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Queensland **Health**

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# A Toolkit for Developing a Clinical Pathway

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## Forward

The Clinical Practice Improvement Centre (CPIC) currently comprises several teams: Centre Management, Collaboratives, District Liaison, Facilitation and Group Learning, Measurement Systems and Analysis, Clinical Processes & Pathways, and Queensland Audit of Surgical Mortality.

The Clinical Practice Improvement Centre supports and works with clinicians and health service managers to improve patient care by:

- Identifying and understanding the causes of important variances in clinical outcomes
- Using established and innovative improvement techniques to reduce these variances through the implementation of evidence-based best practice
- Measuring progress towards specific targets in these activities
- Developing systems to ensure that such progress is sustainable
- Building upon, integrating and expanding the activities of the many individuals and groups that are already working towards improving the quality and efficiency of healthcare in Queensland.

Clinical pathways web page

<http://qheps.health.qld.gov.au/cpic/ClinicalPathways.htm>

Please contact staff from the Clinical Pathways and Processes Team for additional information

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## 1. Introduction

This toolkit has been compiled as a resource for clinicians to manage the development or review of a Clinical Pathway for their service. It is anticipated that this toolkit will help professionals to implement clinical pathways by building on existing knowledge and skills. The tools in this toolkit can be used to help raise awareness of, increase understanding about and gain support for the use of clinical pathways.

The Queensland Health Clinical Pathways Policy can be found using this link <http://qheps.health.qld.gov.au/hsd/procurement/quality/publications/Pathways/pdfs/POLICY%20151204.pdf>.

You will find further information about Clinical Pathways in the following online education modules

- Clinical Pathways program
- The users guide to Clinical Pathways
- The developer's guide to Clinical Pathways

The online education web link is [http://www.medeserv.com.au/qlhealth\\_cdp/](http://www.medeserv.com.au/qlhealth_cdp/) and the passkey for first time users is **evidence**.

### 1.1 What are Clinical Pathways?

Clinical Pathways map out the sequence, timing and expected outcomes of care for patients with a similar diagnosis or who are undergoing a similar procedure. Clinical Pathways standardise care so that all patients are provided with the same high quality care, that is timely and cost-effective and enable the documentation of changes in care, as a result of the patient's health status.

### 1.2 Application of Clinical Pathways

Clinical Pathways are used in the following areas

- **high cost:** hip and knee arthroplasty
- **high risk:** vascular procedures
- **high volume:** day surgery
- **high interest:** mental health.

