Centre for Community Child Health

murdoch children's research institute

BEST START

IMPROVEMENT APPROACH GUIDE

VICTORIA State Government | Education and Training

The Royal Children's Hospital Melbourne

As the contributors to and users of this guide we acknowledge the traditional custodians of the land this guide was developed on, the Wurundjeri people of the Kulin nation.

We pay our respects to their Elders past, present and future for they hold the memories, the culture and dreams of the Aboriginal and Torres Strait Islander people.

We recognise and respect their cultural heritage, beliefs and continual relationship with the land and we recognise the importance of their young people who are our future leaders.

Prepared by:

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Glossary

Adaptive leadership

Adaptive leadership is an approach to leadership suited to solving 'adaptive problems' or complex problems where there is no clear solution. Key features of the approach include the distribution of leadership across multiple roles and levels of seniority, facilitating the identification of solutions rather than providing answers, and maintaining just enough discomfort to enable change (APSC 2018)

AEDC

The Australian Early Development Census (AEDC) is a nationwide data collection of early childhood development at the time children commence their first year of full-time school

Baseline data

Measures or observations that are used to compare with other later measures or observations to understand the change that might have occurred over time

Coaching

Coaching is a practice of supporting individuals or teams to achieve their own goals. It involves facilitating the individual or team to identify their goals and how they can make progress towards them, supporting their reflection on progress, guiding them to course correct along the way, and helping them to make sense of what they have learnt

DET

Victorian Department of Education

ECEC

Early Childhood Education and Care service

Engagement

Engagement is a relational process that actively seeks to incorporate the values, concerns and aspirations of those engaged into decision-making

ESK

Early Start Kindergarten (ESK) is a Victorian Department of Education initiative that provides free or low cost access to 15 hours of kindergarten per week for children who are Aboriginal and/or Torres Strait Islander, or known to Child Protection or referred to Child FIRST from Child Protection

EYM

Early Years Management (EYM) organisations provide management services for kindergartens and early childhood services

Family-centred practice

Family-centred practice is when professionals and families work together, in partnership to support a child's development

Improvement science

Improvement science is an applied science that combines expert subject knowledge with rapid cycle testing in the field to understand what changes lead to improvement in a particular context. (IHI n.d.)

Logic model

A logic model is a tool that shows the overall logic of how an initiative is understood to work. It does this by broadly stating the actions that will generate change, the resources required to undertake these actions, and the expected results

MCH

Maternal and Child Health service

MCHN

Maternal and Child Health nurse

Model for Improvement

The Model for Improvement (Langley et al., 2009) is an improvement framework that generates, implements, tests and embeds change ideas (small ideas for improvement) in a way that ensures these ideas are connected to the initiative's broader objectives or goals

NAPLAN

National Assessment Program – Literacy and Numeracy (NAPLAN) is an Australian assessment program undertaken annually in primary and secondary schools to measure students' performance

NQS

The National Quality Standard (NQS) is an quality framework for ECEC and outside school hours services in Australia, against which services are assessed and rated

PDSA

A Plan Do Study Act (PSDA) cycle is a tool for planning, trying and observing change, and acting on the results in a rapid fashion

Qualitative data

Qualitative data are measurements or observations expressed in words, such as family stories

Quantitative data

Quantitative data are measurements or observations expressed as numbers, such as census or demographic data

Relationship-based practice

Relationship-based practice emphasises the importance of practitioners developing relationships with their clients as a vehicle for authentically engaging with and subsequently supporting them

Short-term outcome area

Short-term outcome areas are drivers of participation in ECEC and MCH services that have been identified from research and practice evidence. Best Start partnerships are required to select two short-term outcome areas to work under each year. They are:

- Service accessibility
- Cultural safety for Aboriginal families
- Service continuity and collaboration
- Relationship-based practice
- Active outreach and engagement
- Family awareness and beliefs

Spreading

Spreading is the dissemination and implementation of successful change ideas across multiple sites or services

Stretch goal

A stretch goal is an ambitious, measurable goal that the Best Start partnership sets itself to achieve in one year. A stretch goal is set under each short-term outcome area selected by the partnership

Sustaining

Sustaining is the embedding or implementation of proven or adopted changes in the service or site where it was tested

Vulnerability

Vulnerability is being susceptible to physical, emotional or mental injury

Introduction and context

This guide has been developed by the Centre for Community Child Health on behalf of the Victorian Department of Education and Training to help you implement the Best Start improvement approach in local communities.

About Best Start

Best Start is a Victorian Department of Education and Training place-based prevention and early intervention initiative focused on strengthening early childhood services. Best Start aims to give every child the best start in life by improving their learning and development, and encouraging agencies and services to work together to address challenges faced by families and communities.

Best Start began in 2002. It exists in 30 sites across Victoria including Aboriginal Best Start sites run by the Aboriginal community, for the Aboriginal community. The program operates at each site through a formal partnership of local agencies and service providers supported by a Best Start facilitator.

In 2016 Best Start sharpened its focus, concentrating on children and families experiencing vulnerability, and Aboriginal children and families. This new, targeted focus is set out in the *Best Start Policy and Guidelines* (Victorian Department of Education and Training, 2016). It helps to ensure all children have the opportunity to participate in quality early childhood experiences through kindergarten, supported playgroups and maternal and child health services. In line with the revised guidelines, Best Start's implementation is now grounded in an improvement science methodology, seeking to continuously improve program delivery and make effective changes to benefit children and families.

What is improvement science?

Improvement science is an applied science that combines expert subject knowledge with rapid cycle testing in the field to understand what changes lead to improvement in a particular context (IHI n.d.). Improvement science draws on multiple disciplines including clinical science, systems theory, psychology and statistics (IHI n.d.). Its origins can be traced back to W. Edwards Deming's Profound System of Knowledge, a model for understanding an organisation or wider system, which consists of four components: appreciating a system, understanding variation, psychology and the theory of knowledge (Perla, Provost & Parry 2013). In order to use improvement science, Best Start has adopted the Model for Improvement, created by Associates for Process Improvement and based on Deming's work, as its rapid cycle testing framework. For further information about the rationale for using improvement science, see Supplementary Article 1.

Why use an improvement approach?

There is a growing body of evidence about the benefits of participating in early childhood services. Yet despite our best efforts, some children and families do not access services and miss out on the benefits provided by early childhood services. This is partly because these children and their families face complex problems and the root cause of these problems is not easily identified. Therefore, a one-size-fits-all solution is unlikely to make a difference to these families.

Place-based initiatives, such as Best Start, offer a solution by bringing stakeholders together in one place to tackle these complex problems in a more comprehensive way. However, stakeholders often get stuck by working on too many complex problems and ideas at once, pursuing many small projects that have little

collective impact, focusing on policy rather than practice change, focusing on practice/programs without attention to scale, and/or neglecting the human and technical aspects of effective change (Inkelas, 2013).

What is needed in such circumstances is an adaptive approach to solving problems, where disciplined experimentation, learning and practice change occurs through the involvement of key stakeholders (Inkelas, 2012). Improvement science is one adaptive approach (along with action research and developmental evaluation) that enables such complex problems to be tackled.

In recent years improvement science has been adopted by a number of similar place-based, child and family-focused initiatives, both locally and overseas, with promising results. To read more about these initiatives, see Appendix D: Model for Improvement – Additional resources.

Using the Guide

About this Guide

The Best Start Improvement Approach Guide provides instructions for implementing the Best Start improvement approach. The Guide follows the structure of the four-stage Best Start improvement approach process.

Each chapter in the Guide outlines a stage of the process and includes:

- the purpose of the chapter
- background information about key concepts and the rationale for the stage
- implementation instructions
- a list of related templates and additional resources.

This icon is used to identify where a task has a supporting template. This guide should be viewed alongside the *Best Start Policy and Guidelines* (Victorian Department of Education and Training, 2016) and the *Best Start Portal Guide for Facilitators*.

A set of supplementary articles complements this Guide (*Best Start Supplementary Articles*) which are referred to in this document. These articles address the following topics:

- Definitions, origins and the rationale for improvement science.
- Evidence-based programs that relate to the Best Start primary outcomes which can inform the development of change ideas.
- Practice-based evidence that relates to the Best Start primary outcomes, which can inform the development of change ideas.

The Best Start portal

An online portal has been developed at www.collaborate.edu.au to collect and streamline measurement and reporting in Best Start. The portal has a range of features including:

- tools to support planning and implementation
- a surveying function that enables regular collection and collation of feedback from families and services
- a community dashboard that visualises this survey feedback and other imported and uploaded data
- tools to enable streamlined reporting to the Department.

Each Best Start site has their own secure account that is monitored by the Best Start facilitator, and made accessible to partners and other stakeholders. The portal is referenced broadly throughout this guide in instances where tasks require its use.

This icon is used to identify where a task involves the use of the portal. More detailed instructions on how to use the portal can be found in the *Best Start Portal Guide for Facilitators.*

Who to engage in improvement work

While this Guide has been written to support Best Start site facilitators' understanding of how to implement the program, it is assumed that others in the Best Start site will be involved in many of the tasks and activities described. In each Best Start site, it is expected that at minimum there will be a partnership assembled to provide strategic oversight and an authorising environment for the work, and then multiple improvement teams, who will be involved in the design, testing and adoption of practice improvements. Some sites may wish to involve stakeholders in other advisory or working groups to complement the work of the partnership and/or improvement teams, however the role of such groups is not described in this Guide.

The roles of the individuals and groups in the implementation of Best Start are described in Table 1.

Table 1 - Best Start roles and groups

Facilitator	The role of the Best Start facilitator in improvement science is best likened to a 'coach' of improvement teams. Just like a sports coach, the facilitator is not part of the team or 'in the game'. The facilitator is supporting the team – the people doing the work/providing the service – from the sidelines. Initially the facilitator 'steps up' to help build knowledge and capacity in the improvement team. However, the intention is to 'step back' and allow the team to do the improvement work more independently. The facilitator is also responsible for reporting and providing guidance to the partnership to enable their participation.  This icon is used to identify where a task is undertaken by the facilitator.
Improvement team	Improvement teams are small (somewhere between three and ten members) and meet regularly (e.g. every 2 weeks). Their purpose is to drive improvement work towards a particular stretch goal by designing, testing and reviewing change ideas and often consist primarily of practitioners. You may need multiple improvement teams, i.e. one (or more) for each stretch goal. Team members will have different roles and bring different perspectives to discussions in the Plan, Study and Act parts of the Plan, Do, Study, Act (PDSA) cycle. Improvement teams need team members who will: • champion the stretch goal (this is different from the coach) • lead each change idea test (this is also different from the coach) • analyse and interpret the data • understand the content of the work, i.e. frontline staff. Members of the improvement team can embody one or more of these roles. Parents and carers may also be invited to participate in an improvement team. They will have rich insights about engaging with the service system and the ability to support the development of ideas to improve practice.  This icon is used to identify where a task is undertaken by an improvement team.

Partnership	The partnership provides the authorising environment and high level guidance for the improvement work in the Best Start site and enables and contributes to improvement teams. It is important that your partnership is representative of the communities your site is focused on engaging and supporting, for example Aboriginal people or culturally diverse communities.  This icon is used to identify where a task is undertaken by the partnership.

Gathering evidence

Some tasks described in the Guide require the gathering of relevant data or evidence beforehand. These tasks are indicated by this icon.

Assumptions

This Guide focuses only on describing how to use the improvement approach within Best Start. It is acknowledged that there are a number of conditions to the successful implementation of the improvement approach, and this Guide therefore assumes:

1. that the Best Start facilitator has the necessary adaptive leadership, coaching and engagement skills to enable this work
2. that a diverse partnership is engaged and provides an authorising environment to enable the involvement of service providers in this work
3. that partners provide service data to the partnership and improvement teams to monitor the impact of the work.

Adaptive leadership, engagement and coaching are seen as enabling skill sets for the implementation of an improvement approach. Facilitators are encouraged to consider their competency in these fields and explore options for building these complementary skills.

It is also acknowledged that the implementation of the Best Start improvement approach requires the development of deep relationships between, and the building of improvement science skills and knowledge in, a large number of people including the Best Start facilitator, partnership members and improvement team members. Developing these relationships and this capacity can take months and even years, meaning the execution of the phases as described in this Guide may be imperfect in the first year or two where a facilitator is new or there has been some other significant change within the site.

Best Start improvement approach overview

The four stages

A four-stage annual process is used to implement the Best Start improvement approach (summarised in Table 2). Each chapter in this Guide outlines a stage of the process. Figure 1 below appears throughout this Guide – a red circle will indicate which stage each section refers to.

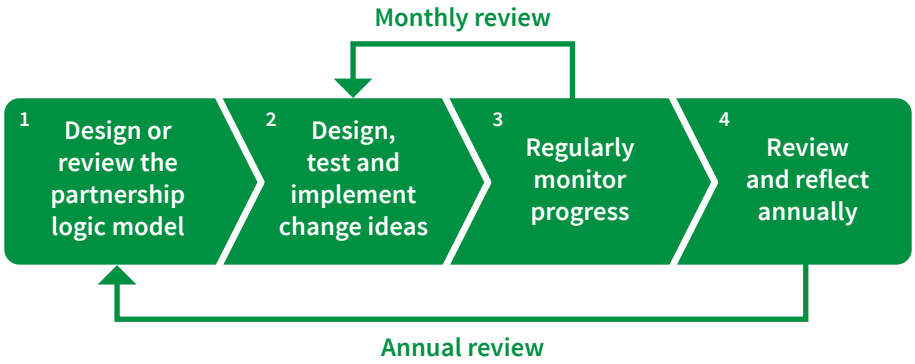


Figure 1: Best Start's four stages of implementation

Table 2 - Best Start's four stages of implementation

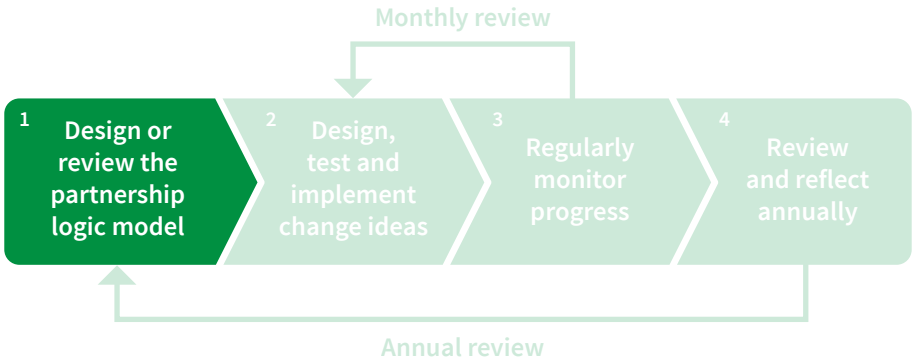
Stage	Group responsible	Role of Best Start facilitator	Timing
1. Designing or reviewing a logic model that provides guidance for the focus of improvement work over the course of the year.	Partnership	Facilitate the partnership's development of the logic model.	Logic model review is undertaken at the end of the previous year (see stage 4).
2. Designing, testing and implementing change ideas that aim to improve the service system and make progress towards the goals set in the logic model.	Improvement teams	Coach the team to design change ideas and subsequently study the results of their tests. Coach individuals to plan and implement their own change ideas tests (PDSAs).	Change ideas are designed and tested throughout the year. Improvement teams meet monthly.
3. Monitoring the progress being made towards goals through gathering and reviewing monthly data.	Partnership and improvement teams	Facilitate improvement teams' interpretation of the data and implications for their work. Facilitate the partnership's interpretation of the data and implications around sustaining and spreading practice changes across the site.	Improvement teams monitor data monthly. Partnership reviews data 2-3 monthly.
4. Reviewing a wider data set on an annual basis to draw conclusions about the learning and impact of the year's work, and identify implications for the following year.	Partnership	Facilitate the partnership's interpretation of all data and understanding of what has been learnt.	Full data review is undertaken at the end of the year.

The feedback loops

The stages are designed to be completed in order, but the sequence also includes two feedback loops:

- The first is a quick-turning loop between testing change ideas (stage two) and monitoring progress (stage three). This loop is completed each month.
- The second is a slower loop between annual reflection (stage four) and review of the logic model (stage one). This loop is completed on an annual basis.

Stage one: Design or review the partnership logic model



Purpose

This section will:

1. describe what a logic model is and how it is used in Best Start
2. explain why logic models are used and the benefits they provide
3. provide instructions to design and/or review a logic model.

Background

What is a logic model?

A logic model is a tool that shows the overall logic of how an initiative is understood to work. It does this by broadly stating the actions that will generate change, the resources required to undertake these actions, and the expected results. There are many types of logic models and Best Start uses one that is modelled on the 'pipeline model'.

A pipeline model typically represents an initiative as a series of boxes articulating inputs, activities, outputs, outcomes and impacts. (BetterEvaluation, n.d.) This model has been adapted to suit Best Start's context (in particular the application of improvement methods) and as such consists of boxes detailing target or focus, inputs, strategies, short-term outcomes and Best Start outcomes (see Figure 2).

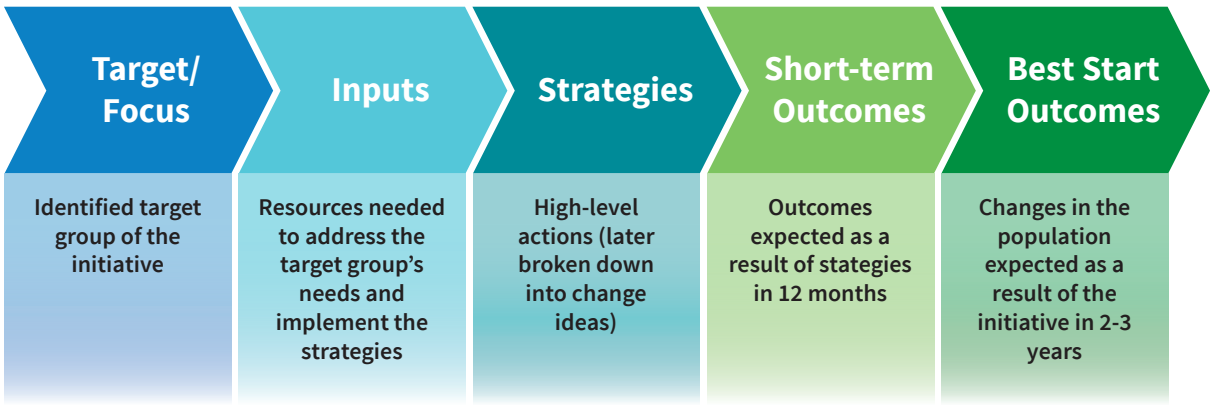


Figure 2: The Best Start logic model template

The pipeline model uses an 'if…then…' logic that looks like this.

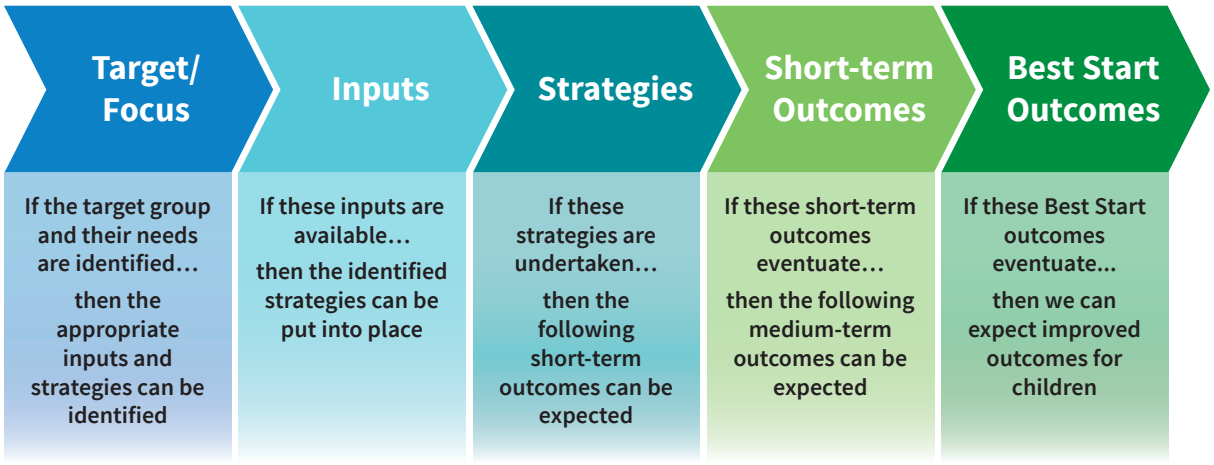


Figure 3: 'If...then' logic

Why use a logic model?

