

ICPUS

Integrated Care Pathway
Users in Scotland

A Workbook for People Starting to Develop Integrated Care Pathways



Acknowledgements

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Authors

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about the workbook

The aim of this workbook is to give you a knowledge and understanding of the skills and processes required to successfully begin to develop the **multidisciplinary, chronological, structured case records known as Integrated Care Pathways (ICPs)**.

It is the distillation of lessons learned over the last 10 years by a group of ICP facilitators belonging to **ICPUS** (Integrated Care Pathway Users in Scotland), a network of people from all over Scotland, who are interested in or using ICPs in many different areas and who meet with a view that ICPs can add something positive to patient/client care. In many instances it is likely that the ideas are not new and the workbook simply brings together in one place a lot of things that you already know. By reflecting and raising awareness, we aim to enable people at all levels to feel more confident about using ICPs.

While this workbook has been designed primarily for the use of hospital based staff, much of the information should be of interest to anyone wishing to develop ICPs.

The content of the workbook is a consensus of views and opinions and where views differ this is noted. Written source materials have been acknowledged as far as possible. We recommend those sources at the top of the reference list as the minimum of what you should read. There are activity boxes to complete throughout the workbook and self-assessment questions at the end of each section to highlight the main points discussed.

By the end of this workbook you should have a clear understanding of the ICP tool and how to write and develop one. You should also have gained knowledge of the steps for effective variance tracking and continuous quality improvement as well as an idea of how ICPs can support you in delivering safe and effective care.

We hope you find the workbook useful and as we aim to review it on a regular basis we would welcome your feedback. We apologise if any copyrights are infringed and would ask that notice of such infringements be forwarded to the authors through our website:

www.icpus.org.uk

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 <p>REFERENCE</p>	 <p>KEY POINT</p>	 <p>WARNING</p>	Throughout the workbook sections of text have been marked with these symbols to amplify the ideas and indicate areas that you might wish to return to.
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section 1: introduction to integrated care pathways

1.1 General History

Sociologists will tell you that “Care pathways embody an approach to organisations whose intellectual origins can be traced back at least to the Enlightenment’s social engineering model of society with its twin beliefs in constant improvement and rationality”, Pinder et al (2005). Others would go on to say that they are a modern version of that management favourite, the Gantt chart (Brigato and Jacobs, 2003) – a form of time/task matrix.

In practical terms we can trace a direct line from work done in America by Karen Zander at the Centre for Case Management, in the development of what they call CareMaps™ system – a trademarked and copyrighted series of documentation available for purchase.

The story of their development seems to be that in an American healthcare system driven by insurance companies there was a need to drive down costs in the 1980’s. You can imagine a conversation between the insurance companies (IC) and hospital administrators (HA) along the following lines:

IC: *“One target for reducing costs is the wide variation between costs for the same procedure or condition depending on where in America it is carried out. Given the numbers involved, we are able to use some form of statistical method to come to a unit cost which we will pay for procedure X or condition Y”.*

HA: *“Ah but, my patients/clients are sicker/older, etc. than average and so we deserve more in repayment!”*

IC: *“Prove it! Tell us what your patients/clients go through. What’s the guideline, protocol, journey for most patients/clients with condition Y? We’ll negotiate ‘extras’ on a case-by-case basis if you have evidence that extra care was provided.”*

Hospital administrators saw an easy-to-use structured case note for every condition, [‘Managed Care’ was coined] and that’s where ‘CareMaps™’ came in: providing evidence of the routine care provided, as well as those extra bits of care that Mrs. Smith required.

But we don’t have an insurance system and don’t get paid on a per case basis, so what’s in it for the NHS?

Clinical Effectiveness

UK NHS teams went to the USA in 1990 to investigate ICPs and as a result 12 pilot sites were set up in North London (www.library.nhs.uk/pathway). [Also see Johnson's book, 'Pathways of Care' (1997) for descriptions of its introduction.] They decided to use the ICP as a tool to implement Clinical Effectiveness guidance and it is that thread which led to it being investigated north of the border. By 1994/5 there were a number of sites looking at ICPs in Scotland for adults and children, on the west and east of the country.