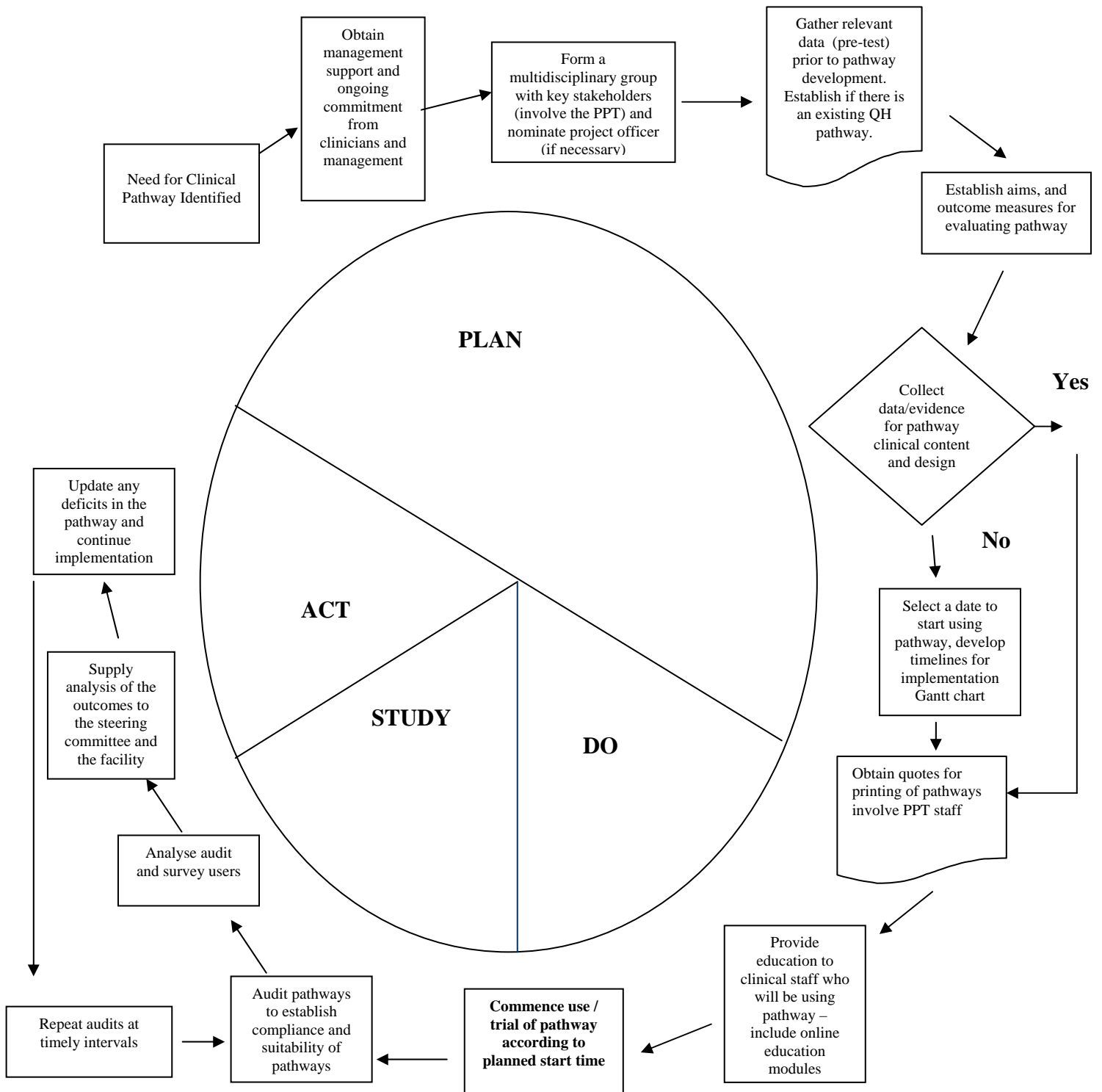
Clinical Pathways are suitable for approximately 70% of the population undergoing a particular procedure or treatment.

### 1.3 Advantages and benefits of Clinical Pathways

Using Clinical Pathways has a number of advantages and benefits, which include:

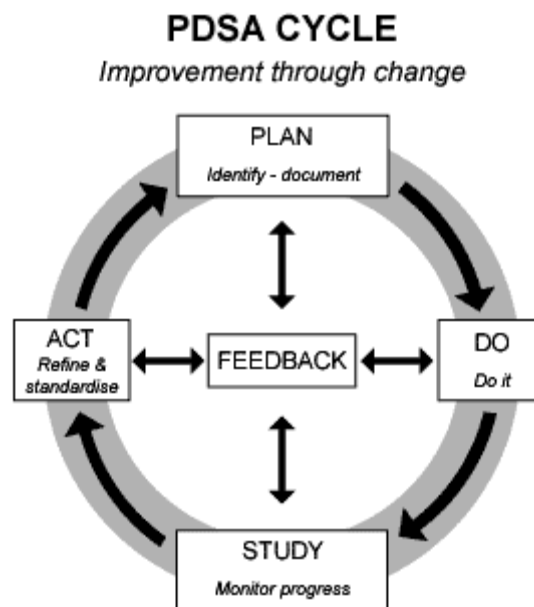
- promoting patient focussed care because patients can participate in what is planned and can give feedback on whether outcomes have been achieved
- providing for patient education and the provision of information regarding care provided
- facilitating collaboration within the multidisciplinary team in the continuum of care
- identifying tests and investigations to be ordered and completed
- documentation is by exception which reduces duplication within the clinical record
- facilitating the introduction of care and treatment practices that are based on best available evidence adapted to suit local conditions
- discharge planning is introduced at time of admission and reviewed daily
- reducing documentation. Documentation relating to the patient's care is held at the bedside in a single document and eliminates duplication of documentation.
- reducing costs and maximising the use of resources, for example minimise unnecessary tests or procedures.
- providing a guide to the care of patients with particular conditions
- providing a legal record for the care provided
- facilitating the collection of clinical indicator data.