A logic model is developed as the first step of implementation because it provides a high-level plan to guide the work of the Best Start site over twelve months. There are a number of benefits to using a logic model and some of these are experienced while developing the logic model. For example, the logic model:

- ensures the Best Start partnership is very clear about the target group and the desired outcomes from the start
- prompts the partnership to choose strategies/high level actions that will logically achieve the short-term outcomes
- begins to develop relevant stakeholders' buy-in as a result of involving them in the process of developing it.

Other benefits result from the final product. For example, the logic model:

- provides a framework to guide the design and testing of change ideas
- enables progress to be monitored against the outcomes
- communicates clearly and concisely the work of the Best Start site/partnership to new stakeholders.

How is a logic model used in Best Start?

Designing or reviewing the partnership's 12 month logic model is the first stage of implementation each calendar year. This is because it enables the establishment of a shared understanding of the target group, the short-term outcomes and how these will be achieved – the strategies and resources available over the next 12 months. While it is understood that the previous year's logic model will be used to inform the development of the following year's model, there is an expectation that a full review process will be undertaken annually to ensure the development of a high-level plan that reflects current needs, priorities and learning in the Best Start site. Through this review process it may emerge that some elements of the new logic model are the same or similar to the previous year's. This is acceptable, particularly if there is further work to be done in a short-term outcome area.

Implementation

The following instructions offer a suggested order to develop the components of the logic model as well as how to develop each component. Please note, **the suggested order does not move from left to right across the pipeline model**, but rather starts with the target/focus and then jumps to the end and works backwards. This enables the partnership to develop a model with 'the end in mind' and thus create a stronger plan. This process is undertaken at the end of the previous year in collaboration with the partnership members.

Step 1. Define your target/focus

Target/ Focus

The cohort of children and families the initiative will target in the year ahead.

Each Best Start site will have its own unique target group(s), specific to the needs of the community and Best Start's specified target group: *Aboriginal children and families, and children and families experiencing vulnerability.*

The target group may be defined in a range of ways including geography (e.g. in a particular suburb), cultural background (e.g. all Aboriginal children at a site) and risk factor status (e.g. children in Out of Home Care). A detailed example of a target group/focus is provided in Figure 4.

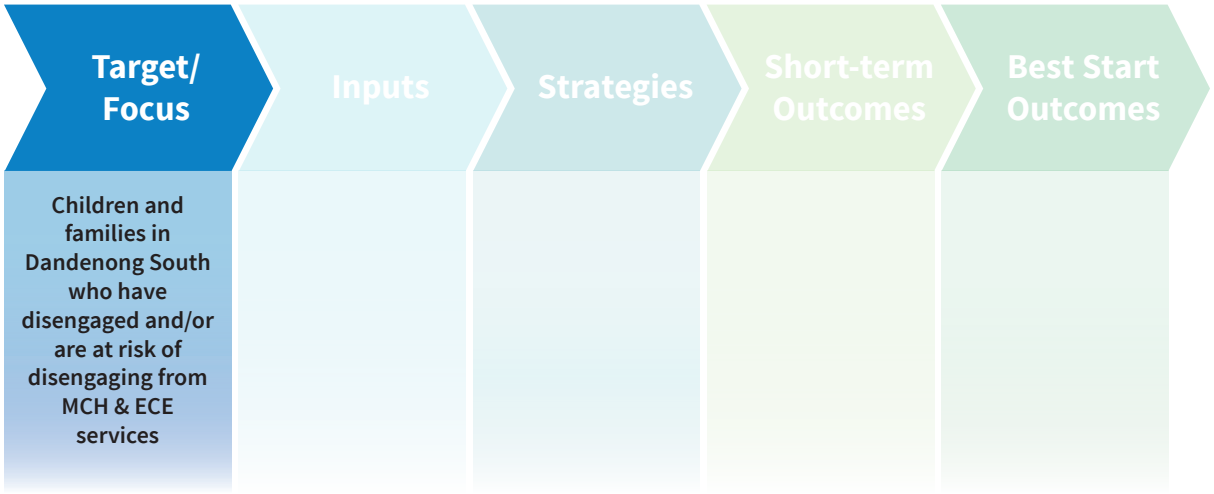


Figure 4: Target/focus example

It is important that the selection of the target group is informed by evidence of where need exists in the community. **Pull together all the relevant and available data and practice evidence to inform the partnership's discussion of where the needs in the community lie and therefore who the target group might be.** For example, the Australian Early Development Census (AEDC) can be used to identify where the most developmentally vulnerable children in the community live, and service administrative data and practice evidence can describe the characteristics of families disengaging from services.

The ultimate selection of the target group will be influenced by a range of factors, including:

- where it is determined the greatest need in the community lies, as per the evidence
- whether it is agreed that there is value in continuing to work with the target group from the previous year, in terms of building on what has been learnt and gained
- what target groups the partner organisations focus on
- the ability to engage with the target group/site, implement improvement science and make progress towards outcomes within 12 months.

Remember

When defining the target group, ask:

- What does the evidence (research and practice) tell us about where the greatest need is in our community?
- What have we learnt about working with the target group from the previous year, what gains have we made, and is there more to be done with this group?
- Does the target group suit the objectives of Best Start (i.e. Aboriginal children and families and/or children and families experiencing vulnerability)?

Step 2. Acknowledge the Best Start outcomes

Best Start Outcomes

The medium-term outcomes to be achieved over two to three years with progress monitored annually.

This component has already been set for the program and there are two Best Start primary outcomes common to all sites. These are:

1. Children engage and participate in early childhood education (e.g. kindergarten and DHHS funded Supported Playgroups)
2. Children and families actively engage with maternal and child health (MCH) services, attending key ages and stages visits.

There are also two Best Start optional outcomes. Sites wishing to select these outcomes must seek permission from the Department. The optional outcomes are:

1. Children acquire literacy and numeracy skills through active participation in their education.
2. Early childhood services provide an engaging and high-quality environment for children and families experiencing vulnerability.

It should be noted that although the long-term outcomes are not featured in the Best Start logic model template, the long-term outcome for the program is encapsulated in the vision for Best Start: *Communities work in partnership to improve the learning, health and development outcomes of young children and their families, particularly those in greatest need*.

Tip

From this point, it is suggested that the partnership works backwards in the design/review of their logic model. From the Best Start outcomes, the partnership moves to defining their short-term outcomes, followed by strategies and finally inputs. Working in this way enables the use of an outcomes-based approach where intended outcomes are defined first, which then inform the development of strategies, and subsequently the inputs required. This approach has a better chance of resulting in improved outcomes than working 'forwards', where there is a risk of choosing strategies that may not lead to desired outcomes.

Step 3. Define the short-term outcomes

Short-term Outcomes

The outcomes that the partnership is aiming to achieve over the course of the calendar year with progress monitored monthly.

Best Start has identified six short-term outcome areas that enable the achievement of the Best Start primary outcomes. These short-term outcome areas have been developed from research and practice evidence and are detailed in Table 3.

Table 3 - Short-term outcome area definitions

Service accessibility	Considers **structural** features (e.g. enrolment/intake processes, waiting lists, appointment times, affordability), **physical and environmental** features (e.g. parking, public transport, signage, entrances, location), and the **delivery of information** (type and content of information provided; advertising and marketing; catering for diversity).
Cultural safety for Aboriginal families	Cultural safety for Aboriginal families is about "an environment that is safe for people: where there is no assault, challenge or denial of their identity, of who they are and what they need. It is about shared respect, shared meaning, shared knowledge and experience, of learning, living and working together with dignity and truly listening" (Williams, 2008). There is a range of ways that services can create a culturally safe environment, including: **developing relationships with Aboriginal people and organisations** and involving them in the planning and delivery of services, creating **a physical environment that acknowledges and is respectful of Aboriginal culture** (e.g. displaying an acknowledgement of the Traditional Owners of the land), and **observing significant events** such as Sorry Day and NAIDOC Week (Commission for Children and Young People, n.d.).
Service continuity and collaboration	Encompasses information sharing and **communication** between services; **referral** to and from other services; **transitions** between services; **and integrated case planning**. Also considers levels of collaboration between partnership members.
Relationship-based practice	The quality of the relationship between the service provider/practitioner and client/family is crucial. A fundamental respect for families should be reflected in policies as well as practices. Work with families should be based on the **core principles of family-centred practice** (FCP), including building partnerships with parents, basing services on family priorities, shared decision making and recognising and building on family strengths and competencies.

Active outreach and engagement	**Special efforts,** including outreach, are made to **reach and engage** Aboriginal families and families experiencing vulnerability, e.g. those with limited social networks or limited trust or interaction with child and family services.
Family awareness and beliefs	This outcome area focuses on addressing the consistency of messages by local service providers about early childhood development and learning. There are gaps between public opinion and expert understanding about the importance of early learning. Awareness campaigns to address public opinion require resources beyond local Best Start partnerships, however, partnerships should focus on **the consistency of messages about early learning** given to families.

Developing the short-term outcomes involves two tasks: choosing short-term outcomes and defining stretch goals.

Step 3.1 Choosing the short-term outcome areas

Select at least two outcome areas of most relevance to the community. In other words, work out which of the six outcome areas are the biggest barriers to the target group's participation in the Maternal and Child Health Service and/or Early Childhood Education services. To do this, gather and review all relevant and available research, data, practice evidence and community feedback, including what has been learnt through the work of the partnership over the last 12 months.

Step 3.2 Defining stretch goals

For every short-term outcome area chosen, the partnership must establish a corresponding 12-month stretch goal that provides the detail about what is to be achieved under that short-term outcome area. A stretch goal is an ambitious goal that the partnership sets itself to achieve in one year. However, even if the goal has not been entirely met within this time, any progress made towards it is considered a success. The stretch goal must be measurable and as such, a specific measure (e.g. 90 per cent) must be attached to each stretch goal. The stretch goal may be an extension of the previous year's goal or have a different focus, depending on what has been learnt and achieved in the previous year. An example of a short-term outcome area and stretch goal is provided in Figure 5.

Explainer: short-term outcome areas versus stretch goals

Selecting a short-term outcome area is about identifying which of the six evidence-informed enablers you will work towards, in an effort to increase participation in ECEC and/or MCH services. Selecting two short-term outcome areas helps your partnership and improvement teams focus on what it is they are trying to improve.

Developing a stretch goal under each short term outcome area is then about having a target to work towards over the course of the year and to monitor your efforts against on a monthly basis.

For example, a partnership may decide that "Cultural safety for Aboriginal families and Active outreach and engagement" are the most significant enablers of increasing participation in ECEC and MCH in their site. The facilitator may then set up a 'cultural safety improvement team' and an 'active outreach and engagement improvement team' that can test practice changes under each of these focus areas. Each team would then have a stretch goal to monitor their improvement efforts against. The 'cultural safety improvement team' might be working towards a 90 per cent attendance rate for all Aboriginal children in a 4-year-old kinder program. The 'active outreach and engagement team' might be working towards 80 per cent of all 'do not attend' families being followed up by the MCH service.

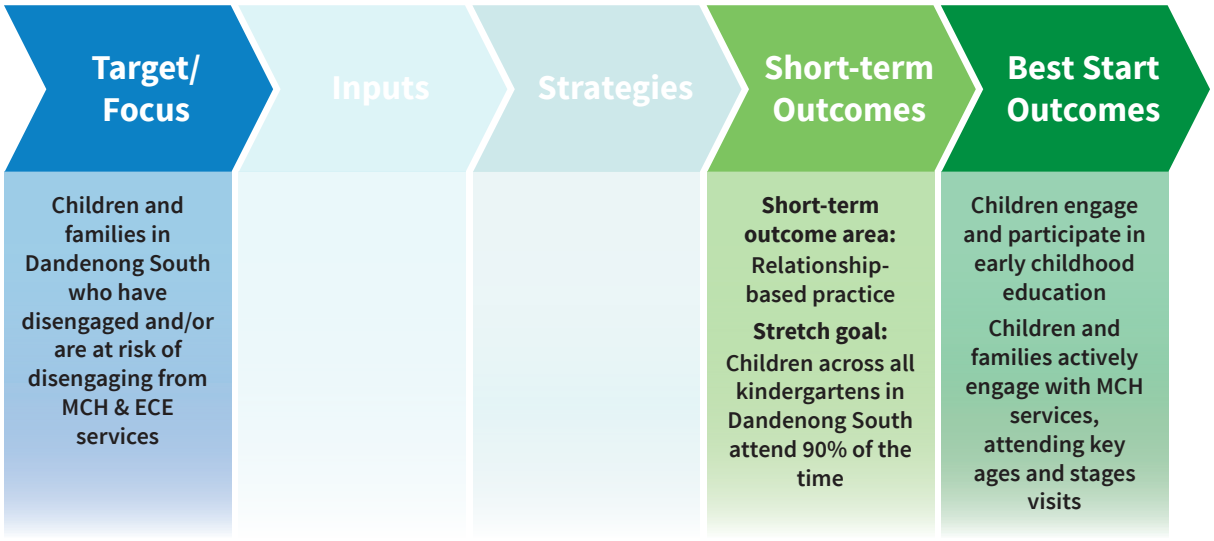


Figure 5: Short-term outcome stretch goal example

Remember

When deciding which of the six short-term outcomes to use, ask:

- What does the evidence (including what we have learnt through improvement work in the last year) say about the main barriers to our community actively engaging with MCH and ECEC services? Which of the short-term outcome areas do these barriers align with?
- Have we made gains in our work under the previous year's short-term outcome area, and is there value in continuing to build on this work under this outcome area?

When developing a stretch goal, ask:

- What change can we make in the short-term outcome area over the next 12 months that will reflect an improvement in the service system?
- If we improve our practice under this short-outcome area over the next year, what will that look like for families? For example:
  - If we more consistently adopt relationship-based practice, what impact will that have on families? Should we expect their attendance to improve?
  - If our service system is working in a more continuous and collaborative way, how will this affect families? Should we expect more Early Start Kindergarten (ESK) eligible children to be identified?
- What progress did we make towards our stretch goal last year? What does this tell us about what we should aim to achieve in the coming year? (If developing a stretch goal under the same short-term outcome area selected in the previous year.)
- Will this goal stretch us? N.B. You are encouraged to set a goal that may be a little beyond what you think is attainable, in other words, a goal that will stretch or push the partnership to strive hard.

Step 4. Develop strategies

Strategies

High-level actions the partnership will take to achieve its short-term outcome stretch goals.

Strategies must be described broadly enough so that they do not include many small actions. This is because in Stage two of implementation, strategies are broken down into smaller, discrete change ideas that will be tested.

It is important that research and/or practice evidence is used to inform the development of strategies. Gather the available evidence on what works to achieve the short-term outcome stretch goals and bring this to the discussion with the partnership. For more information about the use of evidence in Best Start, see **What is evidence-based and evidence-informed practice?** in Stage 2. For more detail about evidence-based programs and practice-based evidence, refer to the Best Start Supplementary Articles 2 and 3.

With the evidence in mind, take each short-term outcome stretch goal and ask:

'*How can we, broadly speaking, achieve this?*'

If the partnership is coming up with specific, low-levels actions to achieve the stretch goal it may be useful to write all of these down and then when there is a list, ask:

'*How can we describe these smaller actions as a collective?*'

or '*What is the strategy that all of these smaller actions could sit under?*'

This list of smaller actions may be used later when discussing possible change ideas. One strategy per stretch goal is sufficient, however more are also acceptable. An example strategy is provided in Figure 6.

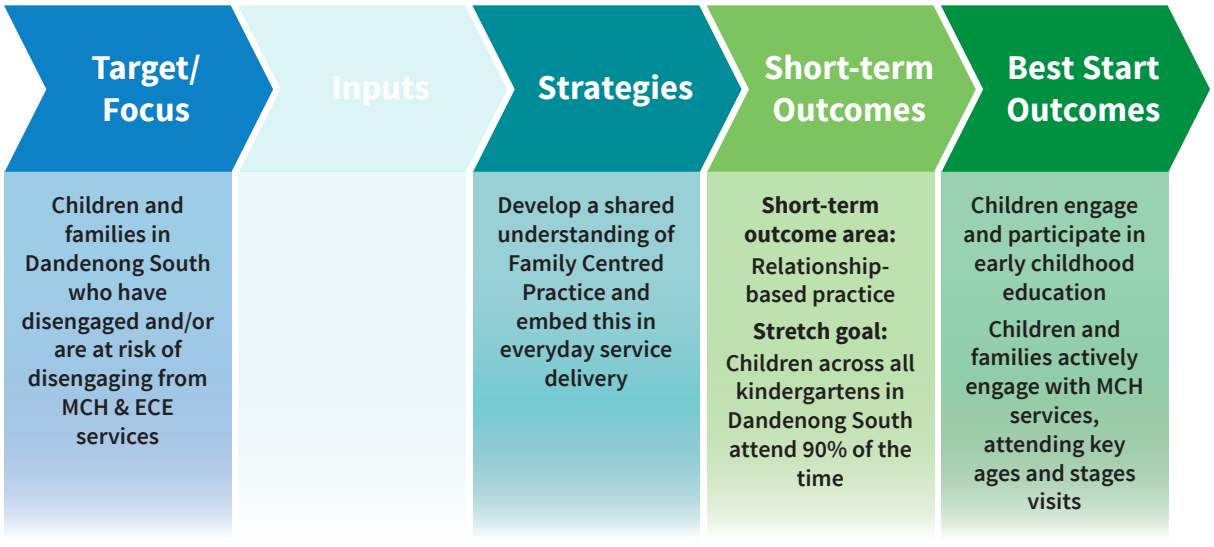


Figure 6: Strategy example

Remember

When developing strategies, ask:

- Will this strategy help us to achieve our short-term outcome stretch goal?
- Is the strategy based on what the evidence says about the most effective way of attaining our short-term outcome stretch goal?
- Is my strategy high-level enough? Is it a strategy or is it really an action? Can lots of low-level actions fall out of it?

Step 5. Identify inputs

Inputs

The resources that the partnership has available to them and/or needs to implement the strategies.

Inputs can be material resources (e.g. available space or a building) or human resources (e.g. partnership members, community representatives). To identify inputs, ask the partnership:

'Who do we need to involve and what materials do we need to undertake our strategies?'

This can be a good opportunity to identify individuals or organisations that are vital to your strategies and achieving your stretch goal, but are missing from your partnership. These people/services could be invited to join the partnership and/or improvement teams. Example inputs can be found in Figure 7.