Scottish Project

Such interest eventually led to a three year project funded by the former Clinical Resource and Audit Group [CRAG], at the Scottish Executive, which reported in 1999 [as CRAG project number 96/01].

A summary of the findings of this project are discussed later in the workbook in Section 1.3. The full report is on the web, 70+ pages of cracking reading (*though beware, that at the end it says there are supplementary papers available – these were never loaded*) It is an MSWord document, which means it is simple to cut and paste from! You can find a 4-page summary of the report on the ICPUS website.

Just in the UK?

Currently there are pathways in at least 23 countries, detailed as follows from the international survey carried out by the European Pathway Association (EPA) [vanHaecht et al 2006].

Percentage	Patients/clients who are on a pathway	Who could have been on a pathway	Who will be on a pathway in 5 years
81-100%			
61-80%		(61 – 80%) Australia – Canada – Estonia – Saudi Arabia – Scotland – England – Wales - USA	(61 – 80%) Estonia - UAE
41-60%		(41 – 80%) Austria – Belgium – Germany – Netherlands – Singapore – Switzerland – UAE	(41 – 60%) Australia – Canada – Saudi Arabia – Singapore – Wales - USA
21-40%	Estonia – Singapore - USA	(21 – 40%) Guernsey – India – Italy – Spain	(21 – 40%) Austria – Germany – Netherlands – Scotland – Slovenia – Switzerland - England
16-20%		(1 – 20%) China – Denmark – New Zealand - Slovenia	(11 – 20%) Belgium – China – Denmark – Guernsey – Italy – New Zealand
11-15%	Australia – Canada - England		
6-10%	Austria – Saudi Arabia – Scotland - Wales		
1-5%	Belgium – China – Denmark – Germany – Guernsey – Italy – Netherlands – New Zealand – Slovenia – Spain - Switzerland		(1 – 10%) India – Spain
0%	India - UAE		

© European Pathway Association, www.E-P-A.org, (2005)



Currie et al (1998) & (2000) give an indication of the increasing spread of ICPs across the UK

The EPA Conclusion

“Our survey showed that clinical pathways were predominantly viewed as a multidisciplinary tool to improve the quality and efficiency of evidence-based care. Pathways were also used as a communication tool between professionals to manage and standardise outcome-oriented care.

Conclusions: there is a future for the use of clinical pathways, but there is need for international benchmarking and knowledge sharing with regards to their development, implementation, and evaluation.”

Activity 1

Find out and list below any currently or previous ICP development in your organisation.

If there is/has been some, how will you use this experience?

If there has been none, what effect will this have on how you start to develop your ICP?

1.2 General Principles

Vilfredo Pareto was a 19th century economist who observed that 80% of Italy's wealth was owned by 20% of the population. This Pareto rule applies in healthcare as well as 'real life':

80% of your patients/clients take 20% of your time/resources.

and it's converse,

20% of your patients/clients take up 80% of your time,

The exact proportion is probably not important, it's the principle that it may be possible to plan a routine for a process and cover the vast majority of folk with the main part of that process, which we may come to refer to as **the patient/client journey** or, **the clinical pathway**.



"Ah but, what about patient/client centred care?"

"Now you're treating patients/clients all the same!"

"Cookbook medicine!"

The warning signs are being erected and it's only page 4!

(For more of this kind of comment/question and the answers you should give, please see Prof. Hindle's question and answer table on the next page)

What we would say is:

- that the process of care can be the same,
- the record-keeping can be the same,
- but that it doesn't mean the individual care must be the same.

Variations

This allows us to mention **Variations** which we'll deal with in more detail later under sections 3.2 and 4.1. Suffice to say that ***all ICPs should have a mechanism for variance tracking.*** **Variations are recorded when care is omitted or given which is not as laid down in the documentation.**

Please be aware that ***ICPs are guidelines, not tramlines.*** They are not protocols, though you may want to embed a protocol into the ICP. Some examples of the documentation have an introductory note which reads something like:

PLEASE NOTE: An ICP is intended to act as a guide to treatment and an aid to documenting a patient/client's progress. Clinicians are free to exercise their own professional judgements as appropriate. However, any alteration to the practice identified within this ICP must be noted as a Variance.

Professor Don Hindle is based in the University of New South Wales, Australia. He encourages hospitals around the world to implement ICPs to improve patient/client care.