## 2. Clinical Pathway Development Process Flowchart



## Tip

If you and other members of the clinical team are thinking about developing or adapting a Clinical Pathway for use in the patient care area, then your project is more likely to be successful if you use the Plan-Do-Study-Act (PDSA) approach.



### 3. Checklist for Clinical Pathway Development

<b>Topic for pathway</b>			
<b>Hospital/facility</b>			
<b>Name</b> <i>Project coordinator or team member</i>			
		<b>Tick once completed</b>	<b>Date completed</b>
1	Identify need for Clinical Pathway		
2	Obtain commitment for ongoing support from clinicians and management		
3	Form multidisciplinary group with key stakeholders (involve Pathway & Processes Team (PPT) staff)		
4	Identify procedures – relating to the procedure/condition for the actual pathway – Select pathway for development		
5	Establish aims and outcome measures for evaluation process		
6	Collect data/evidence for content of Clinical Pathway		
7	Write draft Pathway		
8	Review draft Pathway by key stakeholders and achieve consensus on Pathway document		
9	Obtain quotes for printing of pathways – involve PPT staff		
10	Provide education sessions for all staff who will use the Pathway		
11	Implement / trial the Pathway		
12	Evaluate and analyse Pathway results		
13	Act on results of evaluation to make any adjustments to pathway		
14	Continue implementation		
15	Establish ongoing review process		

**Tip**

Successful development of a new Clinical Pathway, or adaptation of a currently existing Clinical Pathway, requires formation of a group that will follow through the steps of the PDSA cycle to develop, implement and evaluate the proposed Clinical Pathway.

When forming a Clinical Pathway development group, think about:

- the various clinical roles that will be affected by the introduction of the Clinical Pathway, for example doctors, nurses, pharmacists, physiotherapists etc.
- the necessary tasks that the group will need to complete to implement a Clinical Pathway
- the possible variety of the skills required for the project such as, data collection and analysis, and teaching.

## 4. Example of a Local Clinical Pathways Steering Committee meeting Agenda

<Insert Committee Name>

### Agenda

**Date:** <insert date>

**Time:** <insert time>

**Location:** <insert meeting room name>

**Members:**

**Apologies:**

**1. Welcome:** the attendees

**2. Business arising:**

2.1 Terms of reference

▶ Discuss terms of reference and seek local agreement

▶ Local perspective:

- Current methodology
- Deficits/problems
- Level of knowledge base
- Acceptance

▶ Pathways you wish to trial (looking at the DRG data)

▶ Logistics:

▶ Accessibility

- Patient history
- Location of the Pathway
- Photocopying
- Storage and stock levels

▶ Clinical Pathways education sessions:

- Who will do them?
- How long will the sessions be?
- How many to attend/one-on-one/self-directed/on-line?
- Clinician support during trial

