Improving Outcomes Following Stroke by Improving Early Rehabilitation

www.1000livesplus.wales.nhs.uk
Acknowledgements
This guide has been produced by Michelle Price, Alan Willson, Anne Freeman and Michelle Graham.

We would particularly like to thank healthcare organisations in Wales and their teams for their work in implementing these interventions and also feeding back lessons and experiences gained as a result.

1000 Lives Plus is run as a collaborative, involving the National Leadership and Innovation Agency for Healthcare, National Patient Safety Agency, Public Health Wales and the Clinical Governance Support and Development Unit.

We wish to thank and acknowledge the Institute for Healthcare Improvement (IHI) and The Health Foundation for their support and contribution to 1000 Lives Plus.

Date of publication
This guide was published in April 2010 and will be reviewed in April 2012. The latest version will always be available online on the programme’s website: www.1000livesplus.wales.nhs.uk

The purpose of this guide
This guide has been produced to enable healthcare organisations and their teams to successfully implement a series of interventions to improve the safety and quality of care that their patients receive.

This ‘How to Guide’ must be read in conjunction with the following:

- Leading the Way to Safety and Quality Improvement
- How to Improve

Further guides are also available to support you in your improvement work:

- How to Use the Extranet
- A Guide to Measuring Mortality
- Improving Clinical Communication using SBAR
- Learning to use Patient Stories
- Using Trigger Tools
- Reducing Patient Identification Errors

These are available from the 1000 Lives Plus office, or online at www.1000livesplus.wales.nhs.uk

We are grateful to The Health Foundation for their support in the production of this guide.
Improving care, delivering quality

The 1000 Lives Campaign has shown what is possible when we are united in the pursuit of a single aim: the avoidance of unnecessary harm for the patients we serve. The enthusiasm, energy and commitment of teams to improve patient safety by following a systematic, evidence-based approach has resulted in many examples of demonstrable safety improvement.

However, as we move forward with 1000 Lives Plus, we know that harm and error continue to be a fact of life and that this applies to health systems across the world. We know that much of this harm is avoidable and that we can make changes that reduce the risk of harm occurring. Safety problems can’t be solved by using the same kind of thinking that created them in the first place. To make the changes we need, we must build on our learning and make the following commitments:

- Acknowledge the scope of the problem and make a clear commitment to change systems.
- Recognise that most harm is caused by bad systems and not bad people.
- Acknowledge that improving patient safety requires everyone on the care team to work in partnership with one another and with patients and families.

The national vision for NHS Wales is to create a world class health service by 2015: one which minimises avoidable death, pain, delays, helplessness and waste. This guide will help you to take a systematic approach and implement practical interventions that can bring that about. The guide is grounded in practical experience and builds on learning from organisations across Wales during the 1000 Lives Campaign and also on the experience of other campaigns and improvement work supported by the Institute for Healthcare Improvement (IHI).

Where reference is made to 1000 Lives Plus, this includes the work undertaken as part of the 1000 Lives Campaign and the second phase of this improvement programme - 1000 Lives Plus.

The guide uses examples from the former NHS organisational structures, and where possible this has been acknowledged.

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Introduction

Stroke is defined by the World Health Organization as ‘a clinical syndrome consisting of rapidly developing clinical signs of focal (or global in case of coma) disturbance of cerebral function lasting more than 24 hours or leading to death with no apparent cause other than a vascular origin.’

“Stroke is a preventable and treatable disease. It can present with the sudden onset of a neurological disturbance, including limb weakness or numbness, speech disturbance, visual loss or disturbance of balance. Over the last two decades, a growing body of evidence has overturned the traditional perception that stroke is simply a consequence of aging which inevitably results in death or severe disability.”

Every year in Wales an estimated 7,500 people have a first stroke with a further 3500 - 4000 estimated second strokes and TIA per year. Between 20 and 30 percent of people die within the first month of having a stroke, while a further 30 percent are left with a lifelong disability. Stroke is the third most common cause of death in the UK, and the most common cause of disability in adults.

The National Stroke Strategy states that “Rehabilitation after stroke works. Specialist co-ordinated rehabilitation, started early after stroke and provided with sufficient intensity, reduces mortality and long-term disability. Early rehabilitation is effective when provided in specialist stroke units, or as part of properly organised early supported discharge and longer-term support in the community, according to need.”

Aim of the guidance

The aim of this guide is to support clinicians and health care professionals make improvements in the reliability of integrated early rehabilitation for patients and carers following stroke. This follows on from the four Care Bundles already being implemented for the first week following stroke for a further six weeks and could be in a stroke unit, rehabilitation ward or in the community.

The Driver Diagrams and Care Bundles in this guide have been developed by a core group of specialist clinicians in Wales, based on the evidence and recommendations in the National Stroke Guidelines, 3rd Edition published by Royal College of Physicians (RCP) in 2008 and the National Stroke Strategy, published by the Department of Health. The Driver Diagram and Care Bundles form part of the new improvement targets, called Intelligent Targets, which will be included in the Annual Operating Framework for the new Health Boards in Wales for 2010.
References


Throughout this guide the following abbreviations are used in references:


Improving Outcomes Following Stroke by Improving Early Rehabilitation

Driver Diagram

**Content Area**

**Drivers**

- Seamless Transition of Care

**Interventions**

- Designated case worker
- Patient and carers involved in transfer of care
- Handover of robust information, including:
  - Patient Expectations
  - Agreed goals
  - Treatment Plan
  - Outcome measures

**Target one**

To support individuals to achieve their optimal level of functional recovery

**Target two**

- Patients and carers involved in goal-planning with communication plan in place based on communication assessment
- Appropriate intensity of rehabilitation from multidisciplinary/professional/agency team, with relevant competencies, reviewed weekly via treatment plan
- Weekly review of progress against goals
- Options appraisal of rehab or discharge settings done and agreed with patient/carers
- Weekly review of estimated discharge date (EDD)
Getting Started

Have you set up your team?
You need to consider three different dimensions:

- Organisational level leadership
- Clinical or technical expertise
- Frontline leadership and team membership

See the ‘Leading the Way to Safety and Quality Improvement’ How to Guide; and Appendix B for further information.