What if people say.....	His response
An ICP means "cook-book medicine"	Not true. The good ICP should be designed to ensure this is not so. The ICP must not dictate care, and all clinicians must continue to use their best judgement when treating individual patients/clients.
ICPs will constrain research and development	Not true. Evidence shows clinicians who are likely to be involved in developing and testing new approaches are also the most likely to favour ICPs. Opposition to ICPs is likely from clinicians who fear their practice will be scrutinised by the entire clinical team.
ICPs are expensive and time-consuming to design	Possibly. This has been the case in some health care services, but it is avoidable: a clinical team should meet to pool its <u>current</u> knowledge. It is always advisable to be searching for new knowledge, but this should not delay the introduction of an ICP.
ICPs increase the risk that clinicians will be sued	Possibly. They increase the risk that clinicians will be sued IF they provide inadequate care. However, the clinician who follows a well-designed ICP is less likely to make mistakes such as forgetting to undertake a diagnostic test or check the results.
Patients/clients and their families will not like having "automated care"	Only true in part. Patients/clients do want to be treated as individuals, but they also want to know what is happening. They often waste clinicians' time by asking for more information. Time and worries are reduced if patients/clients / families are given a simplified copy of the ICP.
ICPs increase the amount of clinical documentation	This should not happen. If ICPs are well designed, they reduce the amount of documentation because it is unnecessary to make as many records when care is being provided in the normal way. If the team defines what is 'normal' by way of the ICP it will then be possible to move towards reporting by exception.
ICPs are merely a cost-cutting tool	Not true. It would be unwise for anyone to introduce ICPs simply for the purpose of cutting health care costs. If a service wants to make the best use of a budget, ICPs would help to identify where money could lead to improved health outcomes.
We don't have the time to develop ICPs	Probably untrue. Clinical teams that do not use ICPs are almost certain to be wasting time and money as a consequence of poor synchronization and resource management.
We need more computer systems to support ICPs	No. For most purposes, computerisation is simply not necessary. A well-designed paper system can be highly efficient and probably be less costly and under greater control by the clinical team than if it has to ask IT staff to help when the ICP has to be modified.
We have too many different types of patient/client in our department	This claim is often made by general rather than specialised departments. It shows that a basic idea has been ignored: that no department should ever try to introduce ICPs for all patient/client types. A good clinical team will start where there are the largest returns – high-volume patient/client types, or where there are most errors.
We need several years of research before we're ready to introduce ICPs	No. If the team waits until the best possible evidence is available, from all the clinical journals, then the ICP will never be written. The right time to implement an ICP is always <u>now</u> .
ICPs will put the more complicated patients/clients at risk	No. This claim is based on the idea that ICPs result in the same treatment of all patients/clients. In fact, the reverse may be true: care pathways improve the efficiency of treatment of 'routine' patients/clients, and allow more time for the treatment of those who need more attention.

Definitions

There are several definitions of ICPs currently used, which together encapsulate the various attributes of ICPs.

1. Early writers described ICPs as:
"Consisting of a document which maps the interventions which should occur during a specific episode of patient care. In order to be effective ICPs should be patient centred, multidisciplinary (involving all those concerned with the patient's care) and specific to a particular medical or surgical environment".
(Layton 1993) quoted in (Playford et al 1997)
2. Middleton and Roberts (2000) defined ICPs as:
"An ICP is a multidisciplinary outline of anticipated care, placed in an appropriate time frame, to help a patient with a specific condition or set of symptoms move progressively through a clinical experience to positive outcomes. Variation from the pathway may occur as clinical freedom is exercised to meet the needs of the individual patient/client."
3. European Pathway Association defines a clinical/care pathway as:
"Care pathways are a methodology for the mutual decision making and organisation of care for a well-defined group of patients during a well-defined period.
Defining characteristics of care pathways includes:
 - *An explicit statement of the goals and key elements of care based on evidence, best practice, and patient expectations;*
 - *The facilitation of the communication, coordination of roles, and sequencing the activities of the multidisciplinary care team, patients and their relatives;*
 - *The documentation, monitoring, and evaluation of variances and outcomes; and the identification of the appropriate resources.**The aim of a care pathway is to enhance the quality of care by improving patient outcomes, promoting patient safety, increasing patient satisfaction, and optimizing the use of resources." (Vanhaecht et al 2006)*
4. The National Pathways Association (NPA) [sadly no longer active] noted:
"An ICP determines locally agreed, multidisciplinary practice based on guidelines and evidence, where available, for a specific patient / client group. It forms all or part of the clinical record, documents the care given and facilitates the evaluation of outcomes for continuous quality improvement." (Overill 1998)

This last definition is particularly useful as it captures many of the elements of ICPs and puts specific emphasis on evaluation and quality improvement.