**3. Other business**

3.1 Clinical Pathway audit, pre-trial, post-trial and frequency of review post trial

3.2 Concurrent/retrospective – how many patient episodes (DRGs)

3.3 Audit outcomes: variances /ALOS

3.4 Staff evaluation

For more information contact \_\_\_\_\_

Phone \_\_\_\_\_ or e-mail \_\_\_\_\_

## 5. Terms of Reference

<insert group title>

<b>Aim</b>	Assist Clinical Pathways implementation at a local level
<b>Method</b>	<p>Establish a multidisciplinary forum to:</p> <ul style="list-style-type: none"> <li>• Discuss</li> <li>• Feedback</li> <li>• Evaluate</li> <li>• Offer guidance</li> <li>• Make decisions, on issues which impact on the effective use of Clinical Pathway</li> <li>• Oversee the processes of implementation and review</li> </ul>
<b>Objectives</b>	<ul style="list-style-type: none"> <li>• Review activity and identify procedures and conditions appropriate for clinical pathway development</li> <li>• Facilitate the collection and review of relevant evidence to the targeted procedures and conditions</li> <li>• Establish appropriate outcomes, outcome measurements, data collection and analysis related to the targeted procedures and conditions</li> <li>• Develop a Clinical Pathway document</li> <li>• Facilitate that delivery of appropriate education to relevant staff and stakeholders</li> <li>• Develop and implement a clinical pathway trial process</li> <li>• Review the outcomes of the pilot and recommend and /or implement appropriate modifications to the document and /or clinical practice</li> <li>• Establish a sustainable process for monitoring and review of outcomes related to the targeted procedures and conditions</li> </ul>
<b>Achieved By</b>	<ul style="list-style-type: none"> <li>• Multi disciplinary membership</li> <li>• Planned Agenda</li> <li>• Regular meetings</li> </ul>

**6. Proforma Action Committee Minutes**  
**Committee Title <insert committee title>**

**DETAILS:** Meeting time and location

**MEMBERS:**

**APOLOGIES:**

No	Item	Action Manager	Review Date	Action Required
1.				
1.1				
<b>2. Business Arising from previous meeting</b>				
2.1				
2.2				
<b>3. New Business</b>				
3.1				
3.2				
<b>4.0 Next Meeting: Time Location</b>				
4.1				

**Tip**

Developing and implementing Clinical Pathways can be resource intensive. It requires the support of District and Hospital Management to ensure access to adequate information, human and physical resources. Formally applying for, and documenting, management support for the process is recommended. Presenting a business case to outline the purpose, strategies and expected outcomes of the process will assist in obtaining this formal support (recommended business template included).

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## 7. The Business Case Framework

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The following document has been used across Queensland Health and has been taken from:  
**Managing Organisational Change – ‘How To’ Guide**

### 1. PROJECT TITLE:

A brief title for the project ie a few words

### 2. PROJECT DEFINITION:

Elaboration of the title – eg one sentence. If a strategic project is actually better regarded as a closely related set of (sub-) projects, the project definition should make this clear.

#### 2.1 Problem Being Addressed

A description of the problem(s) or issue(s) being addressed by the project, and how these problems/issues relate to corporate objectives.

#### 2.2 Objectives

A succinct statement of the project’s aims. These should be in terms of business objectives. A project may have multiple objectives.

#### 2.3 Outcomes

A description of the project’s expected outcomes: ie what it will deliver and what will be different when the project is completed.

#### 2.4 Scope

A description of the boundaries of the project; ie what is included (and, if relevant, what is not).

### 3. BUSINESS CASE

A succinct statement of the expected costs and benefits of the project.

#### 3.1 Resources

A description of the resources required for the project and their source. This should also identify any resource gaps (eg lack of appropriate skills)

#### 3.2 Benefits

Benefits should be categorised as realisable (eg cash savings), quantifiable (eg where resource savings can be identified but not realised) or tangible (eg improved quality). This section should include any measures required to ensure that the benefits are in fact realised.

#### 3.3 Risks/barriers

The major risks faced by, or barriers confronting, the project and brief strategies for managing them.

### 4. PROJECT PLAN

An overview of how the project will be managed.

#### 4.1 Strategies/Activities

A schedule of the strategies and/or major activities required to complete the project, together with their planned timeframes. This should identify key milestones and review points. A Gantt chart could accompany this section.

#### **4.2 People**

A description of:

- Who is responsible and accountable, for what
- Key stakeholders and their roles. (A stakeholder is someone who can significantly affect or is significantly affected by the project and/or its scheduling)
- The beneficiaries
- The expected staff impacts

#### **4.3 Consultation**

A description of the consultation which has already occurred and will occur in the future, and the major consultation strategies.