Do you know how you will measure outcomes?
For this content area, you should use the following outcome measure:

- Mortality
- Percentage of people who return to their usual place of residence
- Re-admission rates at 28 days
- Change in average functional outcome (Barthel) score on discharge

See Appendix A for further information.

Do you and your team understand how to apply the Model for Improvement?
The Model for Improvement is a fundamental building block for change and you need to understand how to use it to test, implement and spread the interventions in this guide.

See the ‘How to Improve’ Tools for Improvement guide and Appendix C for further information.

How are you going to measure process reliability?
In order to improve outcomes for your patients you need to demonstrate you are using these interventions reliably. This means that all the elements of the interventions are performed correctly on 95% or more of the occasions when they are appropriate. You need to do this by using the process measures in this guide.

See the ‘How to Improve’ Tools for Improvement guide and Appendix A for a summary of all process measures.

How will you share your learning?
Contact 1000 Lives Plus for details of mini-collaboratives and other ways to share your learning and to learn about the progress of other teams.
Drivers and Interventions

This section details the interventions highlighted in the driver diagram which evidence has shown to be effective in this content area. You should use the Model for Improvement to test, implement and spread each intervention, using the listed process to monitor progress.

Driver: Seamless Transition of Care

Interventions for the Care Bundle:

What are we trying to accomplish?

Each time a patient is moved from one care setting to another there should be:

- A designated case worker. This could be a doctor, nurse or therapist, depending on the main impairments or activity limitation of the patient.
- Patient and carer involvement in planning for the transfer of care.
- Handover of robust information including: patients’ expectations, goals that have been agreed with the patient, treatment plan and outcome measures.

The Evidence:

- People who have had a stroke and their carers value continuity, being kept informed, being included and having a clear, consistent point of contact with services. (NSS, 3.4)
- Patients should be:
  - involved in making decisions about transfer
  - offered copies of transfer documents (MPS, 3.6.1.C)
- Hospital services should have a locally negotiated protocol to ensure that before discharge occurs:
  - patients and families are fully prepared, and have been fully involved in planning discharge
  - patients and families are given information about and offered contact with appropriate statutory and voluntary agencies (MPS, 3.7.1 A)
- When a therapist or team stops giving rehabilitation, the therapist or service should (MPS, 6.2.1 C):
  - discuss the reasons for this decision with the patient
  - ensure that any continuing support that the patient needs to maintain and/or improve health is provided
- teach the patient and, if necessary, carers and family how to maintain health
- provide clear instructions on how to contact the service for reassessment
- outline what specific events or changes should trigger further contact

There should be a workable, clear discharge plan developed by health and social care services that has fully involved the individual (and their family where appropriate) and responded to the individual’s particular circumstances and aspirations (NSS, QM 12)

All transfers between different teams and between different organisations should:
- occur at the appropriate time, without delay
- not require the patient to repeat complex information already given
- ensure that all relevant information is transferred, especially concerning medication
- maintain a common set of patient-centred goals (MPS, 3.6.1 A)

All organisations and teams regularly involved in seeing patients after stroke should use:
- a common, agreed set of data collection tools (measures and assessments)
- a common, agreed terminology
- a common, agreed document layout (structure) and content (MPS, 3.6.1 B)

Any continuing specialist treatment required will be provided without delay by an appropriate specialist service.

Patients should only be discharged early from hospital (before the end of acute rehabilitation) if there is a specialist stroke rehabilitation team able to continue rehabilitation in the community from the day of transfer and if the patient is able to transfer safely from bed to chair, and if other problems can be safely managed at home. (MPS, 3.7.1 B)

Patients being discharged who remain dependent in some personal activities (eg dressing, toileting) should be offered a transition package of:
- pre-discharge visits (eg at weekends)
- individual training and education for their carers/family
- telephone counselling support for three months (MPS, 3.7.1 C)

Before discharge of a patient who remains dependent in some activities, the patient’s home environment should be assessed and optimised, usually by a home visit by an occupational therapist .(MPS, 3.7.1 D)

Patients should not be discharged early from hospital to generic (non-specialist) community services (including both home, and community hospitals) unless there is continuing active involvement by the specialist stroke service. (MPS, 3.7.1 E)
Carers of patients unable to transfer independently should receive training in moving and handling and the use of any equipment provided until they are demonstrably able to transfer and position the patient safely in the home environment. (MPS, 3.7.1.F)

All patients should continue to have access to specialist stroke services after leaving hospital, and should know how to make contact. (MPS, 3.7.1.G)

**Measures:**

For this Bundle, use the following process measures:

- Compliance rate for bundle (percentage of transfers that have all the interventions in the bundle)
- Percentage of patients who have a designated case worker
- Percentage of patients and their carers who are involved with the planning of their transfer of care
- Percentage of patients who have robust transfer documentation

**Applying the Model For Improvement**

**How will we know if a change is an improvement?**

By collecting the following data points for every patient each week for each transfer of care:

- Designated case worker  Yes/No
- Documented evidence of patient and/or carer involved in transfer of care  Yes/No
- Transfer documentation which complies with local protocol/policy  Yes/No

**What changes can be made to make an improvement?**

- Review of care process to ensure that patients and their carers are involved in the planning of any transfer of care.
- Nominate a case worker to co-ordinate the transfer of care from current place of rehabilitation and ensure that links are established with a named person in the place the patient is being transferred to, and that both the patients and the carers have the name and contact details of this person.
- Agree locally what assessment tools and outcome measures will be used in places of rehabilitation.
- Agree locally the format and process for ensuring that appropriate information is passed between rehabilitation sites at transfer of care in a timely way.
**What teams are trying:**

Having family meetings or case conferences within the first two weeks of admission to make sure that the patients and carers are included in planning both rehabilitation and transfers of care from the start.

Developing MDT Meeting documentation that can be used as transfer of care summary, with patients expectations, goals and outcome measures.

Using transfer of care documents that concentrate on the patient’s level of function rather than individual therapy reports (see Helpful Resources).