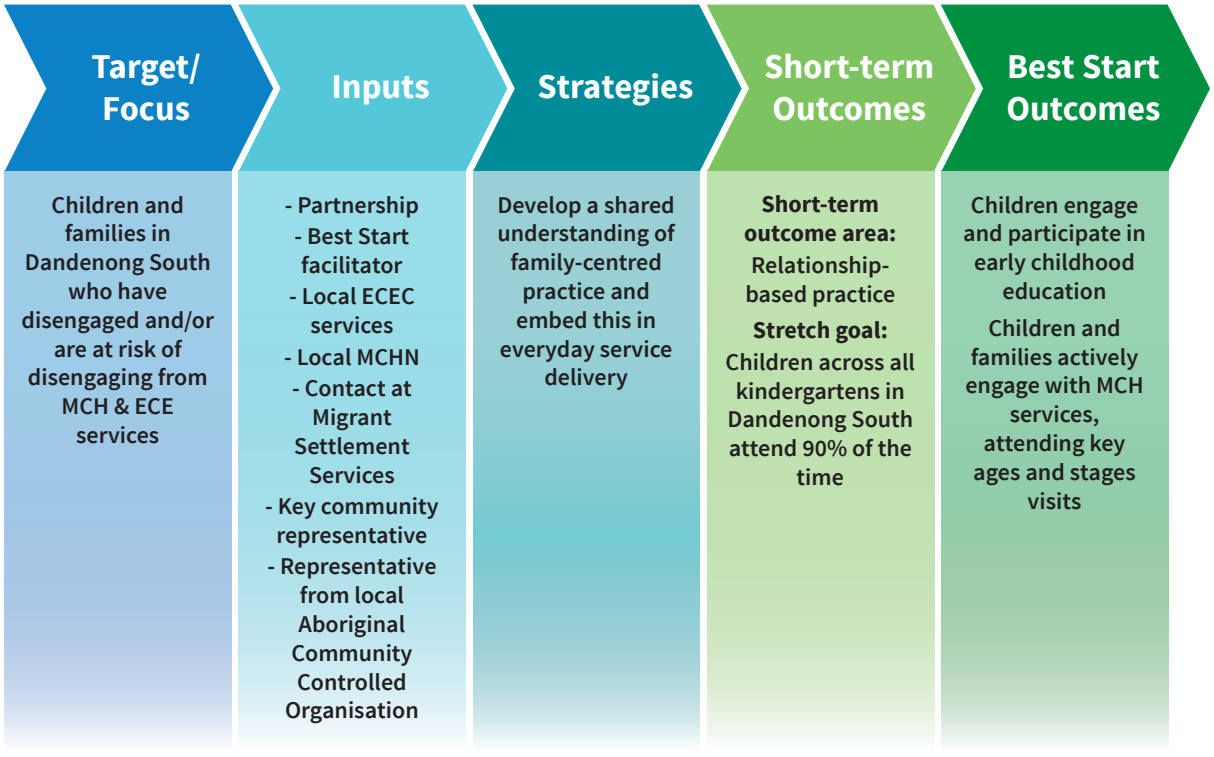


Figure 7: Inputs example

Remember

When selecting inputs, ask:

- What resources do we have to support our strategies?
- What resources do we need to support our target group?
- Have we included the community, or a community representative of our identified target group?

Once you have developed and finalised your logic model, you can upload it to 'Plan' tab of the portal at www.collaborate.edu.au. This will then enable you to access online templates for the tasks that follow in stage two: *Test and implement your strategies*.

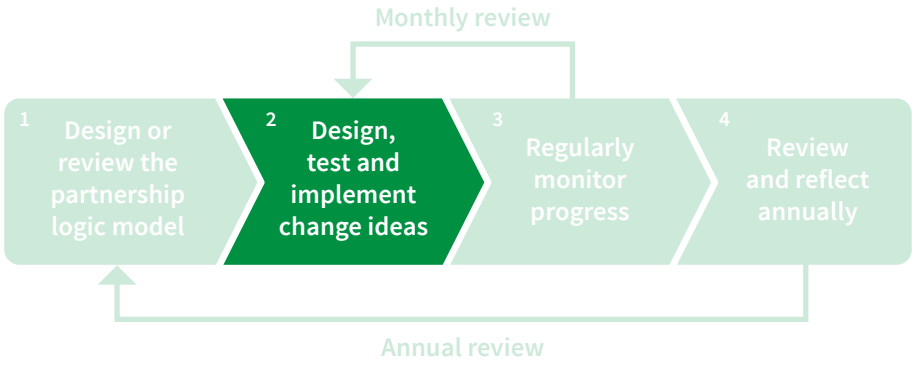
Tips for developing or revising a logic model

1. **Only one logic model is needed:** Although there might be a few different target groups, short-term outcomes and strategies, these can all be contained in a single logic model.
2. **Community is key:** When considering inputs, don't forget about the families and communities at the Best Start site. While the partnerships and other local services are wonderful inputs, the community is just as valuable, if not more, when trying to figure out what the community needs are and what is and isn't working.
3. **Think strategy, think high:** If lots of different change ideas can't fall out of the strategy, then the strategy is most likely an action and not high-level enough.
4. **Stretch goals need to be measurable:** If there is no way to measure the stretch goal, it is not a stretch goal. Stretch goals are to be measured monthly, and so it is also worth considering how easily data can be gathered on a monthly basis to measure your goal. Some examples of appropriate stretch goals might be "the 'did not attend' rate MCH services in suburb x is halved" or "children across all kindergartens in suburb x attend 90% of the time".
5. **Keep it simple:** The logic model should be simple enough so that if someone unfamiliar with the initiative picked it up, they would be able to understand it without much trouble.
6. **Check the 'if…then' logic:** Once finished, read the logic model from left to right, inserting 'if…then' between components. If it doesn't make sense (or doesn't seem logical) then revise at least one of the components.

Templates/additional resources

- **Appendix A: Best Start Logic Model.** The Best Start logic model template is used to create or revise the logic model. This template, shown in Appendix A, is easy to use and follows the same sequence as those used in the examples.
- **Appendix B: The Rosetta Stone for Logic Models.** For more help with the logic model, please refer to the Rosetta Stone guide in Appendix B.
- **Appendix C**: **Additional logic model example.** A second logic model example, using the short-term outcome areas, active outreach and relationship-based practice, is provided in Appendix C.

Stage two: Design, test and implement change ideas



Purpose

This section will:

1. introduce the Model for Improvement and the Plan-Do-Study-Act cycle
2. explain the relationship between the Model for Improvement, the Plan-Do-Study-Act cycle and the logic model
3. explain how the Model for Improvement and the Plan-Do-Study-Act cycle can be used at the Best Start site to develop, test, measure and improve change ideas.

Background

What is the Model for Improvement?

The Model for Improvement (Langley et al., 2009) is an improvement framework that generates, implements, tests and embeds change ideas (small ideas for improvement) in a way that ensures these ideas are connected to the initiative's broader objectives or goals. The model is divided into a thinking part and an implementation part (see Figure 8).

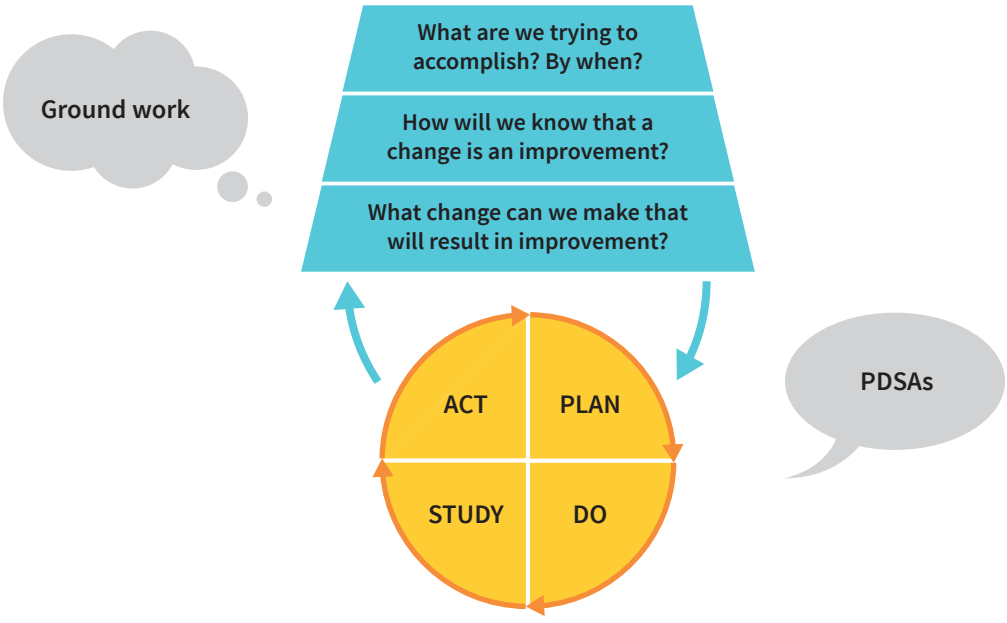


Figure 8: Model for Improvement

The thinking part of the model ensures that the development and testing of these change ideas are tightly connected to the overall goals of your work. In Best Start, this thinking part is referred to as the groundwork. In Best Start the implementation part of the model is referred to as the PDSAs. The Plan-Do-Study-Act (PDSA) cycle ensures that the change ideas are rigorously implemented and that evidence about what works (and what doesn't) is created (Langley et al., 2009).

The **groundwork** consists of three questions:

- What are we trying to accomplish? By when?
- How will we know that a change is an improvement?
- What change can we make that will result in improvement?

These questions need to be answered before moving to the second part. In the context of Best Start these questions are answered in part by the logic model (see Figure 9). Answering these questions ensures that the change ideas that are generated and tested are linked strongly to the logic model.

The **PDSA** is a four-step cycle that tests a change idea by planning it, trying it, observing/analysing the results, and acting on what is learnt. Hence, this is referred to as the Plan-Do-Study-Act (PDSA) cycle. Each of these steps is described in Implementation.

Why use the Model for Improvement?

The Model for Improvement is a simple and easy-to-use improvement framework. It is capable of delivering quick improvement results and has been used in a diverse range of settings (Institute for Healthcare Improvement, n.d.).

How the Model for Improvement is used in Best Start

The Model for Improvement is used in Best Start to undertake Stage two of implementation, *Design, test and implement change ideas*. The data (information or evidence) generated through using the Model for Improvement will also be used in Stage three of implementation: *Regularly monitor progress*. (N.B. Stage three is described in the next section.)

Think of the Best Start partnership's logic model as the foundation for the Model for Improvement to generate and test change ideas. Specifically, it is the strategies and short-term outcome stretch goals that the partnership members have set in your logic model that will directly inform the *groundwork* part of the model, which will in turn inform the *PDSA* part. This relationship is outlined in Figure 9).

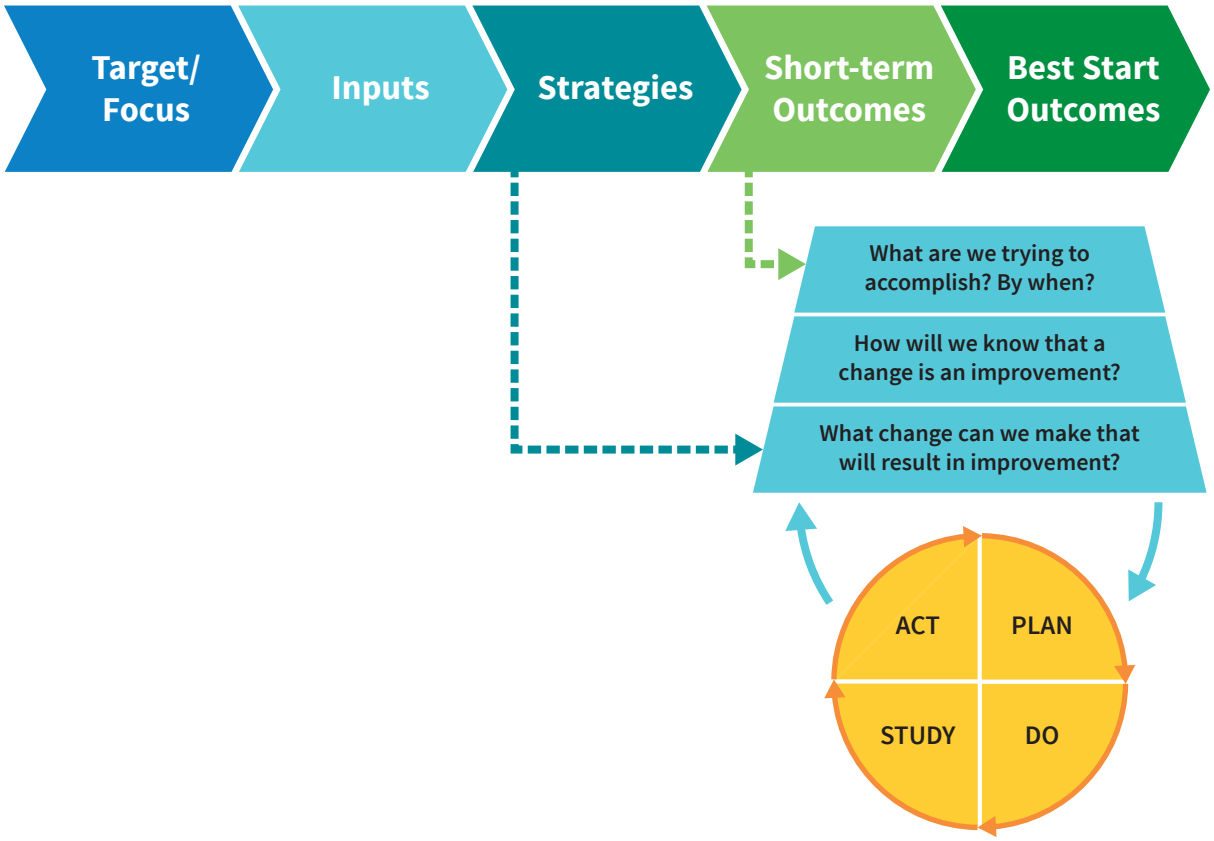


Figure 9: Relationship between the Model for Improvement and the logic model

Engaging service providers and other stakeholders in the 'doing' of the Model for Improvement

Making connections with service providers, raising awareness of the need in the community about why we are doing this improvement work, how we do it and harnessing their support is an essential part of designing, testing and implementing change ideas. This work is referred to as the ground-work.

The ground-work is a key function of the Best Start facilitator. It is separate to, or different from, engagement of a partnership and the authorising environment to enable service providers to be involved in this work. Engagement of the service providers is an ongoing process that requires time, patience, perseverance, leadership and good interpersonal communication. It involves making connections and developing relationships with service providers, and then engaging them in improvement teams where their expertise, experience and practice wisdom can be used to generate change ideas where they can take on the testing, and ultimately adoption, of these change ideas. Service providers are the doers of this work. Collectively they make up the improvement teams.

In engaging individuals to create improvement teams, it is important to consider the inclusion of representatives from the communities are you are working with (e.g. Aboriginal families, families from a particular culturally or linguistically diverse group) as well as parents and other caregivers. These individuals may or may not be involved in the testing of change ideas, but they are likely to provide rich insights from their own and/or their community's experience that can be used to design the change ideas. If any of these individuals join a team in a non-professional role, it will be helpful to think in advance about how to engage them, so that they feel as welcome and valued as their professional peers.

Implementation

This section will:

- explain how to use the Model for Improvement, in particular how to a) design, b) test and c) implement change ideas
- suggest the roles and responsibilities that stakeholders should play in this implementation
- provide answers to frequently asked questions in relation to the implementation of the model.

Part one of the model provides the opportunity to break the strategies in the logic model down into discrete, or smaller, change ideas. This is done by answering the groundwork's three questions. (A template for this task can be found in Appendix E: Groundwork template from collaborate.edu.au, as well as on the 'Plan' tab of the portal at www.collaborate.edu.au.) Outlined below is a detailed description of how to answer each of these three questions. These questions will be answered by the members of your improvement teams.

What are we trying to accomplish? By when?

Because this question is already identified by the logic model, the Model for Improvement asks that the improvement team first reflect on their logic model's *short-term outcome areas* and corresponding *stretch goals*. Using the example logic model presented in Stage one: *Design or review the partnership logic model*, the answer to this question is:

Short-term outcome area: *Relationship-based practice.*

Stretch goal: *Children across all kindergartens in Dandenong South attend 90 per cent of the time.*

How will we know that a change is an improvement?

Here the improvement team is required to identify one or more indicators that will measure the selected stretch goal to determine if a specific change has actually led to an improvement. **Please note:** This task is described in detail in Stage three of this guide. As such you do not need to consider answering this question until you work through Stage three.

What change can we make that will result in improvement?

Here the improvement team reflects on the *strategy* from their logic model related to the short-term outcome area and stretch goal. Drawing again on the example logic model in Stage one: *Design or review the partnership logic model*, the first part of the answer to this question will be:

Strategy: *Develop a shared understanding of family-centred practice and embed this in everyday service delivery.*

The second part of answering this question lies in breaking down this strategy into smaller *change ideas* that can be developed, tested and measured through PDSA cycles.

A. Designing change ideas

Change ideas are simple and specific actions that are likely to support the achievement of a stretch goal and lead to improvements in the short-term outcome areas. Although all changes might not lead to improvement, all improvement requires change.

Change ideas may come from research, those who work in the system (front-line service providers) or use the system (families and children), or from the experience of others who have successfully improved. The change idea(s) are the basis of the PDSA cycle.

Change ideas should be:

- related to the measure, stretch goal and short-term outcome area
- actionable and specific ideas for changing a process, service or system
- based on the best available evidence (research evidence, practice evidence or families' lived experience)
- simple, easy and straight forward (i.e. can be started next week without additional resources).

Change ideas aim to improve the way a service is delivered. Therefore, change ideas are not:

- one-off activities
- activities that involve information gathering only
- activities that require funding to test
- research.

Using evidence-informed decision making to inform the design of change ideas

The use of evidence is a key feature of Best Start's implementation. Evidence is used to inform the development of the partnership's logic model and to generate change ideas within the Model for Improvement.

Historically, the term evidence-based practice has been used to describe the use of interventions, practices and policies that have been proven to be effective under the most rigorous criteria of evidence. More recently, there has been a growing acknowledgement that evidence-based practice is broader than this and extends beyond the application of evidence-based programs to the use of evidence-based processes and the values and wisdom of clients (families or community) (CCCH, 2019). This broader definition is commonly referred to as evidence-informed decision making.

Evidence-informed decision making refers to "the multidimensional service delivery model that integrates evidence from three sources: evidence-based programs, practice-based evidence and client values, knowledge and circumstances.

- Evidence-based programs are interventions that have been experimentally evaluated and deemed efficacious in meeting specified goals.
- Practice-based evidence is the knowledge and evidence that practitioners have accumulated about what works in what circumstances.
- Client values, knowledge and circumstances are the values and beliefs of the client (family or community), their knowledge and expertise, and their particular circumstances.

Evidence-informed decision making is the process whereby the three sources of evidence are blended when making decisions about the goals and strategies to be used in practice" (Moore, 2016 p5).

The components of evidence-informed decision making are depicted in Figure 10, and overlaid with how these different sources of evidence can be used to design change ideas in Best Start.

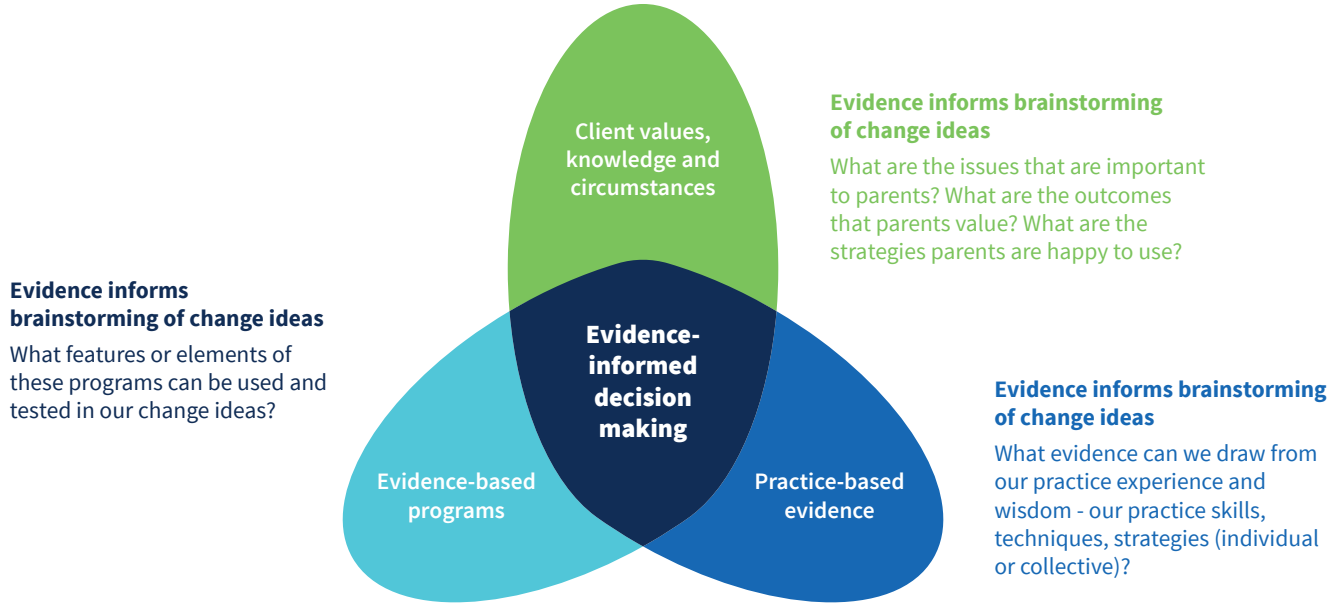


Figure 10: The components of evidence-informed decision making (CCCH, 2019) and how these can be used in designing change ideas in Best Start

Table 4 summarises the three types of evidence and how they can be used in the design of change ideas in Best Start.