#### **4.4 Communication**

A brief description of the strategies which will be used to communicate information about the project and its implications.

#### **4.5 Training**

A description of any training required as a result of the project

#### **4.6 Related projects**

A listing of other projects/processes which can significantly affect or be affected by the project, and their responsible officers.

#### **4.7 Critical success factors**

A brief description of the factors which are critical to the success of the project and therefore of which the sponsor needs to be aware.

#### **4.8 Policy/legislative issues**

A listing of affected policies/legislation and any change implications.

#### **4.9 Quality assurance**

A brief description of any quality mechanisms or issues associated with the project.

#### **4.10 Evaluation**

A description of what evaluation strategies will apply to the project.

## 8. Critical components of Queensland Health Clinical Pathways

- Queensland Health logo on front cover, with room for patient identification label on the top of each page
- Name of the Clinical Pathway
- DRG Coding with Average Length Of Stay (ALOS) – state-wide and/or local (not required for Day Procedure Pathways)
- Queensland Health Endorsed Disclaimer
- Documentation and Symbol key
- Signature Log – with columns for initials, signature, printed name and role
- Discharge plan
- Chart copy of the patient education
- Initial assessment form – medical admission
- Date or phase or timeframe. The timeframe covered by each page will be dependent on the pathway, for example a day to a page, pre and post procedure pages, or in hours or phases
- Care content pages in the Clinical Pathway will have categories and details of care required, (but not essential or limited to depending on the speciality) for example:
  - reviews
  - investigations or procedures
  - medications and pain management
  - observations and treatments
  - hygiene and elimination
  - nutrition
  - wound and dressings
  - activity and mobility
  - discharge planning and patient education
  - expected outcomes
- Care content pages will also have columns next to the intervention or care performed and its outcome, for:
  - the clinician giving the care to sign their initials
  - Shift columns may also be indicated (AM, PM, ND) or a time column
  - variances to be documented with a 'V'
- Clinical Events / Variance pages with:
  - a date and time column
  - a variance code column to record the variance code
  - variance code key on the bottom of the page
  - an area to expand on the variances to the Clinical Pathway, actions taken and outcomes
- Four categories of variance codes (state-wide standardisation):
  - Patient related
  - Staff related
  - Hospital related
  - Community related
- Pathway name, version number, date created and pathway code needs to be in the left-hand margin (aligned vertically direction from the bottom).
- Page numbers are at the bottom of the page, aligned in the centre.

## 9. Pathway Quality Checklist

Print hard copy or district hard copy to check

Single table per page (not multiple tables can use no border if you need space)

Header – even spaced columns

Header - District specific should have HSD where facility is

Header - Generic pathway should have pathway name with a space for Facility available

Align patient label details to the left

Disclaimer should be present on front page of every pathway

Benchmarking data should be present on Queensland Health pathway

Check documentation key has correct symbols

Footer – page x of y displayed each page (Arial 8 font)

Free text box should reflect date and correct version on every odd page in binding margin

Alignment of binding margins

All pages

Each table should be selected and centrally aligned

Check odds and even page are correct eg page numbers binding margins

Check line thickness

Check font and font size

Align all outcome statements to the right

Where possible one line per statement

Avoid continuous use of underscore ( \_ ) for creation of lines within tables

Check table margins and widths eg odd page Left margin 2.5 Right margin 1.5 cm

Page setup: Top 1 cm, Bottom 1cm, Left 2cm, Right 1cm. go to multiple pages and change to mirror margins and apply to whole document

Use checkbox not symbols (may need to add this to your menu bar)

Numeral in expected outcomes should collate with phase of patient care and education sheet

Spell check – mandatory

Ensure appropriate row alignment

### **Tip**

Listed above are components that need to be checked upon completion of the clinical pathway.