Improving communication on date and time of transfer to ensure that all professions have time to put their transfer summaries in medical notes to be transferred with the patient.
Driver: Appropriate Rehabilitation in Most Appropriate Setting

Interventions for the Care Bundle:

*What are we trying to accomplish?*

- Patients and carers involved in goal planning with communication plan in place informed by communication assessment.
- Appropriate intensity of rehabilitation from multi-disciplinary/professional/agency team, with relevant competencies, reviewed weekly via treatment plan.
- Weekly review of progress against goals.
- Options appraisal of rehab or discharge settings done and agreed with patient/carers.
- Weekly review of estimated discharge date (EDD).

*The Evidence:*

- Every patient involved in the rehabilitation process should (MPS, 3.11.1):
  - have their wishes and expectations established and acknowledged
  - participate in the process of setting goals unless they choose not to or are unable to participate because of the severity of their cognitive and linguistic impairments.
  - be given help to understand the nature and process of goal setting, and be given help (eg using established tools) to define and articulate their personal goals.
  - have goals that:
    - are meaningful and relevant to the patient
    - are challenging but achievable
    - include both short-term (days/weeks) and long-term (weeks/months) targets
    - include both single clinicians and also the whole team
    - are documented, with specified, time-bound measurable outcomes
    - have achievement evaluated using goal attainment
    - include family members where appropriate
    - are used to guide and inform therapy and treatment
- Patients should always be informed of realistic prospects of recovery or success and should always have realistic goals set (MPS, 6.1.1 B).
- The nature and consequences of a patient’s impairments should always be explained to the patient (and to the family), and if necessary and possible they should be taught strategies or offered treatments to overcome or compensate for any impairment affecting activities or safety, or causing distress (MPS, 6.1.1 E).
those who have had a stroke may require additional communication or cognitive support needs to be met, to be able to participate in the assessment. (NSS, 3.40)

All patients entering a period of active rehabilitation should be screened for common impairments using locally agreed tools and protocols. (MPS, 6.1.1 A)

Specific treatments should only be undertaken in the context of, and after considering, the overall goals of rehabilitation and potential interaction with other treatments. (MPS, 6.1.1 C)

For any treatments that involve significant risk/discomfort to the patient and/or resource use, specific goals should be set and monitored using appropriate clinical measures such as numerical rating scales, visual analogue scales, goal attainment rating or a standardised measure appropriate for the impairment. (MPS, 6.1.1 D)

All members of a stroke service should (MPS, 3.12.1):
- use an agreed consistent approach for each problem faced by a patient, ensuring the patient is given the same advice and taught the same technique to ameliorate or overcome it.
- give as much opportunity as possible for a patient to practise repeatedly, and in different settings, any tasks or activities that are affected.
- work within their own knowledge, skills, competence and limits in handling patients and using equipment, being taught safe and appropriate ways to move and handle specific patients if necessary.

Patients should undergo as much therapy appropriate to their needs as they are willing and able to tolerate and in the early stages they should receive a minimum of 45 minutes daily of each therapy that is required. (MPS, 3.13.1 A)

- The team should promote the practice of skills gained in therapy into the patient’s daily routine in a consistent manner and patients should be enabled and encouraged to practise that activity as much as possible. (MPS, 3.13.1 B)
- Therapy assistants may facilitate practice but should work under the guidance of a qualified therapist. (MPS, 3.13.1 C)
- Patients should always be informed of realistic prospects of recovery or success and should always have realistic goals set. (MPS, 6.1.1 B)
- Every patient should have their progress measured against goals set at regular intervals determined by the patient’s rate of change, for example using goal attainment scaling. (MPS, 6.2.1 A)
- When a patient’s goal is not achieved, the reason(s) should be established and:
  - the goal should be adjusted, or
  - the intervention should be adjusted, or
  - no further intervention should be given towards that goal (MPS, 6.2.1 B)
A stroke rehabilitation service should (1, 3.10.1):

- agree on standard sets of data that should be collected and recorded routinely
- use data collection tools that fulfil the following criteria as much as possible
  - collect relevant data covering the required range (i.e. are valid and fulfil a need)
  - have sufficient sensitivity to detect change expected in one patient or difference expected between groups of patients
  - be repeatable when used by different people on different occasions
  - be simple to use under a variety of circumstances
  - have easily understood scores
- have protocols determining the routine collection and use of data in their service
  - determine reasons for, and proposed use of, each item
  - allow individual clinicians choice from two or three tools where no measure is obviously superior
  - review the utility of each item regularly
- train all staff in the recognition and management of emotional, communicative and cognitive problems
- have protocols to guide the use of more complex assessment tools, describing:
  - when it is appropriate or necessary to consider their use
  - what tool or tools should be used
  - what specific training or experience is needed to use the tool(s)
  - measure change in function at appropriate intervals

Specialist teams may be more important in the early stages of rehabilitation, while generic teams can be appropriate for the later stages. However, the configuration of community teams is less important than ensuring that these teams are multi-disciplinary and all staff have the right specialist skills to help rehabilitate people who have had a stroke. (NSS, 3.14)

Patients should only be discharged early from hospital (before the end of acute rehabilitation) from hospital if there is a specialist stroke rehabilitation team able to continue rehabilitation in the community from the day of transfer and if the patient is able to transfer safely from bed to chair, and if other problems can be safely managed at home. (MPS, 3.7.1 B)

Patients should not be discharged early from hospital to generic (non-specialist) community services (including both home, and community hospitals) unless there is continuing active involvement by the specialist stroke service. (MPS, 3.7.1 E)
When a therapist or team stops giving rehabilitation, the therapist or service should (MPS, 6.2.1 C):

- discuss the reasons for this decision with the patient.
- ensure that any continuing support that the patient needs to maintain and/or improve health is provided.
- teach the patient and, if necessary, carers and family how to maintain health.
- provide clear instructions on how to contact the service for reassessment.
- outline what specific events or changes should trigger further contact.