It also makes it possible to identify what is **not** an ICP.

Terms Used

There are many terms used to describe ICPs including:

- Critical Pathway
- Clinical Pathway
- Pathway of Care
- Anticipatory Recovery Pathway

A term that can mean more than one thing often ends up meaning nothing – how can we differentiate?

Brigato and Jacobs (2003) suggest that there are three different things being talked about under the general heading of ICPs and if we agree what they are then it should make it a lot clearer:

1. The first type of ICP is the actual care process or pathway experienced by each individual patient/client. In the literature this is represented as a journey in which the patient/client is the traveller.
2. However, ICPs are also described as maps that define best practice and the minimum clinical standards or essential components of care for every patient/client in a given situation. Therefore a care pathway is a standard or universal plan for how a patient/client with a particular condition will be treated.
3. ICPs normally involve physical documentation that is located at the point of care and may replace traditional records. This documentation is also called the care pathway and is central to the task of patient/client care under the pathway approach, as the care process is clearly presented on the documentation for all those involved to see.

All are valid actions in developing ICPs, but we would argue that only point 3 represents an ICP. We would suggest that 1 and 2 above are called 'pathways of care'.

In this workbook we will deal with the last of the categories above, (whether paper or electronic):



A Multidisciplinary, Chronological, Structured Case Record

Activity 2

Write down what you are aiming to develop.

Is it an ICP as defined above?

1.3 Evidence from Research

What can research tell us about ICPs? Many of the studies carried out to date have indicated that there is insufficient evidence to support the *routine* introduction of ICPs. However, this does not necessarily mean that there are no benefits from the use of ICPs, merely that current research methods do not lend themselves easily to the evaluation of these benefits.

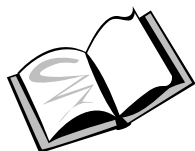
Particular issues with regard to research in ICPs include:

- Randomisation
- Ethics
- 'Before and after' studies
- Robust quality measures
- Transferability of findings
- Definitions of ICPs.

However, some positives have emerged in recent years:

- Randomisation is possible if you are creative – over time or as part of another study.
- The Annual International Conference for ICPs is now very evidence-based, and the Journal of Integrated Care Pathways is now peer-reviewed.
- The advent of organisations like the Centre for Integrated Healthcare Research and evidence-based Allied Health Professions (AHP) networks offer opportunities not previously available.

It is generally agreed that more robust studies are required, looking at why ICPs work. A notable exception to this is the work already described earlier on the CRAG Project which is summarised here.



[See also the Reference List at the end of the Workbook.](#)

CRAG Project Summary

This three year project led to the successful development and implementation of over 100 ICPs in an urban teaching hospital (Glasgow) and a district general hospital (Lanarkshire) and was the first in-depth study of ICPs to be undertaken in Scotland.

The main report on the project was produced in 1999 and included a full literature review, a description of project development, observations of the project team and a formal evaluation of the impact of ICPs at the project sites (*web link to full report below*).

The evaluation was based on a review of some 1379 cases for 20 conditions. The staff aimed for 40 before and 40 after ICP implementation, however some case notes were not found for review, and some conditions had not yet accumulated 40 cases using ICP documentation. Staff and patient questionnaires were also used.