Table 4 - Using evidence to design change ideas

Type of evidence	Description	How to use to design change ideas
Evidence-based programs	Evidence-based programs are programs that have been experimentally evaluated and deemed effective in meeting the specified goals of the program. Experimentally evaluated means the program has gone through the 'gold standard' process for confirming their effectiveness in meeting a specified set of goals. Often this process involves systematic reviews of randomised controlled trials (RCTs).	The implementation approach of Best Start is underpinned by improvement science and as such, is not about identifying and implementing evidence-based programs, but rather identifying and testing small scale practice and process changes. It is acknowledged that there are a number of existing evidence-based programs aimed at engaging children in early education (Best Start primary outcome one) and engaging families in MCH services (Best Start primary outcome two). Therefore, it is worth looking at these programs to see what features or elements could be extracted and tested in the Best Start context. A description of each of these programs, as well as a detailed discussion of the evidence-base for each of the Best Start primary and optional outcomes, is provided in Supplementary Article 2.

Practice-based evidence	Overall, research shows that how services are delivered is just as (if not more) important as what is being delivered (Davis and Day, 2010). Practice-based evidence means evidence drawn from practice wisdom and experience (Chu & Tsui, 2008). That is, the skills, techniques, and strategies used by practitioners when interacting with service recipients (e.g. families). Practice-based evidence can be conceptualised in three different ways (Moore, 2016): 1. Individual or collective practice wisdom/expertise 2. Concurrent gathering of evidence during practice 3. Processes that have been proven to be effective across a wide range of interventions.	Practice-based evidence should be used to inform discussion and brainstorming of change ideas. More detailed information on practice-based evidence related specifically to non-stigmatising and non-threatening environments, cultural awareness and safety, community regard and engagement, building parent capacity and continuity of care are also provided in Supplementary Article 3. Individual or collective practice wisdom held by practitioners at your site should also be drawn upon when you are developing change ideas.
Client values, knowledge and circumstances	The third element of evidence-informed decision making relates to the extent to which services reflect the values and objectives of parents, families and the community.	For services to be effective, they must not only be based on evidence-based programs and practice-based evidence, but they must also reflect the values of parents and the outcomes that are important to them (Moore, 2016). This practice is often called "values-based care" and is a commitment to providing services based on a blend of clients and professional values (Pengra, 2000). The extent to which service delivery is based on parent values should be reflected upon by sites, and this reflection should then inform the identification of change ideas as appropriate. The extent to which individual professionals are aware of their own personal values and the impact they have on their responses to particular families could also be explored by sites, and possibly inform some change ideas, particularly for sites focused on the short-term outcome area of 'relationship-based practice'. Feedback from families and community can be gathered through surveys with open-ended questions (see Stage three) and through recruiting community representatives to your improvement team.

An example of how to use the three sources of evidence can be found in Appendix F.

Brainstorming change ideas

It is helpful to begin with a brainstorm to generate change ideas. The aim is not to narrow down a small number of concrete ideas but to source a broad list of change ideas from all the best available evidence: research evidence, practice evidence, or families' lived experience. The greater number of ideas generated, the greater the chance of testing feasible and effective change ideas.

Why brainstorm?

- Determine possible causes of a problem
- Determine possible solutions to a problem
- Actively encourages creativity and spontaneity
- Triggers other thoughts/ideas

Features of brainstorming

- Small groups directly concerned with problem or process
- Requires a facilitator
- Clearly defined measure, stretch goal, short-term outcome area
- Ideas are generated rapidly and recorded
- All ideas are welcomed – none are rejected or criticised
- Discussion is limited to explanation/clarification of idea

Immediate criticism and analysis of the change ideas should be put on 'hold'. By suspending judgement we can be freed up to generate and welcome new and unusual change ideas. These change ideas can be amended and/or combined to form new change ideas later on.

Not all change ideas will be implemented and the list will continually be added to and changed. You can record change ideas under the relevant stretch goal/strategy in the Groundwork template (see Appendix E) under the 'Plan' tab on www.collaborate.edu.au

When facilitating a brainstorm of change ideas ask questions such as:

- What can we do that will improve the way we deliver services?
- How can we make it easier for service users?
- What does the evidence (research, practice and families) tell us about how to reach this stretch goal?
- What hunches do we have about how things could be improved?
- What gets in the way of us doing the best job we can? How can we change that?

It may be necessary, before being able to brainstorm change ideas, to explore the possible causes or drivers of the problem that the team is trying to address. By identifying the potential causes, the team can then generate change ideas that address each of the causes. Techniques that Best Start facilitators have found useful for understanding the causes or drivers of the problem are described in Table 5.

Table 5 - Techniques for identifying the causes of the problem to be addressed

Technique	Features	Process
Sticky notes (NSW CEC)	• Done in silence • Reduces impact of dominating voices • Encourages all to participate and have a voice • Can support the development of a Fishbone or Driver Diagram that captures the range of contributing issues to the problem the group is trying to solve	1. Participants write (in silence) on sticky notes all the causes relating to the problem – One cause per sticky note – Use as many sticky notes as needed – Causes should be specific. e.g. 'education' is not specific enough. 2. Place sticky notes on wall or flat surface. 3. Analyse the notes, identify high-level themes or topics, and then group them according to these. This information can then be translated into a Fishbone Diagram or Driver Diagram (see Appendix J for more information, examples and templates. 
5 whys (NSW CEC)	• Finds the root cause of a problem by 'digging down'; the first 'cause' is almost never the real root cause • Finding the real cause means you can take effective action to remove the cause. • Not about placing blame but rather to uncover the root cause of why something is occurring	1. State the problem and ask why does it exist? 2. Document the answer and ask why does it exist? 3. Repeat up to five times or until you reach the root cause. N.B. It is unlikely that a problem will have just one cause. You could use this exercise to delve into the root cause of each of the identified first 'causes'.
Process maps	• Helpful for understanding a problem that is connected to a process, e.g. enrolling a child in a service • Uncovers the assumptions we make about the processes we use and those that families need to navigate • Helps us to realise where a process might be 'breaking down'	1. Ask the group where the process begins; scribe describes this in a square 2. Then ask, 'what happens next in the process?'. The scribe notes this next step, connecting it to the first step with an arrow 3. The process repeats itself until the process is completely 'mapped' 4. Then ask the group where the process might fail; the scribe notes this on the 'map' N.B. See Appendix J for more information, an example of and template for a process map. 

Prioritising change ideas

Once a list of change ideas has been generated, the improvement team needs to agree on where to start. This involves pruning or ranking and ordering the change ideas so that it becomes clear which ones are going to be more feasible and effective. This doesn't mean that they will succeed – we learn just as much from the things that don't go according to plan as the things that do.

The facilitator will invite the improvement team to think about the implementation and impact of the change idea. Will the change idea be easy or hard to implement? Will the change idea have high or low impact on the stretch goal? It can be helpful, when prioritising change ideas, to focus on the ones that are easiest to implement and likely to have highest impact.

To prioritise change ideas ask questions such as:

- Will it cost?
- Is our idea small and straight-forward enough to get started next week? Or will it take weeks or months to get started?
- How much will the change idea affect the problem, our stretch goal, and/or our measures?
- Did these ideas come from the people working in or using the system?
- Do we have a champion to drive this change idea?

Example responses to the **groundwork** are provided in Figures 11 and 12.

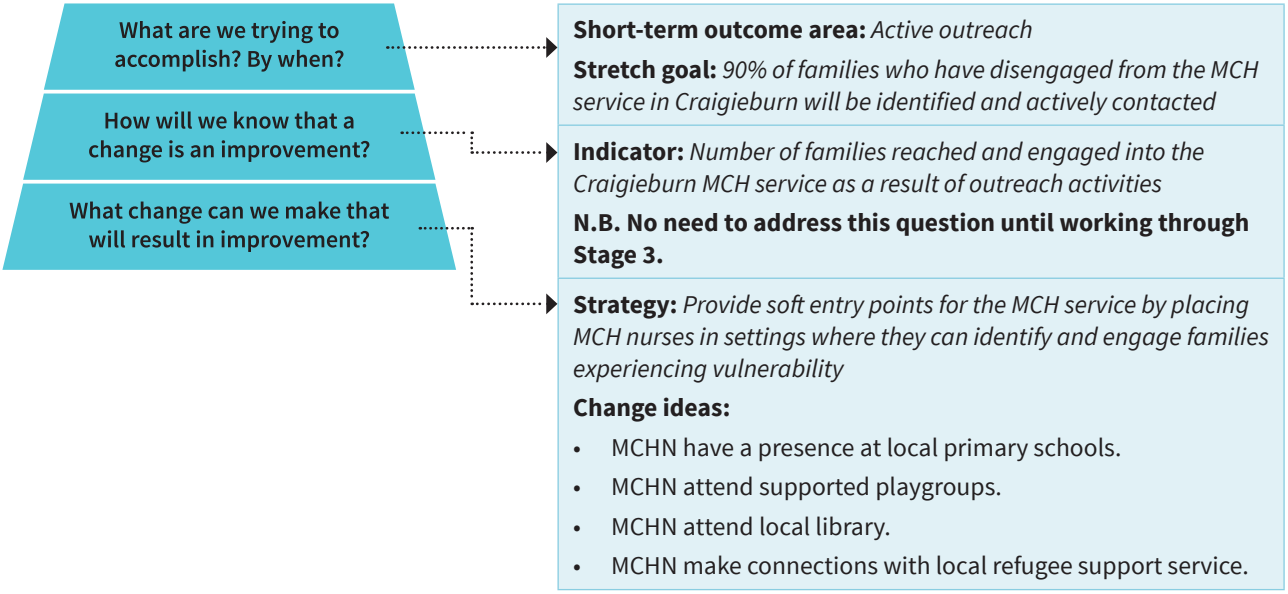


Figure 11: The "groundwork" example A

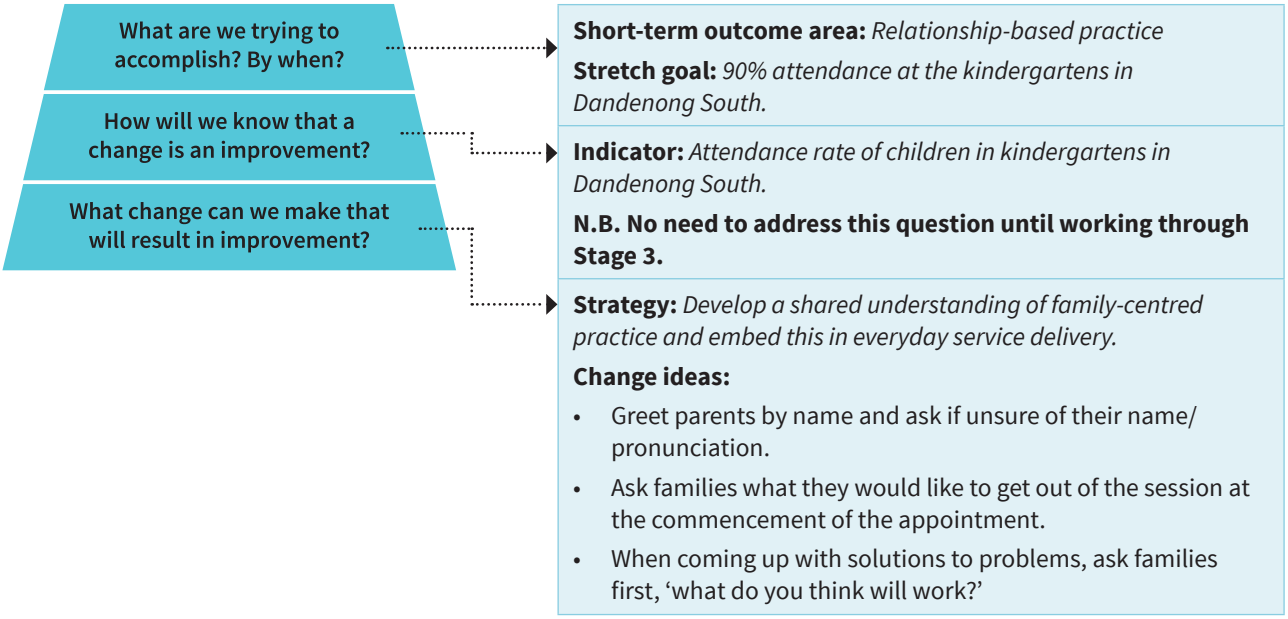


Figure 12: The "groundwork" example B

B. Testing change ideas

Once a number of change ideas have been generated and prioritised, improvement teams can begin to use PDSA cycles to test selected change idea(s) to see if they result in practice improvement.

A template for developing your PDSA is provided on the portal via the 'Report' tab (www.collaborate.edu.au). The template can also be found in Appendix H.

Members of the improvement team are responsible for testing change ideas. The facilitator provides advice on how to complete relevant sections of the PDSA template and encourages the improvement team members to undertake the test.

Step 1: Plan

Who: Improvement team (with support, if needed, from the Best Start facilitator)

Develop a simple, small **plan** to test the change idea, including:

- **What:** Clearly define the tasks that will be undertaken to achieve the idea
- **Where:** Where will the plan be executed? Where is the improvement intended to take place?
- **When:** When will testing begin and end?
- **Who:** Who is responsible for each aspect of this cycle (e.g. implementing the change idea, collecting the data, analysing the data)?
- **Prediction:** Make a prediction about the expected improvement. This will test the link between the plan, change idea and strategy. It will help to work out what data should be gathered and whether the idea was successful or not. Ask questions such as:
  - What is the prediction?
  - What is likely to happen as a result of the change idea?
  - What improvement is expected?
- **Data to be collected:** Describe what data needs to be collected to see if the predicted improvement occurs.
- **Baseline data:** Detail the existing data, or collect some pre-test data, or maybe there is no baseline data.

An example plan is presented in the Table 6.

Table 6 - Example 'plan' from a PDSA cycle

PDSA Cycle #1.1	
Short-term outcome:	*Relationship-based practice*
Stretch goal:	*90% attendance across selected kindergartens*
Change idea:	Learning and using parents' names on arrival

Plan *What?* Learn and use parents' names when they are dropping off their children in the morning *Who & where?* All the staff from one particular kindergarten *When?* Do it every morning for four weeks
Prediction (*Why might it work? What will happen as a result?)* We predict it will lead to better relationships with the children's parents because using their names will convey to parents that we recognise and care about them and their family.
Data to be collected based on our prediction (*How will you know if the idea is effective?)* If relationships with parents get better we expect them to want to talk with us more, so we should see an increase in the number of one-on-one conversations with them.
Baseline data We counted the number of conversations we had with parents in the week before we implemented our change idea. Six conversations were counted across three staff members. (We can compare this with the number of conversations we had in the last week of our cycle.)

Remember

The improvement team does the 'Plan' section of the PDSA cycle together. Ask the team/yourselves:

- is there a specific plan: WHO, WHAT, WHERE, WHEN?
- is this cycle testing an actual change in the way work is done?
- is there evidence to support this change idea? (i.e. research or practice evidence)
- is the plan simple enough to be conducted in 4-6 weeks? It may be helpful to:
  - test the change idea only with volunteers and NOT try to get buy-in or consensus for the test
  - think of the smallest possible test that would be useful to you, then reduce it by half, and by half again (Langley et al., 2009).
- have predictions been clearly stated? Is it clear what this PDSA cycle is trying to achieve?
- is there a plan to collect the data to evaluate the change idea?
- can predictions be evaluated using these data?

Step 2: Do

Who: Individual improvement team members (i.e. service providers/practitioners)

A member (or multiple members) of the improvement team carries out the plan developed in Step 1. They document observations and problems regarding implementation and gather the data to test the prediction. An example is provided in Table 7.

Table 7 - Example 'do' from a PDSA cycle

Short-term outcome:	*Relationship-based practice*
Stretch goal:	*90% attendance across selected kindergartens*
Change idea:	Learning and using parents' names on arrival

Do *(Was the plan executed? Document any unexpected events or problems)*

Staff carried out the plan, noting that on the whole we were able to greet the parents by name each morning, but that sometimes this didn't happen, either because we were busy with another task or we were unsure of the pronunciation of the name. We also counted the number of parent conversations we had in the week before and at the end of the PDSA cycle.

Remember

The service providers/practitioners do the 'Do' section of the PDSA cycle. They should ask:

- has the change idea actually been implemented?
- have problems or unexpected events been documented?
- has the data to test the prediction been collected?

Step 3: Study

Who: Improvement team (with support, if needed, from the Best Start facilitator)

At the next meeting of the improvement team, time is set aside to analyse the data collected and study the results. The improvement team compares the data to the predictions and summarises and reflects on what was learnt. Did the change idea meet the prediction? If not, why not? An example is provided in Table 8.

Table 8 - Example 'study' from a PDSA cycle

Short-term outcome:	*Relationship-based practice*
Stretch goal:	*90% attendance across selected kindergartens*
Change idea:	Learning and using parents' names on arrival

Study *(Review and reflect on the results. Did the change idea meet your prediction? If not, why not? *Include qualitative and quantitative data)*

- We noted we had 11 conversations with parents in the final week of the cycle, compared with six in the week before.
- We noticed that sometimes we were reluctant to use a parent's name in our greeting, as we were unsure of the correct pronunciation and did not want to offend the parent and/or embarrass ourselves.
- We noticed that sometimes there was no one available to greet the parent at the door, because they were busy with another task.
- We were surprised to find that some parents replied to the greeting using the staff member's name.
- We feel that the idea did lead to an improvement – parents were more willing to have conversations with us at the end of the cycle – however, there were some implementation issues and we'd like to address these to see if the idea can be even more effective.

Remember

The improvement team does the 'Study' section of the PDSA cycle together. Ask the team:

- has the data been analysed?
- has there been an assessment of how well the change idea was implemented?
- has there been an assessment of problems or unforeseen circumstances?
- has there been an assessment of the change idea's effectiveness?
- have there been unexpected outcomes/changes?

Step 4: Act

Who: Improvement team (with support, if needed, from the Best Start facilitator)

Once the data has been analysed, the improvement team decides what to do in the next PDSA cycle as a result of this cycle. Will the change idea be adapted, adopted or abandoned?

Adapting the change idea means to modify it based on what has been learnt and test it again within the same or another organisation.

Adopting the change idea means the organisation who tested the change idea is now embedding this process into their daily practice.

Abandoning the change idea means to discard it as it has been shown to be ineffective. A new idea can be subsequently tested.

A PDSA cycle is considered complete once the decision has been made to adapt, adopt or abandon. An example is provided in Table 9.

Table 9 - Example 'act' from a PDSA cycle

Short-term outcome:	*Relationship-based practice*
Stretch goal:	*90% attendance across selected kindergartens*
Change idea:	Learning and using parents' names on arrival

Act *(What will you take forward from this cycle?)*

- We all agree that this was a successful change idea, but that we need to make some **adaptations** for improving it and making it even more effective.
- We plan to ask parents how to correctly pronounce their names so that we can feel confident in saying their name when we greet them and make sure there is always someone at the door during drop-off hours to greet parents using their name.

Remember

The improvement team decides the 'Act' section of the PDSA cycle together. They might ask:

- has there been an assessment of what will happen in the next PDSA cycle (adapt, adopt, or abandon)?
- has there been thinking around the next PDSA cycle? (Ideas for subsequent tests? Scale, scope, sequencing?)

Subsequent PDSA cycles

Change ideas are likely to be adapted, tested and then retested in different contexts through multiple PDSA cycles before you gather enough evidence of their effectiveness and feel confident about embedding them in practice. An example of how a change idea is adapted and tested through a second PDSA cycle is provided in Table 10.