**Measures:**
For this Bundle, use the following process measures:

On a weekly basis:
- compliance with bundle (percentage of people who had all the interventions in the bundle)
- the percentage of people who had documented evidence that they had been involved with goal-planning
- the percentage of people who have their communication plan reviewed each week
- the percentage of people who received the agreed intensity of therapy
- the percentage of people who had progress reviewed against their goals each week
- the percentage of people who had their options for rehab settings or discharge discussed with them and documented
- the percentage of people who had their estimated discharge date reviewed each week

**Applying the Model For Improvement**

*How will we know if a change is an improvement?*

By collecting the following data points for every patient each week from week 2 to week 7:

- communication plan, based on communication assessment, in place
  - Yes/ No
- documented evidence that patient and/or carers involved in goal-planning
  - Yes/No
- documented goals reviewed weekly
  - Yes/No
documented treatment plan reviewed weekly
Yes/No

number of sessions planned per week
Number

number of sessions delivered per week
Number

options for rehabilitation documented
Yes/No

estimated discharge date reviewed
Yes/No

**What changes can be made to make an improvement?**

- Local protocol in place on screening for communication impairments and assessment tools agreed.
- Local protocol in place for screening or all impairments (see Resources).
- Local documentation for communication plan accessible to patient, carers and all members of the team.
- Local policy/protocol in place for weekly MDT meetings (example included in Resources) including:
  - Which professions/teams should be included/represented
  - Roles and responsibilities of people attending
  - When and where the meeting takes place
  - Arrangements for information need for goal-setting and treatment planning in place for those that cannot attend
  - Which assessment tools should be used by which professions
- Education and training available for goal setting (crib sheet included in Resources).
- Develop data collection tool to suit local model of care (planning tool and example included in Resources section and also on intranet site www.stroke.wales.nhs.uk)

**What teams are trying:**

Reorganising the way MDT team meetings are run to put patient’s goals at the centre of discussions.

Using audit tools to evaluate the effectiveness of MDT meetings against standards (see Helpful Resources).

Introducing patient diaries to ensure that patients and their carers are involved in planning treatment and recording data

Identifying key workers or link clinicians who take on role of ensuring patient is involved in all discussions relating to their rehabilitation (see Helpful Resources)
Helpful Resources

*Stroke Services Improvement Partnership: Stroke Intranet Site*

www.stroke.wales.nhs.uk

*Institute for Healthcare Improvement*

www.IHI.org

*NHS Evidence- Stroke*

www.library.nhs.uk/stroke/

*NHS Improvement- Stroke*

www.improvement.nhs.uk/stroke/

*MDT Meeting Standards from North Staffordshire Combined Healthcare NHS Trust*

1.0 All core members and associate members of the multi-disciplinary team will attend the case conference and at the agreed time.

2.0 Cover is provided for professionals not able to attend case conferences.

2.1 If cover is not able to be provided, relevant and up-to-date written information is provided in advance of the case conference.

2.2 It is the responsibility of the individual professional team to provide this cover/information.

3.0 All members of the clinical team are adequately prepared for the ward round/case conference and have a good understanding of the patient’s condition and current status.

4.0 All actions from the previous week have been carried through.

5.0 All results/investigations have been seen prior to the ward round and are filed within the patient’s notes.

6.0 The multidisciplinary team plan realistic timescales for the patient’s anticipated recovery and at an early stage agree a discharge date. This plan is communicated to the patient.

7.0 The patient’s recovery is measured against this plan and adjustments made accordingly.

7.1 All patients are comprehensively reviewed after being in hospital for 10 days (acute setting) or 21 days (Rehab) or on the nearest case conference to this date, and subsequently thereafter.
8.0 At each case conference, any developments during the preceding week are discussed and evaluated.

9.0 Any decisions made at the ward round and case conference are fully explained to the patient and/or their relatives/carers depending upon the patient’s conditions and wishes.

10.0 The decisions made and actions for each professional are accurately recorded in the patient’s notes in a standardised format.
<table>
<thead>
<tr>
<th>Ward</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.0 Preparation</strong></td>
<td></td>
</tr>
<tr>
<td>1.1 Did all staff feel adequately prepared for the ward round / case conference?</td>
<td>1.2 Were the majority actions carried out from the previous week?</td>
</tr>
<tr>
<td>1.3 Are notes and x-rays available and readily accessible?</td>
<td>1.4 Were the majority of investigation reports available and filed in the patient’s notes?</td>
</tr>
<tr>
<td>1.5 Are investigation request cards readily accessible?</td>
<td>1.6 Overall assessment of preparation.</td>
</tr>
<tr>
<td><strong>2.0 Participation and Decision Making</strong></td>
<td></td>
</tr>
<tr>
<td>2.1 Did all professionals feel that they participated adequately in the case conference?</td>
<td></td>
</tr>
<tr>
<td>2.2 Was consensus reached by the team as to the key actions / decisions?</td>
<td></td>
</tr>
<tr>
<td>2.3 Were the professionals present who needed to provide information / make decisions? If not, was the relevant information available?</td>
<td></td>
</tr>
<tr>
<td><strong>3.0 What did we do well?</strong></td>
<td></td>
</tr>
<tr>
<td><strong>4.0 What could we improve?</strong></td>
<td></td>
</tr>
</tbody>
</table>
# Patient Review for Clinical Teams

**North Staffordshire Combined Healthcare NHS Trust**

**Patient:**  
**Ward:**  
**Unit No:**  
**Date:**

1. Was there a clear understanding of patient’s previous abilities to enable effective and realistic goal planning?

2. **Was information available relating to:**  
   - The patient’s social history;  
   - Type of house;  
   - Carers / services involved;  
   - Patient’s views about the future;  
   - Relatives / carers views about the future.  