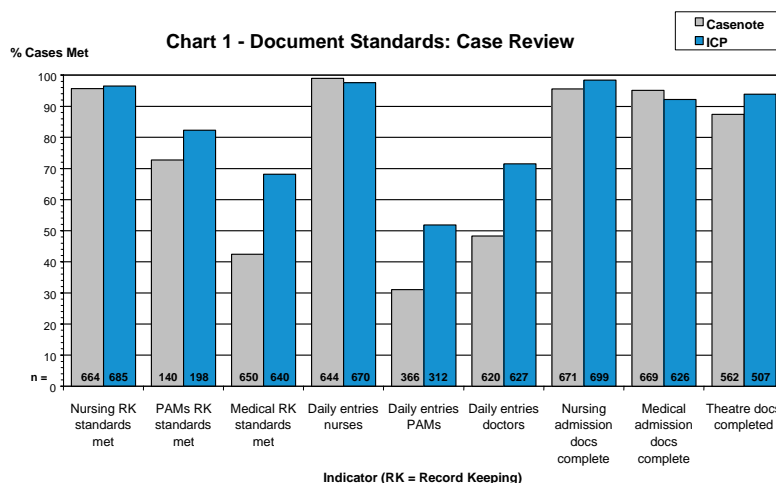
Results

Impact was assessed in four key areas:

A. Quality and completeness of documentation

The review provided good evidence of an overall improvement in the standards of documentation resulting from the introduction of ICPs.

There was significantly improved compliance with standards specified by relevant professional bodies for both doctors and Professions Allied to Medicine (PAMs) [now known as Allied Health Professions (AHPs)]. These results are summarised in the following chart.



Information was duplicated in 97% of all traditional case records but only 14% of ICPs. Questionnaires showed that the majority of all staff (65%) recognised that ICPs reduced duplication.

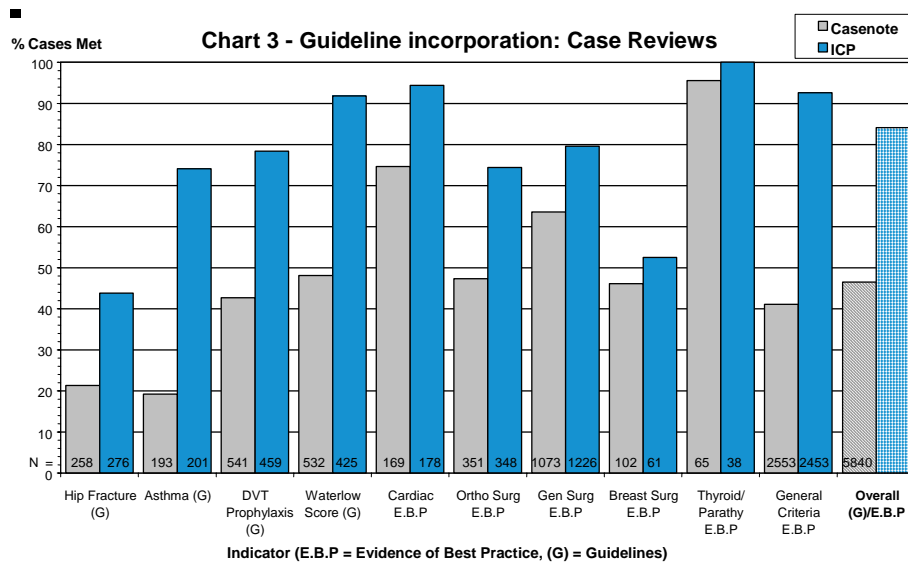


Clinical Audit and Quality Using Integrated Pathways of Care, Project CA96/01.

www.show.scot.nhs.uk/crag/pdf/icp9601/report.doc
summarised in Kent & Chalmers (2006)

B. Incorporation of Guidelines and Best Practice

The widespread advocacy of ICPs as a means of implementing evidence-based practice was strongly reinforced by the report findings. Recordings of indicators derived from clinical guidelines and recommended best practice were found to increase for all conditions studied. This rise was usually marked and significant, as shown in the following chart.



At the very least these results showed ICPs to be superior to traditional documentation when it came to **recording** evidence of best practice. It would be speculation whether this was a direct reflection of improved care delivery or simply an improvement in documentation.

C. Quality of patient information and staff-patient communication

The review showed that patient seemed to value ICPs. Overall, 85% of patients responding to the surveys indicated that they looked at their ICP. A majority of patients (60%) indicated that the ICP helped them to understand their own care.