Table 10 - Example of adapting a change idea from a PDSA

PDSA Cycle #1.2	
Short-term outcome:	*Relationship-based practice*
Stretch goal:	*90% attendance across selected kindergartens*
Change idea:	Learning and using parents' names on arrival

PLAN
What? Learn and use parents' names when they are dropping off their children in the morning. If unsure of how to pronounce the parent's name, ask them. Ensure that a staff member is stationed at the door at drop off time so that no parent is missed. *Who & where?* All the staff from one particular kindergarten. *When?* Do it every morning for three weeks.
Prediction (*Why might it work? What will happen as a result?)* We predict it will lead to better relationships with the children's parents because using their names will convey to parents that we care about them and their family.
Data to be collected (*How will you know if the idea is effective?)* If relationships with parents get better we expect them to want to talk with us more, so we should see an increase in the number of one-on-one conversations with them.
Baseline data We had 11 conversations with parents in the final week of PDSA Cycle #1 and six conversations in the week before Cycle #1.1. (We can compare these numbers with the number of conversations we have in the last week of this second cycle.)
DO
(Was the plan executed? Document any unexpected events or problems) We carried out the plan, noting that compared with Cycle #1, we were able to greet every parent at drop off on each morning. We noted that there were four parents whose names we were unsure of how to pronounce and that although we felt uncomfortable to ask them, they all seemed happy that we made the effort to ask them how to correctly pronounce their names. We ensured that we counted the number of parent conversations we had in the last week the cycle.
STUDY
*(Review and reflect on the results. Did the change idea meet your prediction? If not, why not? *Include qualitative & quantitative data)* • We noted we had 16 conversations with parents in the final week of the cycle, compared with 11 at the end of Cycle #1 (and six in the week before Cycle #1). • We noticed that parents were really pleased when we made the effort to ask them how to correctly pronounce their names – and that this wasn't that difficult to do. • We noted that we were able to greet every single family by stationing a staff member at the door.
ACT
(What will you take forward from this cycle?) • We all agree that this was a successful change idea that should become part of our everyday practice. We are going to **adopt** it. • We are in discussion with a neighbouring kindergarten who is interested in testing this change idea in their service. We have offered to support them to undertake their own PDSA to test whether the idea has the same positive effect in their setting. • We will now go back to our groundwork to review the list of change ideas and decide which new change idea we'd like to test.

Frequently asked questions

- **How long should a PDSA cycle go for?** It is recommended that the PDSA cycle is kept to somewhere between 1-2 weeks. This prevents wasting time with ideas that require adaptation (or abandonment). It also ensures that the change idea is made simple enough to be able to be tested in that period. Of course, there will be instances where a longer period is justified (perhaps where an idea can only be tested once per week or fortnight due to service delivery schedules). Generally the shorter the period, the more focused the test.
- **How can we keep our cycles short?** Keep it simple! If more time is spent on the planning part of the cycle than the doing part, then the change idea may be too complex and should be re-visited.
- **How do we know that we are doing it right?** For each part of the cycle (i.e. Plan-Do-Study-Act), there is a corresponding *Remember* section, which asks a series of questions. Answering "yes" to these questions, indicates the improvement team is on the right track. Make sure to answer "yes" to each of these questions before moving on to the next part of the PDSA cycle.
- **How many cycles should we do for each change idea?** Expect to complete a series of PDSAs for every 'original' change idea. Change ideas are likely to adapt a few times before deciding to adopt or abandon.
- **Do we need to start the process all the way from 'plan' if we only want to make a small adaptation to our original change idea?** Yes. This is important and unless the improvement team does this, the results will be unclear. That is, the improvement team will be unable to make a call as to whether it was the original or adapted version of the change idea that was successful or not.
- **Can we test more than one change idea per cycle?** No. Each cycle must test one change idea only. This is so the improvement team can recognise which change idea it was that actually led (or didn't lead) to change. If the improvement team tests more than one idea at a time, the change could be due to either idea and the improvement team will never know which change idea was effective.

C. Implementing change ideas

Once a change idea has been tested, adapted and found to be successful, it is ready for implementation. Implementation is the embedding of the change idea in its original site – known as sustaining – and across multiple sites, services or the partnership – known as spreading. Sustaining and spreading are considered implementation work, not improvement work (see Figure 13).

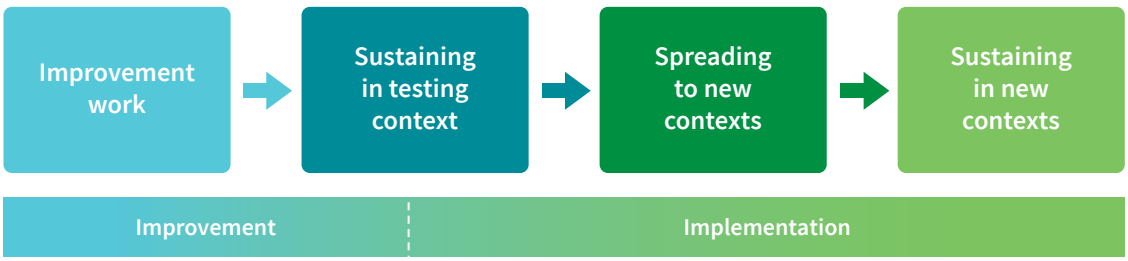


Figure 13: A simple sustain and spread framework

In order to identify whether a change idea is ready for implementation, it is helpful to consider the following questions (adapted from IHI, 2008):

1. Is the change idea near the final stage of development?
2. Are the stretch goal measures demonstrating real improvement?
3. Are others in the Best Start site excited by this improvement?
4. Are others in the Best Start site likely to be interested in implementing this idea?
5. Are there any policy or other changes ahead that may make this change idea redundant?

Figure 14 is another tool that can be used to determine the readiness of a change idea for implementation. This figure suggests that not until there is high confidence that a change idea will lead to improvement and the cost of failure is small, is it ready for implementation.

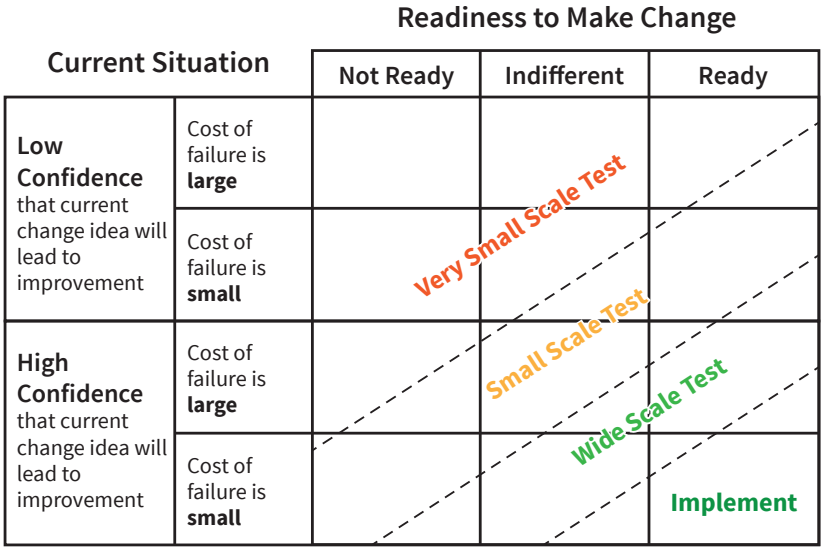


Figure 14: A matrix for determining scale of testing and readiness for implementation (Langley et al. 2009)

Sustaining

Sustaining is the embedding of proven or adopted changes in the service/site where it was tested. It can be thought of as work to 'lock in the progress' or 'hold the gains'. It is important to have measures and check-ins to ensure that the practice or process continues to have the impact it was found to be capable of. Sustaining practice involves four broad steps:

1. Get clear on the practice changes to be embedded at a service or test site
2. Form the implementation team
3. Set an aim and select the most important measures (from the range of measures used in the improvement work)
4. Implement and monitor.

Spreading

Spreading involves the dissemination, or spreading, of change ideas across multiple sites or services within the partnership. It most likely will involve some testing and adaptation to suit the context and environment of each service or site. This is quickly followed by sustaining once the testing is complete. Regular checks and measures are required to ensure the practice is sustained at the spread sites/services. There are three discrete steps to spreading: communication, decision to adopt and implementation (HIS 2013).

1. Communication: Formal and informal communication of the successful change idea to be spread needs to occur first. Consider target audiences, messaging and your methods.
2. Decision to adopt: The services or sites targeted need to then decide to adopt the successful change idea. This will depend on the readiness of people, the evidence you have of the benefit of your change idea, and whether the context is ready for a new process or practice.
3. Implementation: PDSA cycles will be used by the services or sites to determine whether the change idea needs any further adaptation for their context. It is helpful to identify and regularly monitor 'systems measures' to assess the impact of the spread of the change idea. You may want to consider the use of implementation teams or communities of practice to support this work.

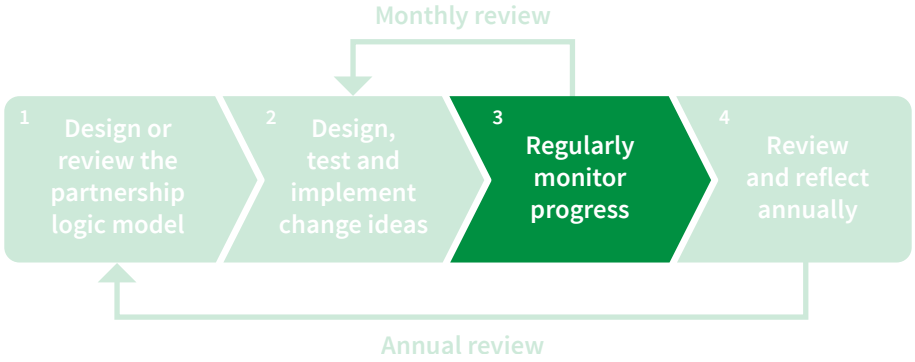
Once the change idea has been tested in new contexts, it can then be sustained using the same steps that were used to sustain it in its original context.

Templates/additional resources

'Groundwork' and 'PDSA' templates (online): Planning and keeping a detailed record of each PDSA cycle can be carried out by using the templates provided on the portal (www.collaborate.edu.au). The groundwork template can be found via the 'Plan' tab, whilst the PDSA template can be found via the 'Report' tab. The groundwork template is particularly useful for keeping a record of the change ideas brainstormed under each strategy of your logic model. The PDSA template records a detailed description of the plan, action and analysis of the test of each change idea.

Appendix D: Model for Improvement – Additional resources: This is a list of electronic resources to increase the facilitator's/partnership's/improvement teams' understanding of the Model for Improvement and examples of where the model and/or PDSA cycles have been used in similar contexts with success.

Stage three: Regularly monitor your progress



Purpose

This section will:

1. explore the role of feedback, measurement and a community dashboard in improvement
2. discuss the methods for measuring improvement in Best Start
3. describe how to collect regular feedback on the stretch goals
4. describe how to use regular feedback on a quarterly basis to monitor progress.

Background

Monitoring progress in Best Start

Monitoring progress is the third stage of implementation. It is closely related to the second stage, *Test and implement strategies*, because it enables you to assess the effectiveness of the improvement work. It is also closely related to the fourth stage, *Review and reflect annually*, because it supports the annual review process. Progress is assessed through the collection of different types of feedback at different intervals.

What feedback will be collected?

There are four levels where feedback is collected to measure progress:

- Individual PDSA cycles
- Short-term outcome stretch goals
- Best Start primary outcomes
- Long-term children's outcomes.

Table 11 provides detail about the time intervals, purpose and type of feedback that will be gathered at these four levels.

Table 11 - Levels of feedback in Best Start

Feedback level	Measured how often?	What is measured?	Type of feedback
PDSA cycles	Rapid (e.g. during the period of the PDSA cycle)	The success of a specific change idea	Varies depending on the PDSA
Short-term outcome areas and stretch goals (Short term)	Monthly	Progress made towards your stretch goals	Administrative or survey data from families and/ or service providers that measures progress towards your goals
Primary Best Start outcomes (Medium term)	Annually	Progress made in participation in MCH and ECEC	DET administrative data i.e. MCH and ECEC participation rates
Children's developmental outcomes (Long term)	Annually or less often	Changes in the developmental status of children in the community	Secondary data e.g. AEDC results, NAPLAN results

N.B. A fifth kind of feedback is collected in Best Start, namely survey feedback from families and service providers, however this feedback is not used to measure progress. Rather, it provides insights about the service system's strengths and areas for improvement, which can be used to determine priorities for action in Stage 1: Design or review the partnership logic model and design change ideas in Stage 2: Design, test and implement stretch goals. This feedback, which can include responses to open-ended questions, can be collected on a quarterly basis through the portal.

Collecting and using feedback (or data) for individual PDSA cycles was covered in the previous stage, Design, *test and implement strategies*. This chapter will focus on the feedback collected to measure short-term outcome stretch goals, the Best Start primary outcomes and longer-term outcomes related to children's development, as well as the survey feedback collected to determine areas for improvement.

Organising feedback through a community dashboard

Best Start uses a community dashboard to collect and visualise feedback collected against the short-term outcome stretch goals and Best Start primary outcomes. Each site has a personalised dashboard produced and accessed through the online portal at www.collaborate.edu.au

This portal can visualise locally collected administrative data, collects feedback via online surveys and accesses administrative data from a range of sources including DET. It produces a visualisation of progress made against outcomes in the short term, i.e. feedback against stretch goals; medium term, i.e. MCH and ECEC participation rates; and long term, i.e. children's developmental outcomes, for example AEDC results. It may also include data from family and service provider surveys to communicate potential areas for action. An example dashboard is provided in Figure 15.

Long-term outcomes

Children's developmental progress at school entry (AEDC)

Medium-term outcomes

Primary Best Start outcome: Kindergarten participation

Short-term outcomes

Stretch goals related to service coordination and collaboration (time from offer of kinder place to first day of attendance) and relationship-based practice (MCH do not attend rate)

Survey feedback

Feedback from service providers about their understanding of Early Start Kinder; and from families about how it easy it was to enrol in kindergarten

Figure 15: Example community dashboard

Why use a community dashboard?

A community dashboard gathers feedback at regular intervals that is meaningful to the work of the partnership and enables the partnership to make a rapid assessment of improvement. This is in contrast to more traditional sources of community data that:

- offer annual trends, at best
- are heavily focused on long-term outcomes that do not change quickly and are often beyond the ability of a community to influence (such as, rates of low birth weight, poverty)

- only focus on what is available, rather than what is meaningful for changing practice
- rely on costly, or unsustainable/non-replicable data collection to supplement existing data.

Community dashboards organise feedback in a way that tells a visual story of the partnership's progress. It can be a very powerful tool to mobilise the partnership and community buy-in to the improvement work.

Some other benefits of using a community dashboard include:

- focusing the community partnership on shared outcomes
- considering all children and families in the community, not just those in your involved your initiative
- prioritising areas for improvement that will have a big, observable impact
- connecting many people to a common process of how to "get from here to there"
- setting expectations to see change
- giving the community partnership real-time information on what is happening in the community, with parents as the voice of the system.

Implementation

This section provides instructions for collecting feedback and using it to regularly monitor progress. The Best Start facilitator is responsible for coordinating the tasks described under *Collecting feedback against* while data analysis tasks will be undertaken by the facilitator together with the improvement teams on a monthly basis, and on a 2-3 monthly basis with the partnership.

Collecting feedback

As already described, feedback is gathered at four levels to monitor progress, with a fifth type of feedback also collected for the purpose of identifying areas for improvement in the service system.

1. The process for gathering feedback against individual PDSA cycles has been described in Stage two, *Design, test and implement strategies.*
2. The process for collecting feedback against short-term outcome stretch goals is described below.
3. The collection of feedback against the Best Start primary outcomes is automated through the online portal.
4. The collection of feedback against the long-term outcomes is also automated through the portal.
5. The process for collecting family and service provider perspectives via survey is described below.

The process of selecting measures for short-term outcome stretch goals and selecting items for family and service provider feedback is undertaken once a year, prior to the first collection period of the financial year. The following tasks are undertaken in the 'Setup' tab of the portal (see www.collaborate.edu.au).

Selecting monthly measures for short-term outcome stretch goals

Task 1. Identify appropriate monthly measures

A monthly measure of a stretch goal will indicate whether progress has been made towards it. To identify a measure, it is helpful to ask: 'If we make progress towards our stretch goal, what will we see?' The facilitator supports the relevant improvement team to identify relevant monthly measures for each of the stretch goals. Table 12 provides examples.

Table 12 - Example indicators

Short-term outcome area	Stretch goal	If we make progress towards our stretch goal, what will we see?	Possible monthly measures
Relationship-based practice	90% attendance at Dandenong South kindergartens	• Higher attendance • Lower absences	• Attendance rate • Number/percentage of absences
Service continuity and collaboration	50% increase in the number of children enrolled in ESK	• More ESK-eligible children identified • More ESK-eligible children enrolled	• Number of new ESK-eligible children identified • Total number of ESK enrolments

When developing measures for your stretch goals, keep in mind the following:

- They should be easy to collect on a monthly basis: they are likely to be administrative measures (e.g. attendance)
- They must be reliable: it measures the same thing over time so that we can track progress over time
- They should be sensitive to change: it tells us if actions are producing better results
- We can ideally set a target for measures: we know what the "best" system anywhere can produce; we have a target we are aiming for.

Explainer: Why monthly measures?

Measuring and monitoring your stretch goals on a regular basis, enables you to understand what effect the testing and adoption of change ideas is having. Regular feedback, in the form of monthly measures, enables the improvement team to understand whether they should continue to pursue a change idea and over time can provide evidence for wider spread of the idea through plotting the data on a run chart (see *Using data to regularly monitor progress* overleaf). More frequent measures of your stretch goals (e.g. fortnightly, weekly or even daily) can also be used to track improvement – in fact, the more frequent the measure, the more helpful. However, the opposite is also true – less frequent measures (e.g. quarterly, annual) are not so useful in understanding the effect of improvement efforts. Imagine having to wait three months or more to begin to see if your efforts are making a difference! Monthly measures have been selected for monitoring in Best Start as a compromise between usefulness and effort of collecting data.

Task 2. Select relevant 'ready to use' measures

A set of 'ready to use' monthly local entry indicators have been developed and are available on the portal for use. They are measures of:

- Maternal and Child Health Service attendance
- Kindergarten enrolment and attendance
- Early Start Kindergarten enrolments and attendance
- Supported playgroup enrolments and attendance
- Outreach activities attendance.

These monthly administrative measures are to be collected locally for the site's particular target group (e.g. attendance rate for services in a particular suburb, MCH did not attend (DNA) rate for Aboriginal children and families across the site). Some measures may be easily extracted from central databases (e.g. MCH DNA rates) while others may require more manual collection (e.g. kindergarten attendance). Review this set of local entry indicators to identify and select relevant monthly measures under the 'Setup' tab at www.collaborate.edu.au.

Task 3. Develop additional measures if necessary

There may be gaps between your identified monthly measures and the set of local entry indicators. If this is the case, you may develop your own monthly measures and set these up under the 'Setup' tab at www.collaborate.edu.au.

Task 4. Collect data

Monthly measures data can be manually input via the 'Collect' tab of www.collaborate.edu.au.

Selecting survey questions for family and service provider perspectives

Task 1. Select relevant survey questions


To support broader information gathering about the status of the local service system, a set of survey questions has been developed to collect family and service provider feedback for each of the short-term outcomes areas. These survey questions can be found under the 'Setup' tab at www.collaborate.edu.au. Sites are encouraged to select the set of survey questions that relate to their selected short-term outcome areas, to enable them to gather ongoing feedback about the possible barriers and areas for improvement within their area of focus. The selection of these survey questions in the portal will automatically create a set of family and service provider surveys that can be distributed on a quarterly basis.

Task 2. Develop additional indicators and survey questions

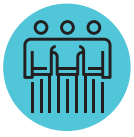
Sites can develop additional survey questions if there are additional topics that they would like to gather families' or service providers' feedback on to inform their work. The portal provides guidance around how to set up unique survey questions.

Task 3. Implement the survey tool

Once you have selected and developed your survey questions, a number of details should be decided in order to implement the survey tool and collect quarterly feedback. These include:

- Does the tool need to be approved? By when? By whom?
- How will it be administered? (E.g. it could be emailed to parents directly or parents could fill it out on an iPad in the service.)
- Who will be responsible for implementing the survey? (E.g. if at the service, will someone support the parents to complete the survey?)
- When will the survey open and when will it close?
- Who will be involved in analysing the results? (E.g. is this the role of your partnership or an improvement team?)