3. **Were the following areas covered in relation to the patient’s current progress:**  
   - Washing  
   - Dressing  
   - Lifting and Handling  
   - Mobility  
   - Nutrition  
   - Continence  
   - Pressure areas  
   - Waterlow Scale  
   - Falls  
   - Falls Score  
   - Psychological needs  
   - Barthel score  
   - Medication  
   - Resuscitation

4. Was the progress of the patient over the previous 7 days discussed?

5. Are the patient’s needs reflected on a 24-hour basis?

6. **Were all staff clear about the key decisions / actions?**

7. **Were all actions clearly allocated to an individual?**

8. Was the involvement of the patient adequate?

9. Were the patient’s views fully considered?

10. **Was there a clear plan for the next 7 days?**

11. **Were the timescales for discharge reviewed?**
**Example of bundle data collection sheet from Wrexham Maelor Hospital**

**STROKE REHABILITATION BUNDLE- APPROPRIATE TREATMENT IN MOST APPROPRIATE SETTING**

<table>
<thead>
<tr>
<th>Patient ID Label</th>
<th>Rehabilitation Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Communication assessment completed and documented</strong></td>
<td>/ / 10</td>
</tr>
<tr>
<td><strong>Communication plan in place</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Multi-disciplinary goals agreed and documented</strong></td>
<td>/ / 10</td>
</tr>
<tr>
<td><strong>Documented evidence of patient and carer involvement in goal-planning</strong></td>
<td>/ / 10</td>
</tr>
<tr>
<td><strong>Number of treatment sessions planned/ documented for week</strong></td>
<td>/ / 10</td>
</tr>
<tr>
<td><strong>Number of treatment sessions delivered/ documented</strong></td>
<td>/ / 10</td>
</tr>
<tr>
<td><strong>Weekly review of progress</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Options for rehab discussed with patient/ carer and documented</strong></td>
<td></td>
</tr>
<tr>
<td><strong>EDD review</strong></td>
<td></td>
</tr>
</tbody>
</table>
## Data Collection Planner

<table>
<thead>
<tr>
<th>Phase</th>
<th>Data item</th>
<th>Format</th>
<th>Who records this</th>
<th>At what point</th>
<th>Where is it stored</th>
<th>How reliably do we collect</th>
<th>Issues to resolve</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transfer of Care</td>
<td>Designated case worker</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Documented evidence of patient and/or carer involved in transfer of care</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Transfer documentation which complies with local protocol/policy</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Communication plan, based on communication assessment, in place</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Documented evidence that patient and/or carers involved in goal-planning</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Documented goals reviewed weekly</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Documented treatment plan reviewed weekly</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of sessions planned per week</td>
<td>Number</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Number of sessions delivered per week</td>
<td>Number</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Options for rehabilitation documented</td>
<td>Yes/No</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Example of transfer of care document

<table>
<thead>
<tr>
<th>XXXX Stroke Unit</th>
<th>PLEASE AFFIX ADDRESSOGRAPH LABEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Situation</td>
<td></td>
</tr>
<tr>
<td>Goals agreed with patient</td>
<td></td>
</tr>
</tbody>
</table>

**Therapies Undertaken and contact details:**

- Dietetics
- OT
- Physio
- Psychology
- SALT

**Functional Outcome Measure Score on Discharge:**

<table>
<thead>
<tr>
<th>Communication</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Eating and Drinking</td>
<td></td>
</tr>
<tr>
<td>Medications Management</td>
<td></td>
</tr>
<tr>
<td>Elimination</td>
<td></td>
</tr>
<tr>
<td>Mobility</td>
<td></td>
</tr>
</tbody>
</table>

**Personal Care**

<table>
<thead>
<tr>
<th>Domestic ADL</th>
<th>Cooking</th>
<th>Cleaning</th>
<th>Shopping</th>
<th>Laundry</th>
<th>Package of Care</th>
</tr>
</thead>
</table>

**Cognitive/Perceptual Issues:**
## Work/ Leisure/Driving Recommendations:

<table>
<thead>
<tr>
<th>Other Outcome Measures</th>
<th>On admission</th>
<th>On Discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

## Equipment Supplied/Environmental Adaptations

Health -  
Local Authority -

## Additional Comments:

## Referral on to Other Services:

## Review Plan:

## Ongoing Goals:

<table>
<thead>
<tr>
<th>Case Worker</th>
<th>Contact details</th>
<th>Date</th>
</tr>
</thead>
</table>
### WHO International Classification of Functioning (WHO-ICF)

**common problems associated with stroke**

<table>
<thead>
<tr>
<th>Impairments</th>
<th>Impairments</th>
<th>Limitations in Participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>Ability to protect airway</td>
<td>Driving</td>
</tr>
<tr>
<td>Aphagia</td>
<td>Ability to maintain oral health and hygiene</td>
<td>Education</td>
</tr>
<tr>
<td>Aphasia</td>
<td>Ability to maintain adequate hydration</td>
<td>Employment</td>
</tr>
<tr>
<td>Ataxia</td>
<td>Ability to maintain adequate nutrition</td>
<td>Financial</td>
</tr>
<tr>
<td>Cardiovascular fitness</td>
<td>Ability to maintain skin integrity</td>
<td>Family role</td>
</tr>
<tr>
<td>Bowel function</td>
<td>Ability to manage elimination</td>
<td>Home environment</td>
</tr>
<tr>
<td>Cognitive impairment</td>
<td>Ability to communicate effectively</td>
<td>Work environment</td>
</tr>
<tr>
<td>Contractures</td>
<td>Personal activities of daily living</td>
<td>Leisure</td>
</tr>
<tr>
<td>Depression</td>
<td>Extended activities of daily living</td>
<td>Social role</td>
</tr>
<tr>
<td>Dysarthria</td>
<td>Posture- ability to gain/maintain, seating</td>
<td>Productivity</td>
</tr>
<tr>
<td>Dysphagia</td>
<td>Bed mobility</td>
<td></td>
</tr>
<tr>
<td>Emotionalism (tearfulness)</td>
<td>Transfers from e.g.in out of car</td>
<td></td>
</tr>
<tr>
<td>Executive function</td>
<td>Walking/gait</td>
<td></td>
</tr>
<tr>
<td>Fatigue</td>
<td>Wheelchair mobility</td>
<td></td>
</tr>
<tr>
<td>Hearing</td>
<td>Ability to self-medicate effectively</td>
<td></td>
</tr>
<tr>
<td>Inattention</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Malnutrition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mood disturbance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motor control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Muscle weakness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neglect (spatial awareness)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oral hygiene</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceptual problems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sensory disturbance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shoulder subluxation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sexual function</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spasticity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Swelling/ oedema</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tone disturbance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Urinary incontinence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visual disturbance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volition</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Role of Designated Case Worker - H M Stanley Hospital

People who have had a stroke and their carers value continuity, being kept informed, being included, and having a clear, consistent point of contact with services.