D. Specified indicators of process and outcome

Measures used of how care was delivered were improved by ICP use. There was strong evidence of improvement in nursing discharge planning with a rise of 20% and a significant increase in evidence of general discharge planning from 33% to 93%. There was very little evidence of an influence of ICPs on outcome. None of the indicators looked at showed strong evidence of a change either way.

Some conditions showed a general decrease in length of stay with ICP use whilst others showed less dramatic shifts in the distribution, but a clear reduction in outliers. This shortening of the range of the distribution is the kind of pattern that is predicted from the use of ICPs. The literature suggests that they produce more appropriate and predictable lengths of stay, rather than simply reducing length of stay.

Implications for Clinical Governance

Clinical Governance has been defined as,

“A framework through which NHS organisations are accountable for continually improving the quality of their services and safeguarding high standards of care by creating an environment in which excellence in clinical care will flourish.”

(Scully and Donaldson, 1998)

Clinical Governance can:

- Make the changes you want to make happen
- Improve the quality of care for patients/clients
- Provide a better experience for patients/clients
- Provide a better experience for staff.

ICPs are recommended in the literature as a practical tool to enable clinicians to achieve targets set by the clinical governance agenda. (Middleton et al 2000).

The CRAG Report concluded that ICPs had the potential to be a cornerstone of clinical governance. They had been shown to visibly enhance incorporation of guidelines and best practice, accountability for care delivery, make clinical audit and outcome assessment easier, and be used as a tool for education and training. They were recommended for use as part of the strategy for improving clinical effectiveness, providing better patient/client information and managing clinical risk.

The Standards for Clinical Governance and Risk Management (NHS Quality Improvement Scotland, 2005) detail the outcomes to be achieved from the implementation of the standards as:

- systems are in place to ensure that patient and staff safety underpins all aspects of healthcare delivery
- the principles of equality and diversity are embedded in the values, culture and behaviour of NHS Scotland
- patients, carers and the public are treated with dignity, respect and empathy at all times
- individual patients and carers are involved in, and informed about, all decisions made during the journey of care
- information is used appropriately to support decision-making and facilitate the delivery of quality services
- the views and experience of patients, carers, public and staff are taken into account in the planning and delivery of services
- staff are fully supported and adequately trained, both personally and professionally, to play a full and active role in providing safe, effective, patient-focused care and services
- processes are in place to enable review of service delivery and continuous quality improvement.

Clearly the use of ICPs can play an important role in the achievement of these outcomes.



Recommendations for ICP Developers <i>This checklist has been taken from the CRAG Report. You can use it to highlight any actions you need to take for your ICP development.</i>	Action Required
ICP development should start with high volume, short-stay procedures/conditions.	
Full, open support of senior managers and clinicians is essential for success and their active input cannot be underestimated.	
A team-based approach to development is strongly recommended.	
Clinical involvement and ownership is as essential as a managed approach.	
A full time support team is required, led by a clinician with clear vision and good organisational and inter-personal skills.	
Administrative support is required.	
Documentation should be as user-friendly as possible.	
Training of staff groups will be a long term commitment to ensure success.	
Development is likely to take time and multidisciplinary teams should be aware of the timescales involved in order to avoid disappointment.	
Costs should be projected at the outset.	

1.4 Legal Issues

Litigation and complaints have become endemic to health care. Defence can only be based on the ability to demonstrate clear, thoughtful planning and execution of care and treatment, plus acceptable justification of actions. ICPs should assist this process by incorporating explicit best practice and ensuring accountability in the form of a signature for each intervention. (CRAG 96/01 1999)

There seem to be three threads to this aspect of ICPs:

1. Professional standards on record-keeping
2. Issues for ICP developers
3. Issues for users of ICPs

1. Professional Standards

Each profession maintains its own standards for record-keeping, based on its uni-professional needs, for example, the Nursing and Midwifery Council (NMC), Royal College of General Practitioners (RCGP), Scottish Social Services Council (SSSC), etc. all have published standards on what is acceptable.

In developing ICP documentation it is important for each profession to monitor that its standards are being met. (Compliance with standards is one of the four strands within evaluation – see section 4.1 for more)

2. Issues for ICP Developers

- Developers should keep a complete record of who was involved, what guidelines were incorporated and what audit is expected **(as you should for any new policy written)**.
- Record the reason for any decisions relating to why something was included or excluded within the ICP.
- Include a review date in your background document and stick to it.