Using data to regularly monitor progress




The facilitator, together with the improvement teams on a monthly basis and the partnership on a two to three monthly basis, will use the data available to them to monitor progress. There are two levels of feedback available for this analysis:

- Data collected against individual PDSAs
- Data collected against short-term outcome stretch goals.

N.B. Family and service provider feedback collected through quarterly surveys may be fed into these monthly conversations as it becomes available. However, it is important to note that the purpose of this data is not to monitor progress, but rather to shed light on possible barriers and areas for improvement. Family and service provider survey data also has a role to play in Stage 1 in terms of informing the review of the logic model, Stage 2 in terms of feeding into the design of change ideas, and Stage 4 from the perspective of reflecting on what has been learnt across the year.

Data collected against individual PDSAs

The data collected against all PDSA cycles conducted in the month should be shared with the improvement team and an assessment made on what has been learnt about how to address the stretch goal. The partnership can review this data on a two to three monthly basis to understand which practices are promising, and which could/should be spread across the Best Start site.

Data collected against the short-term outcome stretch goals

The monthly measures data on the portal is reviewed by the improvement teams to assess progress made against each of the stretch goals in the month. Implications for the next month's improvement work are also identified. The partnership reviews this data on a two to three monthly basis. This ensures that the fast-turning feedback loop between stages two and three of the Best Start implementation takes place (see Figure 16).

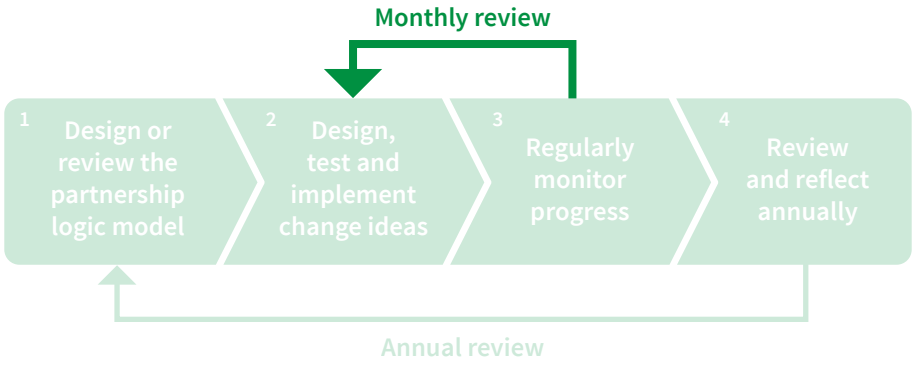


Figure 16: Fast turning feedback loop between stages two and three

Using run charts to determine improvement

Run charts can be used to visualise monthly data and determine more rigorously whether efforts in a site are leading to improvement in the measure (rather than simply 'eyeballing' patterns in the data). Run charts plot data across time and include a goal line and a median line (calculated using baseline data) that is used to determine whether improvement has occurred (see Figure 17). Run charts can be set up under the 'Collect' tab on www.collaborate.edu.au.

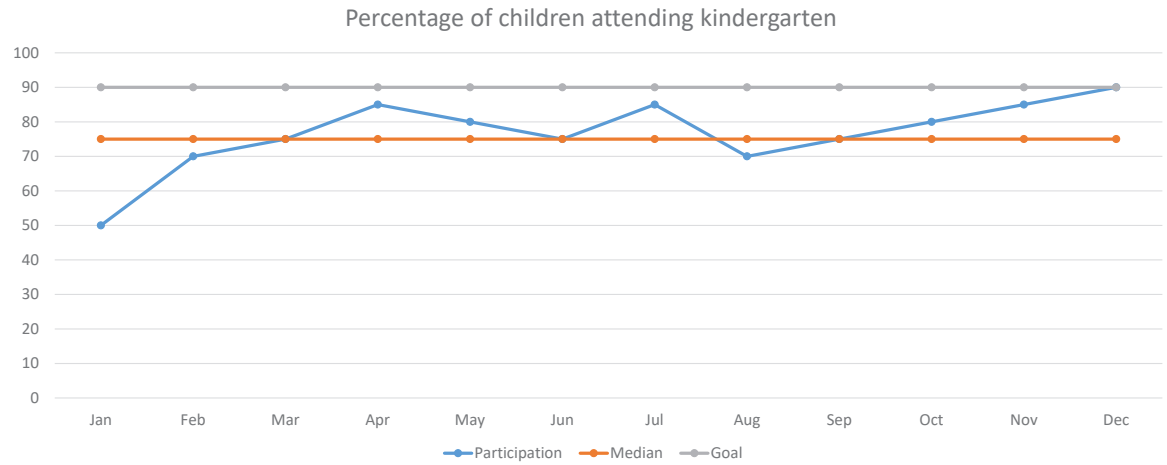


Figure 17: Example of a run chart with goal and median lines

There are four rules that are used to "analyse a run chart for evidence of non-random patterns in the data" (Perla, Provost & Murray 2011), in other words to look for signals that your efforts may actually be leading to change. The rules are provided in the Table 12. These rules need to be interpreted with an understanding of your context, in other words, how the timing of a shift, trend, astronomical point or too few/many runs relates to the timing of your improvement efforts. The timing of PDSAs and implementation of successful change ideas can be plotted on the run chart to support this analysis. The identification of a shift, trend and astronomical point is shown in Figure 18.

Table 13 - Run chart rules (adapted from NHS Scotland, n.d.)

Rule	How to identify
A shift	The presence of six or more data points above or below the median line, indicating evidence of change. Identification of a shift requires more than ten data points.
A trend	The presence of five or more data points all going up or going down (and can be across the median), indicating evidence of change. Identification of a trend can be done with fewer than ten data points.
Too few or too many runs	The number of runs equals the number of times the line connecting the points crosses the median line, plus one. Then refer to the 'table of critical values' (see Appendix G) to identify whether the run chart has fewer or more than the expected number of runs, indicating evidence of change. This rule requires more than ten data points.
An astronomical point	The presence of a blatantly different value from the rest of the points, possibly indicating change. Identification of an astronomical point can be done with fewer than ten data points.

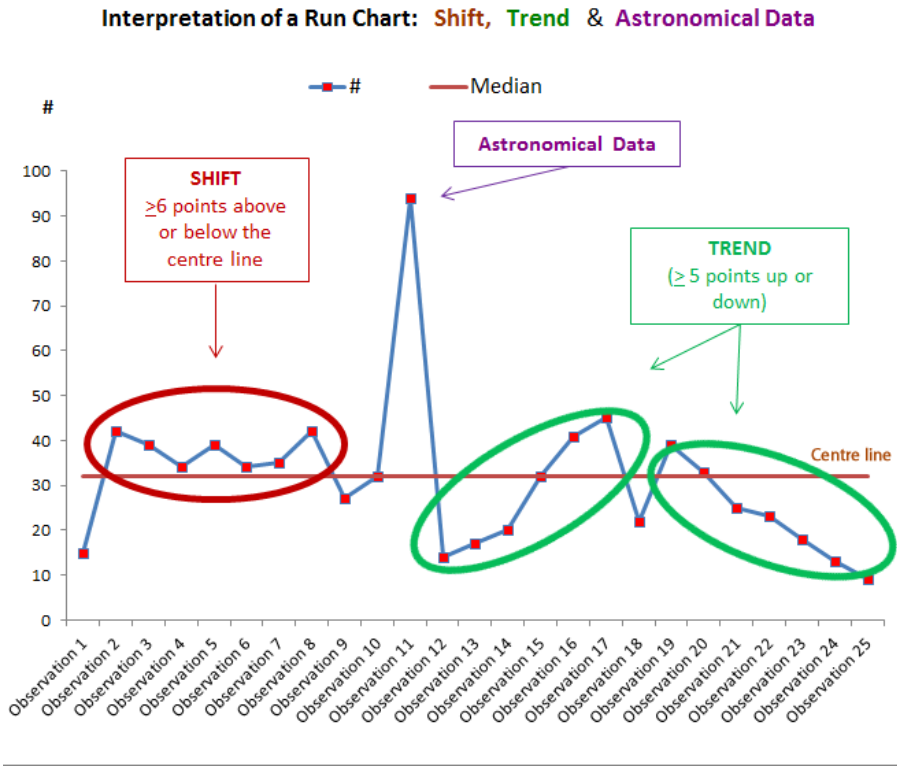
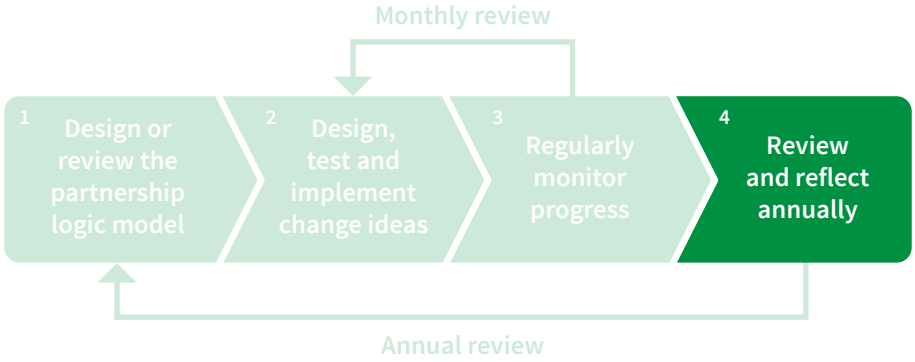


Figure 18: Run chart with shift, astronomical point and trend identified (NSW CEC, n.d.)

Stage four: Review and reflect annually



Purpose

This section will:

1. explore the value in reviewing and reflecting annually
2. describe how to undertake an annual review process.

Background

The Best Start annual review process

Undertaking an annual review is the fourth stage of implementation and is part of the slower-turning feedback loop. It connects directly to the first stage of the next cycle where the partnership's logic model is reviewed. This annual process provides the Best Start partnership with the opportunity to reflect on:

- changes/improvements against the short-term outcome stretch goals and the Best Start primary outcomes
- the successful practice and system changes that have been implemented
- what has been learnt about what hasn't worked and to hypothesise why recent efforts haven't led to improvement
- the implications of these reflections on the focus of the partnership's work in the following 12-month period.

Why review and reflect annually?

Undertaking this step allows the partnership to discover to what extent its work has led to improvement in the local service system and an improvement in the participation of children and families in MCH and ECEC at the Best Start site. This is important for these reasons:

- Demonstrating accountability to the community, funders and other stakeholders
- Providing an opportunity to celebrate improvements
- Allowing the partnership to identify what works and where the barriers to improvement lie
- Ensuring that the work of the next 12 months is informed by what has already been learnt.

What data will be available for the annual review?

All data collected over the financial year will be available for the annual review, as detailed in Table 14.

Table 14 - Data available for your annual review

Level of data	Range of data
PDSA cycle data	Data from all completed PDSA cycles over the 12 month period
Stretch goal data	Monthly run charts
Best Start primary outcome data	Administrative data from the previous calendar year • Annual kinder participation (LGA/SA2) • Quarterly ESK enrolment (LGA) • Quarterly Supported Playgroup enrolment (LGA) • Annual MCH participation (LGA) (N.B. All data sets available for Aboriginal children at LGA level)
Other data	Survey feedback from families and service providers from the four quarters Slower-turning community-level data e.g. AEDC, NQS.

Implementation

This section provides instructions for undertaking your annual review process.

The Best Start facilitator is responsible for the tasks described under *Part A: Behind the scenes work* while the facilitator together with their partnership undertakes *Part B: Collective work*.

Part A: Behind the scenes work

The 'behind the scenes' work is undertaken by the facilitator, possibly with support from one or two improvement champions or data analysts, and involves preparing for the annual review partnership meeting. It consists of two steps:

1. Analysing the four levels of data
2. Identifying key data to develop and support the narrative.

Step 1: Analyse the four levels of data

Before heading into the partnership meeting it is helpful for the facilitator to have initially analysed the different levels of data, to enable them to efficiently support the partnership to develop a collective understanding of progress and learnings.

Level 1: PDSA cycle data

The objective of analysing your combined PDSA cycle data from the last 12 months is to understand what has been learnt across all PDSA activity over the year. Analysis involves pulling together all PDSA activity under each short-term outcome area. For each short-term outcome area, you should consider:

- What are the ideas that have been tested over the past 12 months?
  - How many cycles of testing has each change idea gone through?
  - How widely have each of the change ideas been tested?

- Which change ideas have been found to work or are demonstrating some promising practice?
  - Which of these ideas have been sustained or embedded into practice?
  - Which of these ideas have been spread across service, sites or the service system?
- Which change ideas have been found not to work? And what did the partnership or improvement teams learn from these?
  - For example, PDSAs that services either adapted or abandoned. Why did these change ideas not work?

An example of how you might pull together data from across all PDSA cycles conducted over the course of the year is provided in Appendix I: Example 12 month PDSA data summary.

Level 2: Stretch goal data

The objective of analysing all 12 months of short-term outcome feedback is to understand what progress has been made against your stretch goals, and more broadly how the performance of your service system has improved. Analysis involves looking at the responses on your run charts under each short-term outcome area over the last 12 months and considering:

- what is the pattern telling you? (i.e. improvement, no change, regression) – refer to the run chart rules in Stage 3
- is this what was anticipated? (Why or why not?)
- is it in line with your combined PDSA cycle findings?
- what are other explanations for the pattern?
- overall, what progress has been made towards the stretch goal?

Level 3: Primary outcome data

The objective of analysing your primary outcome data is to understand what progress has been made against the primary outcomes (i.e. the participation of children and families in MCH and ECEC). Analysis involves looking at the data on your dashboard under each primary outcome and considering:

- what is the pattern telling you? (i.e. improvement, no change, regression)
- is this what was anticipated? (Why or why not?)
- is it in line with your short-term outcome feedback findings?
- what are other explanations for the pattern?
- overall, what progress has been made towards the primary outcomes?

Level 4: Other data

It is important to consider feedback from family and service providers through your surveys as well as the broader data about your community (e.g. AEDC, NQS, DET parent satisfaction survey data, MCH client satisfaction survey data, EYM client survey data) at the end of the year to identify possible areas for improvement, and to consider how this information might align with the findings from your three other data sources.

Step 2: Develop the narrative and identify key data

The second and final step in the 'behind the scenes work' is to develop a story that communicates to your partnership what has been learnt and achieved over the course of the 12 months by drawing together your analysis of the three levels of data. It is helpful as part of this process to also identify the key data that supports the delivery of this story.

There are a number of ways of approaching the development of your narrative. The following are suggestions only:

- Tell the story from the bottom up i.e. PDSA successes, leading to short-term outcome improvements, leading to primary outcome improvements.
- Tell the story from the top down i.e. changes in primary outcomes, achieved by changes in short-term outcomes, enabled by PDSA successes.
- Develop a narrative for each short-term outcome area or target group.
- Use case studies to spotlight particular successes.
- Highlight what has been learnt about what works (and what doesn't).

Part B: Collective work

Collective work consists of three steps across one or more meetings:

1) Developing a collective understanding of progress and learnings
2) Identifying priorities for action
3) Revising your logic model.

The collective work is undertaken by the partnership, facilitated by the Best Start facilitator.

Step 1: Develop a collective understanding of progress and learnings

Developing an understanding as a partnership of what has been achieved and learnt over the last 12 months is beneficial for a number of reasons. One of the most important is the sense of ownership that is developed of the partnership's work and the subsequent support of partners for future endeavours.

The starting point for developing this shared understanding is the presentation of the narrative and key data developed in the 'behind the scenes' work. Once the narrative has been shared, the facilitator is able to:

- explore individual partners' analysis of the data and ask for input into unclear or unresolved findings
- pull together the collective's impression of their achievements and progress
- identify the partnership's summary of what it has learnt in the last year.

The facilitator might invite the partnership to reflect on the following:

- What successful change ideas need consolidating? (e.g. embedding/sustaining, spreading)
- What unsuccessful change ideas justify further exploration?
- How have we progressed towards our stretch goals?
  - What does this mean in terms of future goals?
  - Do they need to be revised?
  - Or do they need further stretching if they've already been met?
- What have we learnt about how to best progress towards our stretch goals this year?
- What have we learnt about engaging relevant partners/stakeholders in improvement work this year?

- What other trends have emerged, both from portal data (e.g. annual data) and from community feedback, service provider knowledge, about what is most pressing for our community (in terms of reaching the Best Start outcomes) in the next 12 months?

Step 2: Identify priorities for action

Once the partnership has developed a shared understanding of progress and learnings, you will move on to identifying priorities for action. Priorities for action are based on the collective reflections of the partnership. From these reflections the partnership agrees what should be addressed or incorporated into the next year of work. Examples include the discovery of:

- an emerging new target group
- a promising practice change that could be spread across the region
- no improvement against a particular short-term outcome area despite intensive and sustained efforts.

Priorities for action may be identified by considering as a group:

- What have been the most significant improvements, changes or lessons this year? How can we build on these?
- What have been the biggest barriers to progress? How can we address these?

Step 3: Revise your logic model

You will use your priorities for action to shape the revision of your logic model for the next calendar year. It may be helpful to return to the first stage of implementation, *Design or review the partnership logic model*, and follow the suggested order and prompts when reviewing each of your logic model's components. Revising a logic model can be a complex and time consuming task. You therefore may opt to work with one or two key stakeholders to draft your revised model, and then take the draft to the next partnership meeting for feedback and final agreement. Once you have an agreed revised logic model, you will be ready to embark on another twelve months of designing, testing and implementing change ideas, regularly monitoring progress, and reviewing and reflecting at the end of the year.

Templates/additional resources

To help you summarise your PDSA cycle data from across the year, an example of how this can be done is provided in Appendix I: Example 12 month PDSA data summary.