The role of the designated case worker in the Stroke Rehabilitation Unit at H M Stanley Hospital is to:

- Complete documentation in readiness to avoid asking patient the same information again.
- Involve patient in decisions during their stay, with agreement of their goals.
- Liaise with relevant professionals to ensure goals are documented for MDT meetings.
- Ensure test results and other information are available for the consultant and MDT meetings.
- Discuss reasons why treatments are discontinued.
- Review goals and options on a weekly basis.
- Involve patients/family/carer with maximising their independence.
- Ensure actions from MDT are carried out e.g. referrals to other services in good time.
- Ensure relevant information is shared/sent to appropriate agencies.
- Provide information e.g. Stroke Association.
- Contact telephone numbers after discharge.
- Offer patient diary to aid communication between patient/family/carer/staff.
### Examples of Goal-setting Crib Sheet

<table>
<thead>
<tr>
<th>Self-efficacy</th>
<th>Self-efficacy</th>
<th>Swallow</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be able to motivate self to attend therapy sessions independently</td>
<td>To be able to maintain oral health and hygiene with help from staff</td>
<td>To be able to swallow teaspoons of water effectively and safely</td>
</tr>
<tr>
<td>To be able to initiate</td>
<td>To be able to maintain oral health and hygiene independently</td>
<td>To be able to manage teaspoonfuls of a pureed diet three times a day</td>
</tr>
<tr>
<td>To be involved in setting own goals</td>
<td>To be able to manage own oral secretions</td>
<td>To be able to eat three unmodified meals a day</td>
</tr>
<tr>
<td>Elimination</td>
<td>Skin Integrity</td>
<td>Positioning</td>
</tr>
<tr>
<td>To be able to ask for help with toileting</td>
<td>To understand need for regular repositioning to prevent pressure areas</td>
<td>To understand the need to wear a splint/positioning aid for ...hours</td>
</tr>
<tr>
<td>To maintain bowel management with dietary supplements</td>
<td>To be able to move in bed to relieve pressure</td>
<td>To remind staff to put on splint/positioning aid</td>
</tr>
<tr>
<td>To maintain bladder management with prompts</td>
<td></td>
<td>To be able to reposition self in chair once prompted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To be able to maintain an upright symmetrical posture in armchair for ....minutes</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Medication management</th>
<th>Nutrition and Hydration</th>
<th>Mobility - transfers/gait/wheelchair</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be able to manage own medication with prompts</td>
<td>To be able to maintain adequate nutrition to enable rehabilitation by</td>
<td>To be able to roll in bed with minimal assistance when being washed</td>
</tr>
<tr>
<td></td>
<td>• taking dietary supplements</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• eating three meals a day</td>
<td></td>
</tr>
<tr>
<td>To be able to manage own medication without prompts</td>
<td>To be able to tolerate an NG/PEG feeding regime of ...ml/hr</td>
<td>To be able to move up and down the bed independently</td>
</tr>
<tr>
<td>To be able to move up and down the bed independently</td>
<td>To be able to tolerate standing on tilt table at 80° for ... minutes</td>
<td></td>
</tr>
<tr>
<td>To be able to tolerate standing on tilt table at 80° for ... minutes</td>
<td>To be able to sit on the edge of the bed.....for ... minutes</td>
<td></td>
</tr>
<tr>
<td>To be able to sit on the edge of the bed.....for ... minutes</td>
<td>To be able to transfer from ...to .....</td>
<td></td>
</tr>
<tr>
<td>To be able to transfer from ...to .....</td>
<td>To be able to walk with...... from/to......</td>
<td></td>
</tr>
<tr>
<td>Pain management</td>
<td>Spasticity management</td>
<td>Personal ADL</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>----------------------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>To be able to tell staff when in pain</td>
<td>To be able to understand the need to take medication to manage spasticity</td>
<td>To be able to feed self using adapted cutlery and using affected hand to stabilise plate</td>
</tr>
<tr>
<td></td>
<td>To be able to put on splint to manage spasticity</td>
<td>To be able to wash face with set up and prompts, using unaffected hand</td>
</tr>
<tr>
<td></td>
<td>To be able to carry out stretches to reduce spasticity independently</td>
<td>To be able to wash upper half of body independently using both hands</td>
</tr>
<tr>
<td></td>
<td></td>
<td>To be able to take wash things to bathroom and shower and dress independently</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Domestic ADL</th>
<th>Communication</th>
<th>Vision/Perception</th>
</tr>
</thead>
<tbody>
<tr>
<td>To be able to make a sandwich using both hands</td>
<td>To be able to communicate needs and wishes using a communication aid</td>
<td></td>
</tr>
<tr>
<td>with set up and prompts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>To be able to make self a cup of tea in kitchen</td>
<td>To be able to express abstract ideas verbally</td>
<td></td>
</tr>
<tr>
<td>using a perching stool and trolley</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Psychological needs</th>
<th>Cognition</th>
</tr>
</thead>
<tbody>
<tr>
<td>e.g. mood / anxiety / emotional state</td>
<td>e.g. verbal reasoning / insight / executive function / decision making / mental capacity / problem solving / attention</td>
</tr>
</tbody>
</table>
## Appendix A - Measures and Definitions