## 10. Evidence Base Practice

### Tip

Evidence-Based Practice comprises five steps:

1. Convert the information you require into an **answerable clinical question**.
2. Track down, with maximum efficiency, the **best evidence** with which to answer it.
3. **Critically appraise** that evidence for its:
  - **validity** (closeness to the truth)
  - **impact** (size of the benefit)
  - **applicability** (clinical usefulness).
4. Integrate that appraisal with your clinical expertise and patient biology, values and circumstances, and **apply** the results to your clinical practice.
5. **Evaluate** your effectiveness and efficiency in executing steps 1-4 and seek ways to improve your performance.

**Useful web site:** *A guide to the development, evaluation and implementation of clinical practice guidelines*

<http://www7.health.gov.au/nhmrc/publications/synopses/cp30syn.htm>

Check out these interactive, flexible online e-learning programs

<http://www.health.qld.gov.au/cdp/default.asp>

The online education Evidence Base Practice series is designed to provide flexible adult learning pathways for individual clinicians wanting to become proficient in the techniques of evidence based practice for their own professional practice and/or to participate in a Clinical Practice Guideline development group. The program is divided into fifteen (15) modules called Workshops addressing, in total, all the steps of both EBP and Guideline development methodology.

## 11. Gathering feedback from the users of a trial pathway

### **Tip**

Two methods have been used to collect feedback from the users of a trial pathway. Firstly this involved using a post trial survey. The survey was successful for accumulated data or longitudinal study such as in evaluation report. The other method involved placing a hard copy for feedback in the ward area for suggested improvements. This method was successful for making pathway adjustments. These two methods were used for different purposes. This allows for comments on the process as well as the pathway itself.

## 12. Variance Tracking and Analysis in a Clinical Pathway Program

Variance has been defined as “any deviation from the proposed standard of care listed in the pathway”<sup>1</sup>. According to Zander,<sup>2</sup> “Variance is the difference between the item stated, within the time period stated and the actual event.” Reporting of a variance within a pathway is the first step in activating and implementing an intervention. Monitoring of these deviations is a step towards maintaining quality in health care today in that it can lead to change in practice or change in the patient pathway. If clinical pathways are tools for improving patient outcomes by guiding care along the best evidence available then variance tracking and analysis become the tools for ensuring that continuous quality improvements are attained. Use of variance also acknowledges the individuality of the patient. Variance recording is an essential part of the documentation involved in a clinical pathway as it can capture the individuality of the patient, clinician or organisation and adds to the flexibility of the document. Cyeah states that a well-designed clinical pathway should capture 60 - 80 % of the patients within a defined group. Variances can be positive or negative and can include patient complications.

Variances can be positive or negative and can include patient complications. Variance tracking can also provide the database for research and evidence base for change in practice.

Negative variances can occur when:

- A patient does not meet the predetermined outcome of the pathway, whether due to their own choice or condition
- There are delays in meeting expected outcomes
- Any unexpected intervention is needed to move the patient along the pathway or
- Any planned or expected interventions do not take place

Positive variances can occur when:

- A patients' progress / recovery is shorter than anticipated
- An intervention or care component is not required for an individual patient
- Selected interventions or resources (such as pain relief) are unnecessary
- An intervention results in the patient being discharged earlier

Analysis of variance also provides vital information for continuous quality improvement in health care in that it can lead to change in practice or change in the pathway. If clinical pathways are tools for improving patient outcomes by guiding care along the best evidence available then variance tracking and analysis become the tools for ensuring that continuous quality improvements are attained. It can also provide the database for research and evidence base for change in practice.

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<sup>1</sup> Dalton P, Macintosh D, Pearson B. Variance analysis in clinical pathways for total hip and knee joint arthroplasty. *Journal of Quality of Clinical Practice* 2000 December; 20: 145-149

<sup>2</sup> Zander K, Integrated care pathways: eleven international trends. *Journal of Integrated Care Pathways*. 2002; 6: 101 – 107

### 13. Current methodology for variance management

A paper based Free Text Variance Page has been developed for inclusion in the QH Clinical Pathway. Clinician's code and note problems, actions and outcomes as they arise during the course of treatment. An excel spreadsheet developed for each clinical pathway highlights key areas for monitoring. Number of variances and types (coded) of variance are recorded during chart audits of the pathways. This is done retrospectively as part of the evaluation of clinical pathways. The spreadsheet incorporates some calculations allowing for reports and graph plotting.