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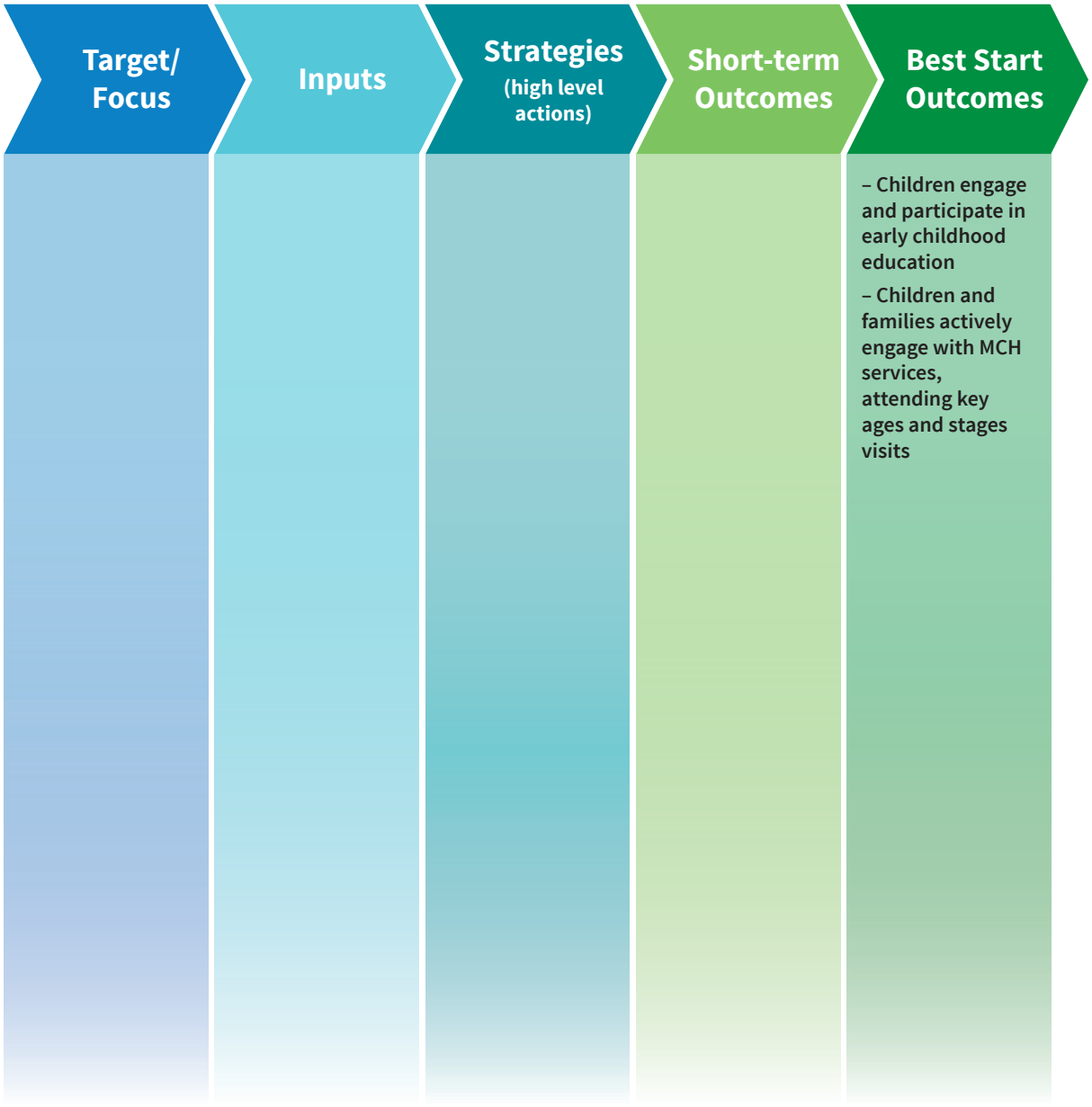
Appendices

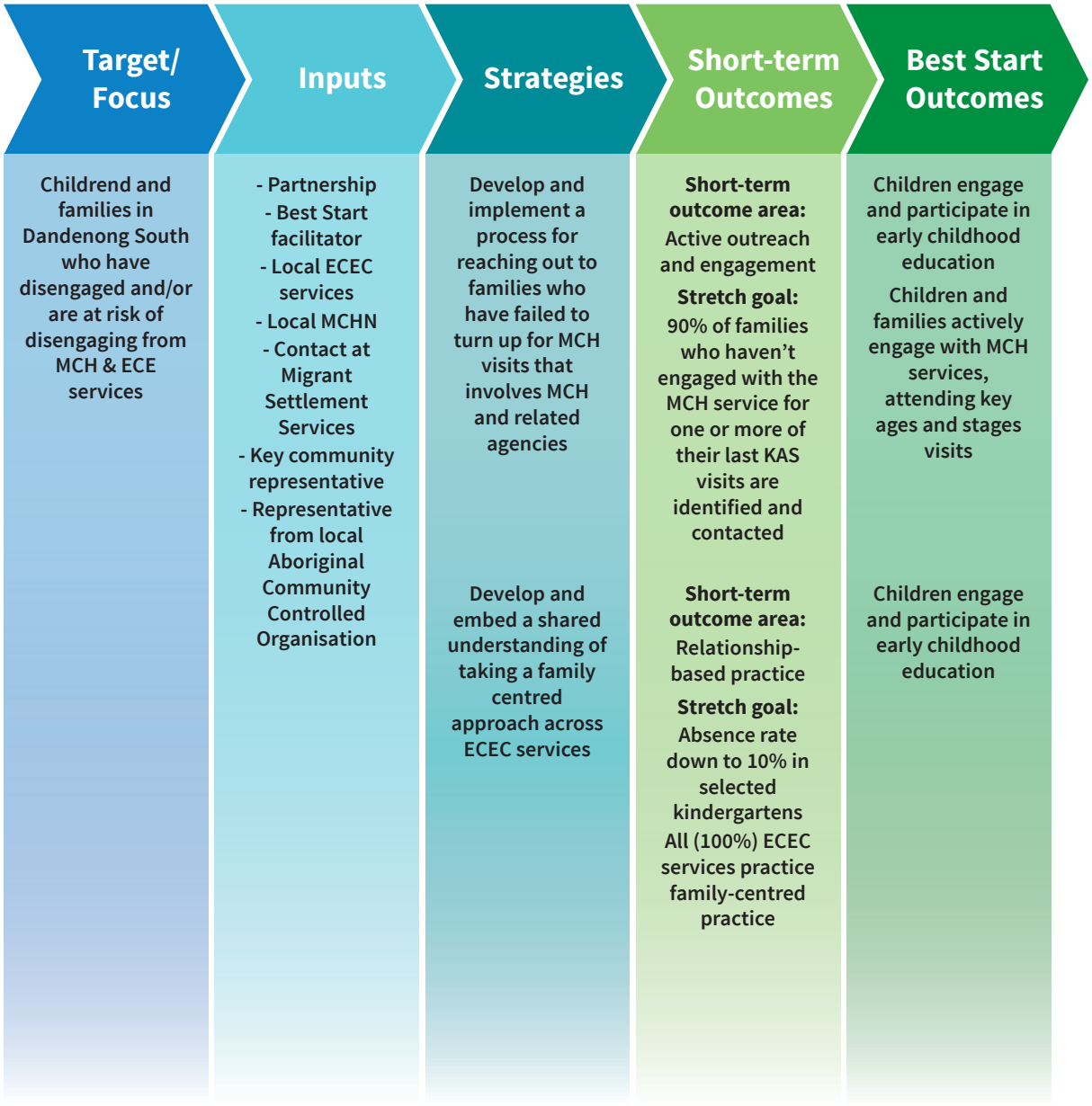
Appendix A: Best Start Logic Model template



Appendix B: The Rosetta Stone for Logic Models

Logic model term	Definitions	Other terms you may use; eg	Examples	Helpful questions
Focus/ Target	The partnership's strategic focus. Describes the characteristics of the population the partnership would like to work with.	*Audience*	Children in our LGA who are in out of home care Children and families in suburb x Families who don't regularly attend the MCH service	"Which population group will we focus on?" "What does the local evidence or data tell us about who we need to work with?" "Does the local evidence/data support our focus?" "Is there a population priority for our local government area?" "Where can we add value?"
Inputs	The resources – e.g: people, physical environment, tools, or funding – the partnership will need or use.	*Resources*	Best Start facilitator Partner agencies Additional funding	"What resources do we have to support our strategies?" "What resources do we need to support our target group?"
Strategy	High level plans of action designed to achieve the stretch goal. What the partnership will do broadly to achieve the stretch goal.	*Outputs* *High level actions*	Develop a shared understanding of taking a family-centred approach across services Provide the MCH service in more easily accessible locations	"How are we going to get to where we want to go with this initiative?" "How are we going to achieve our stretch goal?" "Does the logic suggest this strategy will lead to our short-term outcome stretch goal?"
Short-term outcome area	The domain in which change is expected in 12 months as a result of the initiative. To be selected from the five short-term outcome areas.	*Short-term result*	Service accessibility Service continuity and collaboration Relationship-based practice Active outreach and engagement Family awareness and beliefs	"What is the systems change we want to see in the next 12 months?" "What are the main barriers in our community to achieving the Best Start primary outcomes, and therefore which short-term outcome areas should we focus on?" "What does the local data and evidence tell us about which short-term outcome area we should focus on?"
Stretch goal	The significant improvement or change the partnership is aiming to achieve in 12 months.	*Objective*	90% attendance at selected kindergarten services 50% increase in ESK enrolments across the site	"What change can we make in the short-term outcome area over the next 12 months that will reflect an improvement in the service system?" "Will this goal stretch us?"

Appendix C: Additional logic model example



Appendix D: Model for Improvement - Additional resources

1. **Additional information about the Model for Improvement**
   - *The thinking part*

     This is an excellent 5-minute video that goes over the MfI (the thinking part) and links it nicely with the PDSA: http://www.ihi.org/education/IHIOpenSchool/resources/Pages/CourseraVideo8.aspx
   - *The doing part* (PDSA cycles)

     This is a short 3-minute video which outlines the PDSA cycle in a very succinct way: https://www.youtube.com/watch?v=szLduqP7u-k

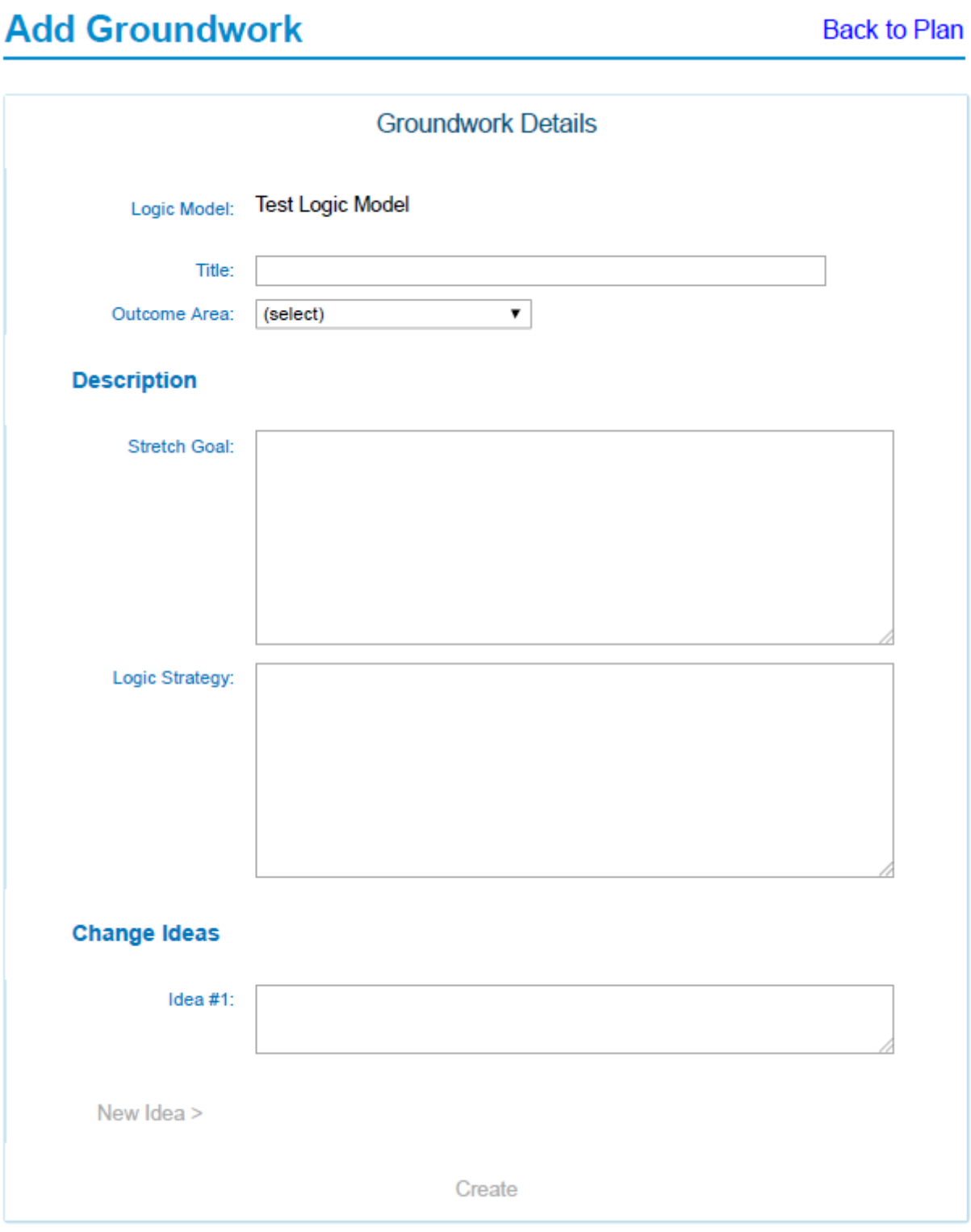
2. **Examples of similar initiatives that have used the Model for Improvement/PDSA cycles**
   - *Bridging the Gap*

     A partnership group used PDSA cycles to try new ways to enable staff to be supported in offering women with low English proficiency an accredited interpreter early in labour.

     https://www.mcri.edu.au/research/projects/bridging-gap/project-profile
   - *Magnolia community initiative*

     This is a community partnership project that uses the Model for Improvement to mobilise change. See Pages 20-21 http://magnoliaplacela.org/wp-content/uploads/2016/07/GettingToScale_MagnoliaPlace.pdf

Appendix E: Groundwork template from collaborate.edu.au



Appendix F: Example of how to use three types of evidence to design change ideas

The Greenfields Best Start 'early childhood education improvement team' is meeting to develop change ideas for their strategy: Developing a shared understanding of family-centred practice and embedding these practices in service delivery (see logic model on page 11). In preparation for the meeting the facilitator has asked the improvement team members to do two things: 1) reflect on their experiences of effective family-centred practice, how and when it has worked in their service; and 2) refer to the evidence outlined in Supplementary Article 3 about practice-based evidence prior to the meeting. The facilitator has prepared a summary from Supplementary Article 2 specifically focused on elements from the evidence-based programs that are relevant to improving family-centred practice.

At the meeting the facilitator explains that the purpose of the meeting is to break down the strategy into simple and specific actions (change ideas) to be tested in the Plan-Do-Study-Act (PDSA) cycle, based on the best available evidence. The facilitator presents the elements from the evidence-based programs relevant to improving family-centred practice. After this the improvement team brainstorms a list of change ideas.

- The group identifies a couple of features from the evidence-based programs in Supplementary Article 2 which they could trial; making a home visit if children are absent from kindergarten and allowing parents to participate in the classroom. (These are examples of elements from evidence-based programs.) These are added to the list.
- An improvement team member says that one of his colleagues has developed effective working partnerships with parents because they make a practice of sharing decision-making with parents when they are seeking solutions, or managing problems. (This is an example of evidence-based processes: individual practice wisdom/expertise.) This is added to the list.
- A representative from an early learning centre states that they have developed a welcoming environment checklist that they regularly review and reflect on together. (This is an example of evidence-based processes: collective practice wisdom/expertise.) This is added to the list.
- Another improvement team member states that their centre surveyed their parents and discovered parents feel welcome and comfortable when practitioners use their name. (This is an example of evidence-based processes: practice-based evidence.) This is added to the list.
- An improvement team member suggests surveying parents and families of pre-school children at selected centres to discover how to improve family-centred practice. This is discussed and the group decide that although this has merit it is not a change idea. This is not added to the list.
- One of the kindergartens has a Family Links Worker who provides ongoing support for families to access services and supports in the community. (This is an example of evidence-based processes: proven to be effective.) This is added to the list.
- Finally, another improvement team member offers that families at their kindergarten often ask them for more regular feedback on their child's progress. (This is an example of client values.) This is added to the list.

The improvement team ranks, amends or deletes change ideas based on their hunches about what will/won't work in their context, and whether it is straight forward enough to start as soon as possible. They come up with a short-list of change ideas:

1. Greet parents by name and ask if unsure of their name/pronunciation.
2. Station a staff member at the door at pick up to discuss the progress of a child with their parent.
3. Ask families what they would like their child to get out of the term at the start of the term.
4. When coming up with solutions to problems, ask families first 'what do you think will work?'.

Appendix G: Table of critical values to use when analysing run charts

The table of critical values is used to determine whether there are either fewer or more 'runs' in a run chart than would be expected by chance alone, indicating a non-random pattern or 'signal of change'. The number of runs in a run chart equals the number of times the line connecting the points crosses the median line, plus one. Using the left hand column in the table of critical values below, you can see the lower limit and upper limit of runs that would be expected by chance, for the number of data points on your chart. If your number of runs is below the lower limit or above the upper limit, this signals change. In other words, this is evidence of your efforts making a difference to your measure!

Total number of data points on the run chart that do not fall on the median	Lower limit for the number of runs (< than this number runs is 'too few')	Upper limit for the number of runs (> than this number runs is 'too many')
10	3	9
11	3	10
12	3	11
13	4	11
14	4	12
15	5	12
16	5	13
17	5	13
18	6	14
19	6	15
20	6	16
21	7	16
22	7	17
23	7	17
24	8	18
25	8	18
26	9	19
27	10	19
28	10	20
29	10	20

(Adapted from Perla et al. 2011)

Appendix H: PDSA template from collaborate.edu.au

Edit PDSA Report

Back to Reports

PDSA Report

Reporter: Alice Ghazarian

Created: 22/01/20

Details

Groundwork: ZM005: Test Groundworkd

PDSA Code: **ZM005/5**

PDSA Title: **PDSA Template**

Focus: ☑ MCH ☑ ECEC

Visibility: Shareable ▾

Follows PDSA: (none) ▾

Idea

Change Idea: (select) ▾

Plan

Enter here all aspects of your PDSA plan to be undertaken.

What tasks or activities will be undertaken to achieve your change idea?

Who is responsible for each aspect of this PDSA? (eg. implementation, collecting data and analysing data)

Are there any leave plans which may impact on the implementation?

When will you commence and complete the PDSA? **18/12/19** to **26/01/20**

Where will be the plan be executed - in which service, site or area?

What do you predict will happen as a result of implementing the change idea, and why might it work?

Are there any barriers or risks? (eg. events coming up,

children away)

If so, how do you intend to work around those risks?

What data will you need to collect to see if the change idea has led to your prediction?

Baseline Data:

Do

Carry out the PDSA and record data as you had planned.

Start Date:

Document the implementation of the PDSA, including any unexpected events or problems:

Complete Date:

Study

Review and reflect on the results, including qualitative and quantitative data.

Was the PDSA executed exactly as planned? Did the change idea meet your prediction, and if not, why not?

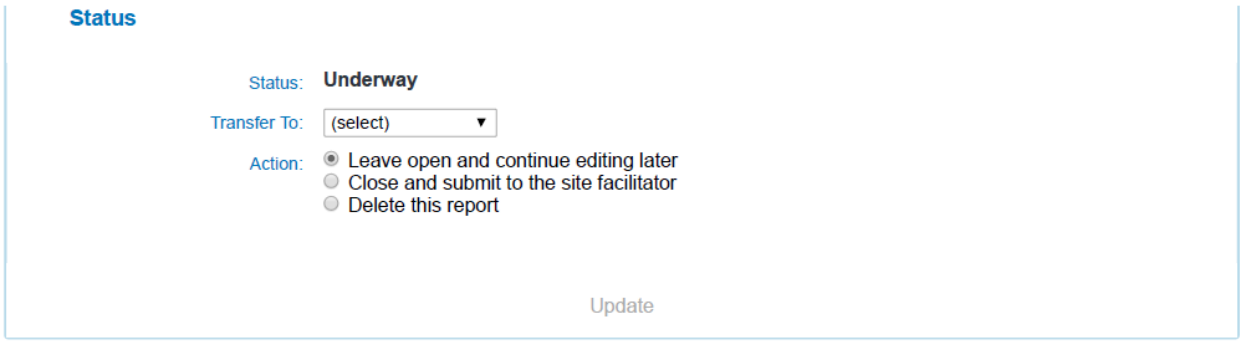
What were the key learnings?

Change Data:

Act

What will you do now? ○ Adopt ⓘ ○ Adapt ⓘ ○ Abandon ⓘ

Comment:


Status
Status: Underway
Transfer To: (select)
Action: Leave open and continue editing later
Close and submit to the site facilitator
Delete this report
Update

Appendix I: Example 12 month PDSA data summary

Short-term outcome area: Relationship-based practice

Change idea 1: Kindergarten staff greet families by name at drop off

Quarter	PDSA cycle	Services testing	Result	Service sample size	Family sample size
Quarter 1	1	A	Adapt	1	20
	2	A	Adopt		
Quarter 2	3	B, C, D	Adopt	7	140
	4	E, F, G	Adopt		
Quarter 3	-	-	-	7	140
Quarter 4	-	-	-	7	140

Change idea 2: MCH staff ask families at beginning of each session "what would you like to get out of today's appointment?"

Quarter	PDSA cycle	Services testing	Result	Service sample size	Family sample size
Quarter 1	1	M	Adapt	1	20
Quarter 2	2	M	Adapt	1	20
	3	M	Adopt		
Quarter 3	4	N	Adapt	2	40
	5	N	Adopt		
Quarter 4	6	O, P	Adopt	4	80

Narrative: Two relationship-based practice change ideas were tested, refined and spread this year. The first idea was 'greeting parents by their name at drop off'. One educator in one early education centre first tested the change idea and after some slight adaptation found that it increased the quality of her relationships with the families and had a longer-term impact on the attendance pattern of children. The centre then adopted this practice with all staff and were able to motivate six other centres to test the change idea. All staff at seven early education centres are now greeting families by name. The second idea was to ask parents at the beginning of an MCH visit, '*what would you like to get out of today's appointment?*'. This was initially tested by one nurse at a maternal and child centre over a couple of cycles where the idea was slightly adapted. The nurse discovered after the third cycle that when she used this change idea families were more engaged in the appointment and asked more questions. This change idea has now been adopted by all nurses at four maternal and child health centres.