<table>
<thead>
<tr>
<th>Measure</th>
<th>Formula</th>
<th>Patients who are transferred from one care setting to another within first seven weeks following stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Compliance rate for Transition of Care Bundle - proportion of transfers that have all the interventions in the bundle for each transition of care</td>
<td>Number of patients who receive all interventions in Transition of Care Bundle x 100</td>
<td>Patients who are transferred from one care setting to another within first seven weeks following stroke</td>
</tr>
<tr>
<td>Proportion of patients who have a designated case worker at transition of care</td>
<td>Number of patients who have a designated case worker at transition of care x 100</td>
<td>Patients who are transferred from one care setting to another within first seven weeks following stroke</td>
</tr>
<tr>
<td>Proportion of patients and their carers who are involved with the planning of their transfer of care</td>
<td>Number of patients and their carers who are involved with the planning of their transfer of care x 100</td>
<td>Patients who are transferred from one care setting to another within first seven weeks following stroke</td>
</tr>
<tr>
<td>Proportion of patients who have robust transfer documentation at transition of care</td>
<td>Number of patients who have robust transfer documentation at transition of care</td>
<td>Patients who are transferred from one care setting to another within first seven weeks following stroke</td>
</tr>
<tr>
<td>Compliance with Appropriate Rehab Bundle - proportion of people who had all the interventions in the bundle each week</td>
<td>Number of people who had all the interventions in the bundle each week x 100</td>
<td>Patients who are receiving rehabilitation in the first seven weeks following a stroke</td>
</tr>
<tr>
<td>Proportion of people who had documented evidence that they had been involved with goal planning each week</td>
<td>Number of people who had documented evidence that they had been involved with goal planning each week x 100</td>
<td>Patients who are receiving rehabilitation in the first seven weeks following a stroke</td>
</tr>
<tr>
<td>Proportion of people who have their communication plan reviewed each week</td>
<td>Number of people who have their communication plan reviewed each week x 100</td>
<td>Patients who are receiving rehabilitation in the first seven weeks following a stroke</td>
</tr>
<tr>
<td>Proportion of people who received the agreed intensity of therapy each week</td>
<td>Number of people who received the agreed intensity of therapy each week x 100</td>
<td>Patients who are receiving rehabilitation in the first seven weeks following a stroke</td>
</tr>
</tbody>
</table>
Improving Outcomes Following Stroke by Improving Early Rehabilitation

<table>
<thead>
<tr>
<th>Proportion of people who had progress reviewed against their goals each week</th>
<th>Number of people who had progress against their goals reviewed weekly each week x 100</th>
<th>Patients who are receiving rehabilitation in the first seven weeks following a stroke</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proportion of people who had had their options for rehab settings or discharge discussed with them and documented each week</td>
<td>Number of people who had their options for rehab settings or discharge discussed with them and documented each week x 100</td>
<td>Patients who are receiving rehabilitation in the first seven weeks following a stroke</td>
</tr>
<tr>
<td>Proportion of people who had their estimated discharge date reviewed weekly each week</td>
<td>Number of people who had their estimated discharge date reviewed weekly each week x 100</td>
<td>Patients who are receiving rehabilitation in the first seven weeks following a stroke</td>
</tr>
</tbody>
</table>

**Outcome Measures**

These three outcome measures will be based on data extracted form PEDW for patients who are admitted with ICD10 codes I61 and I63.

- Mortality rate
- Percentage of people who return to their usual place of residence
- Re-admission rate at 28 days post discharge

Further work is underway to develop clearer definitions for these outcome measures.

The dataset collected by the multi-disciplinary clinical teams will provide the data for the following outcome measure. The data collection tool will display this outcome measure as a run chart:

- Change in average functional outcome (Barthel) score on discharge
Appendix B - Setting up your team

Achieving improvements that reduce harm, waste and variation at a whole-organisation level needs a team approach: one person working alone, or groups of individuals working in an unco-ordinated way will not achieve it and this applies equally at all organisational levels.

Whether your improvement priorities relate to 1000 Lives Plus content areas, national intelligent targets or other local priorities, you need to consider three different dimensions in putting your team together:

■ Organisation level leadership.
■ Clinical or technical expertise.
■ Frontline leadership.

There may be one or more individuals on the team working in each dimension, and one individual may fill more than one role, but each component should be represented in order to achieve sustainable improvement.

Organisation level leadership
An Executive, or equivalent level Director, should always be given delegated accountability from the Chief Executive for a specific content area; and all staff working on the changes should know who this is. This individual needs sufficient influence and authority to allocate the time and resources necessary for the work to be undertaken. It is likely that accountability will be further delegated to Divisions, Clinical Programme Groups or Directorates and this can help to build ownership and engagement at a more local level. However, it is essential that the leader has full authority over the areas involved in achieving the improvement aim. As changes spread more widely, crossing organisational boundaries, appropriate levels of delegation will need to be reviewed.

When working with frontline teams, it is essential for organisational level leaders to have an understanding of the improvement methodology and to base conversations around the interpretation of improvement data. Reporting of progress to higher organisational levels should also use a consistent data format so that the Executive level leader can report to the Board on progress.

Clinical/Technical Expertise
A clinical or technical expert is someone who has a full professional understanding of the processes in the content area. It is critical to have at least one such champion on the team who is intimately familiar with the roles, functions, and operations of the content area. This person should have a good working relationship with colleagues and with the frontline leaders, and be interested in driving change in the system. It is important to look for clinicians or technical professionals who are opinion leaders in the organisation (individuals sought out for advice who are not afraid to try changes).
Patients can provide expert advice to the improvement team, based on their experience of the system and the needs and wishes of patients. A patient with an interest in the improvement of the system can be a useful member of the team.

Additional technical expertise may be provided by an expert on improvement methodology, who can help the team to determine what to measure, assist in the design of simple, effective measurement tools, and provide guidance on the design of tests.

**Frontline leadership**

Frontline leaders will be the critical driving component of the team, ensuring that changes are tested and overseeing data collection. It is important that this person understands not only the details of the system, but also the various effects of making changes in the system. They should have skills in improvement methods. This individual must also work effectively with the technical experts and system leader. They will be seen as a bridge between the organisation leadership and the day-to-day work.

Frontline leaders are likely to devote a significant amount of their time to the improvement work, ensuring accurate and timely data collection for process and outcome measures related to the frontline team.

**Characteristics of a good team member**

In selecting team members, you should always consider those who want to work on the project rather than trying to convince those that do not. Some useful questions to consider are the following:

- Is the person respected for their judgment by a range of staff?
- Do they enjoy a reputation as a team player?
- What is the person’s area of skill or technical proficiency?
- Are they an excellent listener?
- Is this person a good verbal communicator within, and in front of, groups?
- Is this person a problem-solver?
- Is this person disappointed with the current system and processes and do they passionately want to improve things?
- Is this person creative, innovative, and enthusiastic?
- Are they excited about change and new technology?
Appendix C - The Model for Improvement

Successful improvement initiatives don’t just happen - they need careful planning and execution. There are many things to consider and techniques to employ, which are captured in the driver diagram on page 35. The rest of this section explains the primary drivers and where to get more help in using them.