### 14. Storage of information regarding clinical pathways

#### Tip

Please note it is important to keep relevant documentation in the development, implementation and evaluation of your pathway in accordance with QH retention schedules listed below.

Listed below are the QHEPS sites for the documents relating to the retention, storage and disposal of clinical records.

Policy:

<http://qheps.health.qld.gov.au/ibm/isu/docs/9442.pdf>

Disposal Authority:

<http://qheps.health.qld.gov.au/ibm/isu/docs/9443.pdf>

Adoption Records - Guidelines:

<http://qhin.health.qld.gov.au/ibm/isu/docs/24968.pdf>

Record management in general.

Policy:

<http://qhin.health.qld.gov.au/ibm/isu/docs/8342.pdf>

## 15. Useful Intranet and Internet sites

### QHEPS sites

**Requirements:** access to QH intranet

### Queensland Health Change management guidelines

<http://qheps.health.qld.gov.au/odb/oiu/publications.htm>

### Clinicians Knowledge Network

<http://ckn.health.qld.gov.au/>

### PM Plus Project Management

<http://qheps.health.qld.gov.au/PHS/PMplus/templates.htm>

### Document Submission Form for Electronic Publishing

[http://qheps.health.qld.gov.au/eps/Docs/13153\\_att1.doc](http://qheps.health.qld.gov.au/eps/Docs/13153_att1.doc)

### Standards Australia

[http://qheps.health.qld.gov.au/masters/standards/aust\\_standards.htm](http://qheps.health.qld.gov.au/masters/standards/aust_standards.htm)

### Integrating Strategy and Performance (ISAP) website

<http://qheps.health.qld.gov.au/isap/home.htm>

### Safety and Quality Team website

<http://qheps.health.qld.gov.au/hsd/procurement/quality/home.htm>

### Quality Internet Links

<http://qheps.health.qld.gov.au/hsd/procurement/quality/other/qualsites.htm>

### Direct Access Internet Sites – QH allowed internet sites

[http://qheps.health.qld.gov.au/allowed\\_internet\\_sites.htm](http://qheps.health.qld.gov.au/allowed_internet_sites.htm)

### Clinician Development Program Online Education Service

<http://www.health.qld.gov.au/cdp/>

### A guide to the development, evaluation and implementation of clinical practice guidelines

<http://www7.health.gov.au/nhmrc/publications/synopses/cp30syn.htm>

### Other sites of interest

**Requirements:** internet access

### UK National Audit Office

<http://www.nao.org.uk/>

### National Institute for Health and Clinical Excellence

<http://www.nice.org.uk/Cat.asp?pn%20=professional&cn=toplevel&ln=en>

### NHS National Electronic Library for Health

<http://www.nelh.nhs.uk/>

### NHS Clinical Governance Support Team website

<http://www.cgsupport.nhs.uk/>

**NHS Modernisation Agency**

<http://www.modern.nhs.uk>

**Google Health News Australia**

<http://news.google.com.au/news/en/au/health.html>

**The Joanna Briggs Institute**

<http://www.joannabriggs.edu.au/about/home.php>

**Medical Research and Info Sites Australia**

<http://www.uq.edu.au/vdu/MedResAuslinks.htm>

**Therapeutic Guidelines**

<http://tg.com.au/home/index.html>

**Health Communication Network**

<http://www.hcn.net.au/>

**Centre for Reviews and Dissemination**

<http://www.york.ac.uk/inst/crd/index.htm>

These are just a sample of useful sites identified by the Clinical Pathway Project Team - In the supporting evidence some of the e-evidence has links as well which may be useful for gathering supporting evidence. If you have found any other sites that you have found useful, please e-mail a pathways team member so that the information can be shared across the state.