Short-term outcome area: Active outreach and engagement

Change idea 1: Kindergarten staff ask parents whether their child has had their 3.5 year KAS MCH visit and arrange follow up with MCH nurse if required

Quarter	PDSA cycle	Services testing	Result	Service sample size	Family sample size
Quarter 1	1	E	Adapt	1	20
	2	E	Adopt		
Quarter 2	3	F	Adopt	4	80
	4	G	Adopt		
Quarter 3	5	H, I	Adopt	9	180
	6	J, K, L	Adopt		
Quarter 4	-	-	-	9	180

Change idea 2: MCH staff identify families who have missed 3.5 year visits and contact to make appointment

Quarter	PDSA cycle	Services testing	Result	Service sample size	Family sample size
Quarter 1	1	P	Adapt	1	20
	2	P	Adapt		
Quarter 2	3	P	Adopt	1	20
Quarter 3	4	Q	Adopt	2	45
Quarter 4	5	R, S	Adopt	4	95

Narrative: Over this 12 month period two active outreach change ideas were tested, adapted and spread. The first change idea (asking parents whether their child had had a 3.5 year MCH KAS visit and arranging follow up with nurse if required) was tested with kindergarten staff at one early education service and after some adaptation was adopted by the service. This practice was discovered to identify multiple children who had missed their 3.5 KAS visit and resulted in over half of these children attending their appointment. The practice was quickly adopted by staff at seven other early education services. The second change idea was also successful. Using available data, nurses at four MCH centres are now systematically contacting families who have missed 3.5 years KAS visit to reschedule/make appointments. The majority of these appointments are being kept by families resulting in a higher number of 3.5 year visits each month.

Appendix J: Examples of tools for brainstorming change ideas

Fishbone Diagram (Cause and Effect Diagram)

The fishbone diagram provides a visual representation of the brainstormed contributing issues or causes to a problem (see Figure 19).

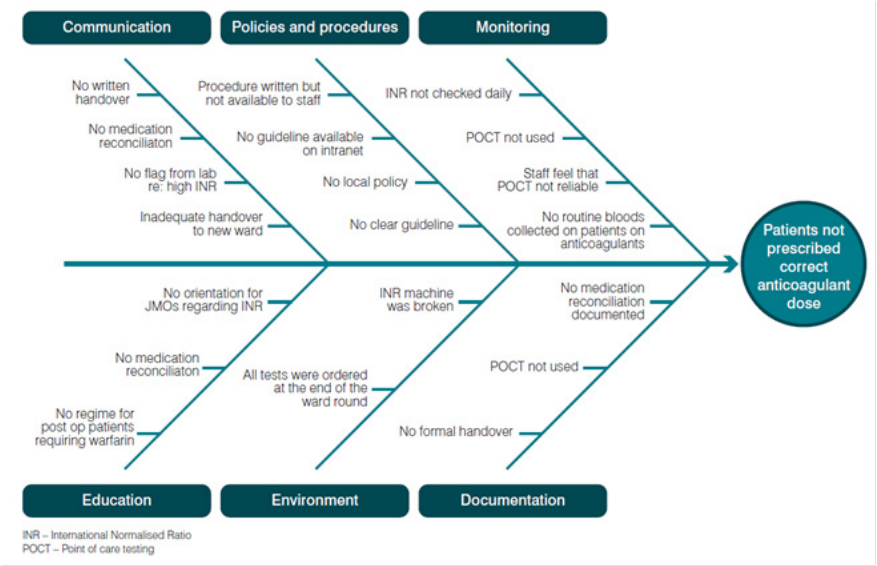


Figure 19: Example of a fishbone diagram (NSW CEC, n.d.)

To create a fishbone diagram:

- Put the problem on the far-right of the diagram, i.e. at the end of the fish 'backbone'
- Organise the contributing issues/causes into categories
- Insert these category headings at the end of each of the main 'bones'
- Insert the individual causes in each category, along the relevant bone

A fishbone diagram template is provided in Figure 20.

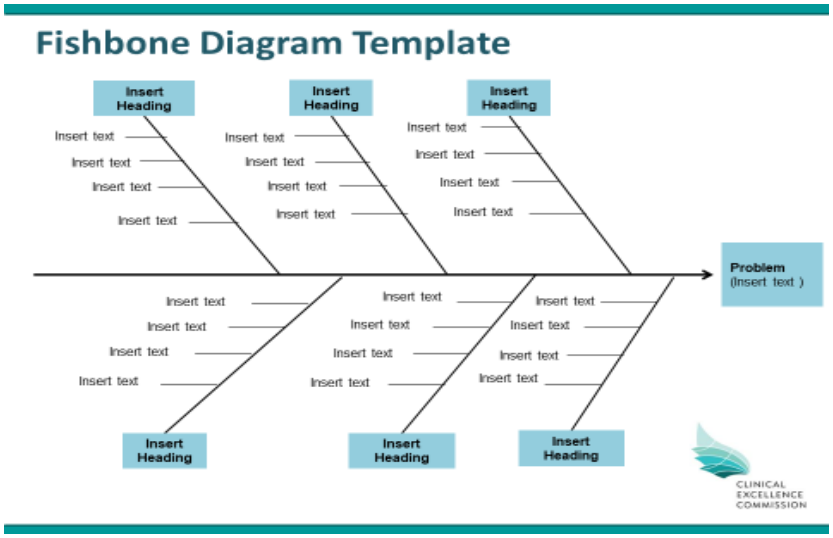


Figure 20: Fishbone diagram template (NSW CEC, n.d.)

Additional resources

- A PowerPoint template from the NSW Clinical Excellence Commission can be downloaded from here.
- An instructional video about developing fishbone/cause and effect diagrams from the Institute for Healthcare Improvement can be found here.

Driver Diagram

Similar to a fishbone diagram, a driver diagram (see Figure 21) is a visual tool that helps you to organise the outputs from a brainstorm. However, rather than articulating the causes to your problem, it articulates the different ways in which you believe you can make progress towards your outcome, or goal.

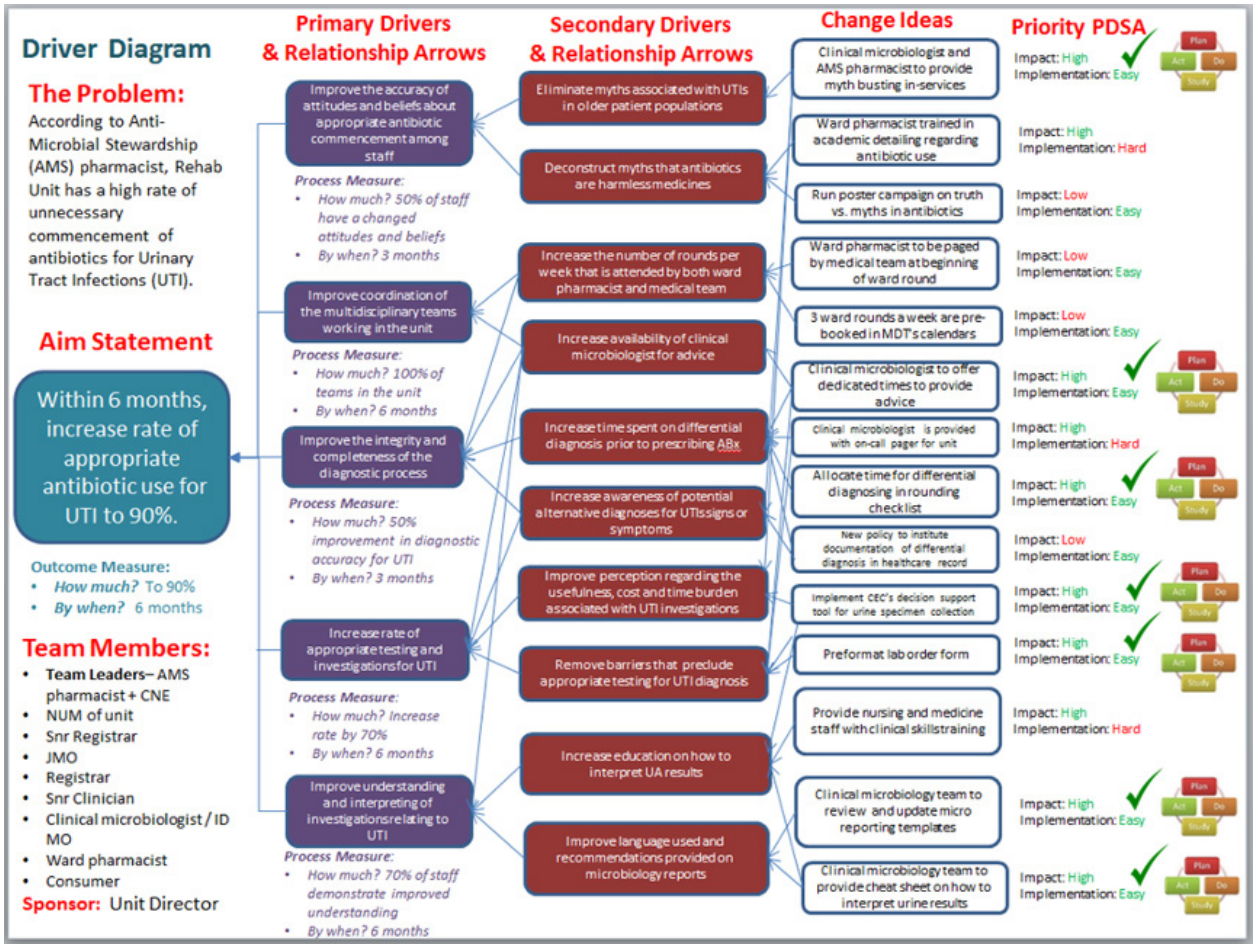


Figure 21: Example of a driver diagram (NSW CEC, n.d.)

As shown in Figure 21, a driver diagram contains:

- Your aim statement (or stretch goal in Best Start) on the far-left
- The primary drivers that are thought to get you towards the aim/stretch goal
- The secondary drivers that are the components of the primary drivers, and
- The change ideas that have been brainstormed against each of the secondary drivers.

To create a driver diagram from your brainstorm outputs:

- Insert your stretch goal in the far-left box

- Categorise your brainstorm outputs (whether these are framed as causes of the problem or possible solutions to the problem doesn't matter at this stage)
- Frame each of these categories in 'primary driver language' and insert into the primary driver boxes e.g. a category about staff not understanding service eligibility could be framed as "improve staff understanding about service eligibility"
- Frame and insert the ideas in each category into the secondary driver boxes
- Add relevant change ideas against each of the secondary drivers.

A driver diagram template is provided in Figure 22.

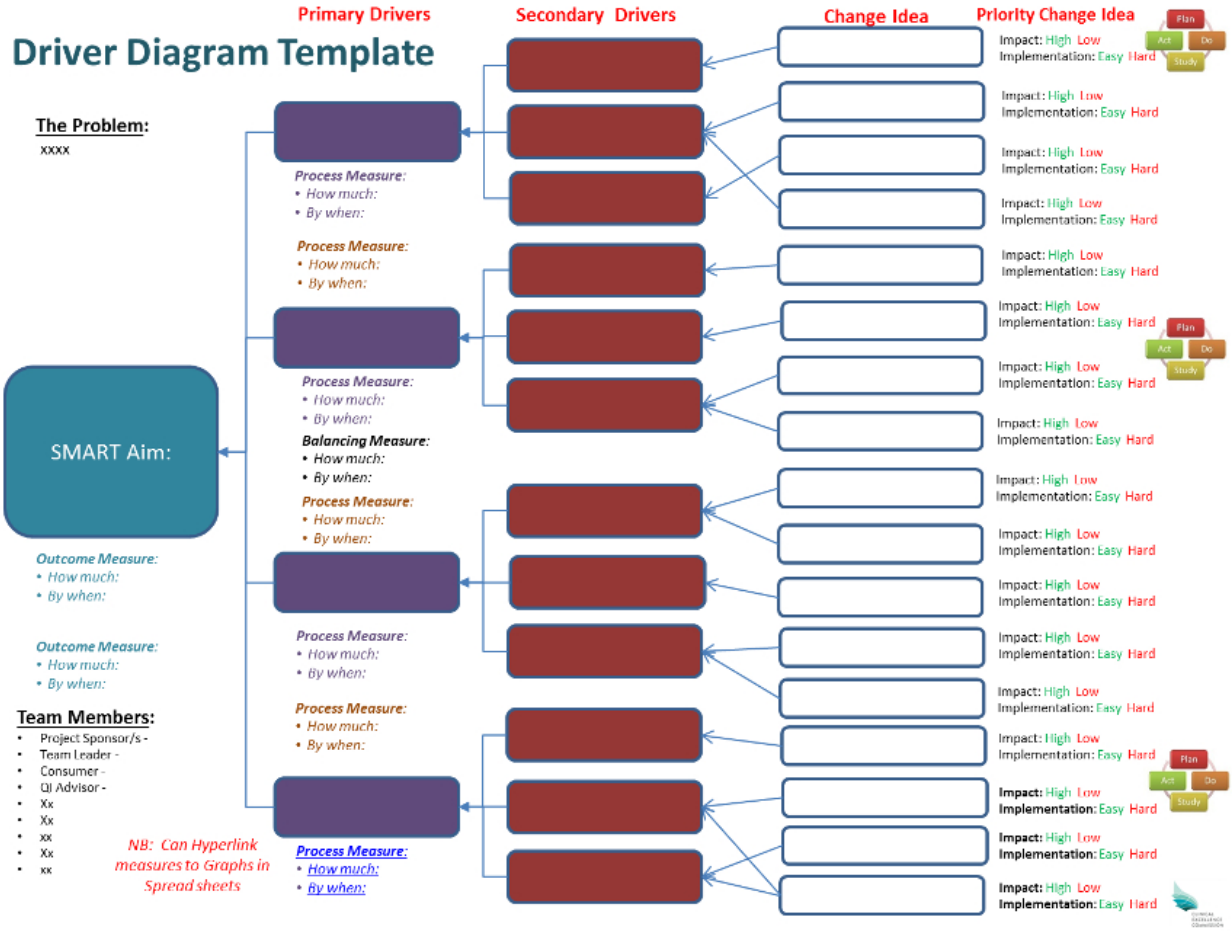


Figure 22: Driver diagram template (NSW CEC, n.d.)

Additional resources

- A PowerPoint template from the NSW Clinical Excellence Commission can be downloaded from here.
- An instructional video about developing driver diagrams from the Institute for Healthcare Improvement can be found here.

Process Map or Flow Chart

Process maps or flow charts allows you to visualise the steps in a process so that you can see where problems might exist and where you may be able to improve it. It can be a helpful brainstorm tool for a problem that involves a process, for example, the enrolment of a family in a service. They can be high-level or more detailed, as shown in the example provided in Figure 23.

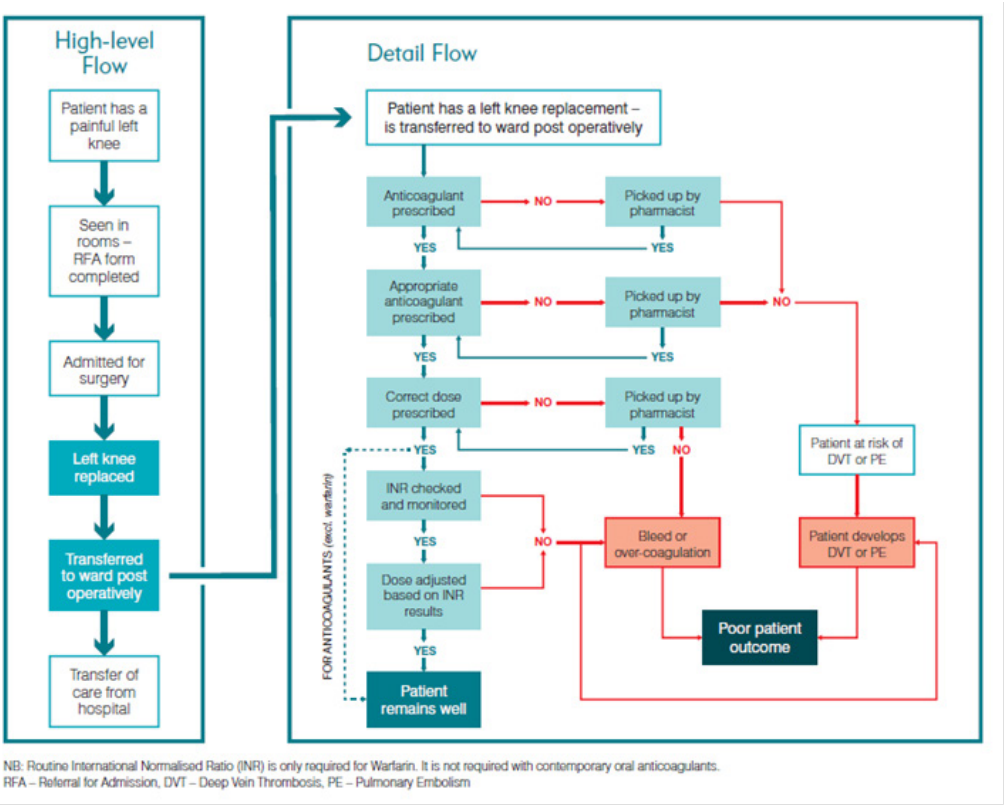


Figure 23: Example of a flow chart (NSW CEC, n.d.)

A process map is created with a group of people familiar with the process, and involves asking (and scribing) where the process begins, what happens thereafter, and where it might fail. A process map template is provided in Figure 24.

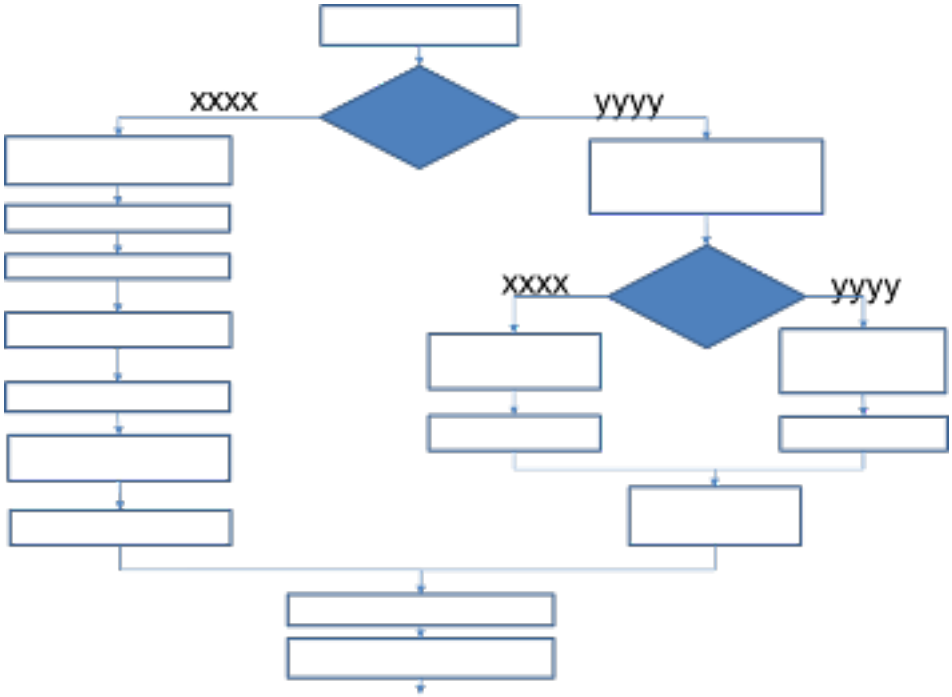


Figure 24: Process map template (NSW CEC, n.d.)

Additional resources

- A PowerPoint template from the NSW Clinical Excellence Commission can be downloaded from here.
- An instructional video about developing process maps/flowcharts from the Institute for Healthcare Improvement can be found here.

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The Centre for Community Child Health is a department of The Royal Children's Hospital and a research group of Murdoch Children's Research Institute