In any improvement initiative you need to succeed in three areas. You need to generate the Will to pursue the changes, despite difficulties and competing demands on time and resources. You need the good Ideas that will transform your service. Finally you need to Execute those ideas effectively to get the change required.

Will

The interventions you need to build Will are explained in the ‘Leading the Way to Safety and Quality Improvement’ and ‘How to Improve’ guides. They concentrate on raising the commitment levels for change and then providing the project structure to underpin improvement approaches. Spreading changes to achieve transformative change across the whole health system requires strong leadership. We need to create an environment where there is an unstoppable will for improvement and a commitment to challenge and support teams to remove any obstacles to progress.

Ideas

The interventions in this guide describe ideas which evidence shows to be effective for achieving changes that result in improvements. It gives examples from organisations that have achieved them and also advice based on their experience. Methods and techniques for generating new ideas or innovative ways to implement the evidence can be found in the ‘How to Improve’ guide and other improvement literature.

Execution

However, to bring these ideas into routine practice in your organisation, it is essential that you test the interventions and ensure that you have achieved a reliable change in your processes before attempting to spread the change more widely.

1000 Lives Plus uses the Model for Improvement (MFI) which is a proven methodology as the basis for all its improvement programmes. It requires you to address three key questions and then use Plan-Do-Study-Act (PDSA) cycles to test a change idea. By doing repeated small-scale tests, you will be able to adapt change ideas until they result in the reliable process improvement you require. Only then are you ready to implement and spread the change more widely.
Model for Improvement
Driver Diagram

Aim

Primary drivers

Secondary drivers

Interventions

Create an organisational culture and environment for improvement

Use the relevant content area ‘How to Guide’ to assess the latest evidence of best practice

Engage senior Leadership
Make links to organisation goals
Form teams
Build skills
Raise awareness
Appoint clinical champions

Consult Faculty members to agree standards to be achieved
Use critical sub sets of key content areas to improve the outcome

Set SMART aims
Communicate aims
Use project charter to provide structure
Understand what to measure
Use 7 step measurement process
Map the process
Use creative thinking

PDSA cycles:
Test - implement - spread - sustain

Establish reliable process
Use reliability model

To deliver patient safety and quality initiatives for Health Boards and Trusts

Will

Ideas
Evidence Base (The what to)

Execution
Improvement Methodology (The how to)

The Model for Improvement
What are you trying to accomplish?

How will you know that a change is an improvement?

What change can you make that will result in improvement?

ACT
PLAN
STUDY
DO

www.1000livesplus.wales.nhs.uk
Model for Improvement - PDSA Cycle

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

For more guidance on using the Model for Improvement, see the ‘How to Improve’ guide.

Seven Steps to Measurement

1 Decide aim
2 Choose measures
3 Define measures

4 Collect data
5 Analyse & present
6 Review measures
7 Repeat steps 4-6
One area that bears extra attention is measurement because we have found that this is often the Achilles heel of improvement projects. When measuring your progress, follow the Seven Steps to Measurement shown on page 36 and covered in more detail in the ‘How to Improve’ Guide.

The key is to go round the Collect-Analyse-Review cycle frequently:

- **Collect** your data
- **Analyse** - turn it into something useful like a run chart
- **Review** - meet to decide what your data is telling you and then take action

Successful improvement projects all have clear aims, robust measurement and well-tested ideas. Use the ‘How to Improve’ guide to ensure your projects have all three.

**What are we trying to accomplish?**

You will need to set an aim that is Specific, Measurable, Achievable, Realistic and Time-bound (SMART). Everyone involved in the change needs to understand what this is and be able to communicate it to others.

**How will we know that change is an improvement?**

It is essential to identify what data you need to answer this question and how to interpret what the data is telling you. The improvement methodology ‘How to Guide’ provides detailed information on the tools, tips and information you need to achieve this, and includes the following advice:

<table>
<thead>
<tr>
<th>Box</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Plot data over time</strong> - Tracking a few key measures over time is the single most powerful tool a team can use.</td>
</tr>
<tr>
<td><strong>Seek usefulness, not perfection.</strong> Remember, measurement is not the goal; improvement is the goal. In order to move forward to the next step, a team needs just enough data to know whether changes are leading to improvement.</td>
</tr>
<tr>
<td><strong>Use sampling.</strong> Sampling is a simple, efficient way to help a team understand how a system is performing.</td>
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<td><strong>Integrate measurement into the daily routine.</strong> Useful data is often easy to obtain without relying on information systems.</td>
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<tr>
<td><strong>Use qualitative and quantitative data.</strong> In addition to collecting quantitative data, be sure to collect qualitative data, which is often easier to access and highly informative.</td>
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<tr>
<td><strong>Understand the variation that lives within your data.</strong> Don’t overreact to a special cause and don’t think that random movement of your data up and down is a signal of improvement.</td>
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</table>
What change can we make that will result in improvement?

The interventions in this guide describe a range of change ideas that are known to be effective. However, you need to think about your current local systems and processes and use the guide as a starting point to think creatively about ideas to test. The improvement methodology guide gives more advice to support you in generating ideas.

Spreading changes to achieve transformative change across the whole health system requires strong leadership. We need to create an environment where there is an unstoppable will for improvement and a commitment to challenge and support teams to remove any obstacles to progress. The guide on ‘Leading the Way to Safety and Quality Improvement’ gives detailed information on interventions that will support this. However, the Model for Improvement, PDSA cycles and process measurement lie at the heart of the transformative change we seek.
Improving care, delivering quality

If we can improve care for one person, then we can do it for ten.

If we can do it for ten, then we can do it for a 100.

If we can do it for a 100, we can do it for a 1000.

And if we can do it for a 1000, we can do it for everyone in Wales.