3. Issues for Users of ICPs

The key principle is 'engage the grey cells':

- If the ICP states that an activity or treatment should happen for the patient/client and you then decided that it should not happen for this particular patient/client, say so by recording a variance which includes why you did not do this and what you did instead.
- If the ICP does not include a task that you have decided should happen for your patient/client, again, say so, recording in the variance why and what you did.



As with any health care documentation, the general rule of 'if it's not documented then it's not done' applies. An incomplete ICP makes this even more obvious.

Another aspect to consider is the possibility of a patient/client being put onto the wrong ICP documentation and being managed inappropriately in line with that ICP.

The Central Legal Office for the NHS in Scotland has stated that it is content with rigorously-developed ICPs (2003).

The Centre for Change and Innovation qualifies entries on their website with the following statement in regard to any potential legal issues, and we would recommend this to you all.

"Please be aware that the content in this section is intended to develop awareness of legal issues that might arise. Every instance has unique aspects. This is not intended to constitute legal advice and no liability can be accepted for any act or omission which follows reading this text. Please contact a qualified legal advisor if you require specific legal advice."

(taken from the 'Centre for Change and Innovation' website 2005)

1.5 Policies and Guidelines to Consider

As a review of the work presented so far (or indeed any ICP work over the past decade or so) will testify, policies and guidelines are a vital component which must be considered at a very early stage in the ICP development process. These will fall into two main groups: direct and indirect.

Direct guidelines will include:

- Local treatment policies and protocols for the condition/procedure/care under consideration.
- National and international guidelines, such as those from SIGN (Scottish Intercollegiate Guidelines Network), NICE (National Institute for Clinical Excellence), and those from Royal Colleges and other such bodies.
- Documentation issues for the various professions and departments involved, such as does a document which includes some form of prescribing have to go to the local Drugs and Therapeutics committee.

Indirect guidelines might include:

- Cross-cutting policies such as MRSA treatment, antibiotics.
- Local policies on whether support workers complete documentation.
- Administrative ones – such as which section of the case notes ICPs are filed in, or is there a local policy on developing ICPs or other forms of documentation such as charts.
- What's the policy on where case notes are kept – end of the bed versus the doctor's room, patient/client held versus case note only.

Once the multidisciplinary team decide that ICPs will add value, let's develop an ICP!

Activity 3

What policies and guidelines do you need to incorporate into your ICP?

What added value could ICPs provide to the way you care for your patients/clients?

What added value could ICPs provide for the patient/client experience of the service?

Self-Assessment 1: Introduction to ICPs

Well done! You have now completed the first section of the workbook and should attempt the assessment questions below.

Please tick (✓) one box only
<p>1. An ICP can be defined as:</p> <p><input type="checkbox"/> a. Interdisciplinary standardised documentation of a patient/client's planned care</p> <p><input type="checkbox"/> b. A standardised care plan</p> <p><input type="checkbox"/> c. A 'tick-box' document of planned care</p>
<p>2. The primary function of an ICP is to:</p> <p><input type="checkbox"/> a. Reduce the amount of staff involved in patient/client care</p> <p><input type="checkbox"/> b. Replace a doctor's order</p> <p><input type="checkbox"/> c. Provide a written document of patient/client goals/outcomes and staff intervention at agreed intervals</p> <p><input type="checkbox"/> d. Act as a quality audit tool</p>
<p>3. Which professional staff groups may document on an ICP?</p> <p><input type="checkbox"/> a. Nursing and Medical staff only</p> <p><input type="checkbox"/> b. Nursing, AHP and Social Care staff only</p> <p><input type="checkbox"/> c. Healthcare staff only</p> <p><input type="checkbox"/> d. All of the above</p>
<p>4. Critical components of an ICP include:</p> <p><input type="checkbox"/> a. Assessment, planning, implementation, evaluation</p> <p><input type="checkbox"/> b. Clinical indicators, clinical incidents, time-line, special needs</p> <p><input type="checkbox"/> c. Evaluation, analysis, synthesis</p> <p><input type="checkbox"/> d. Clinical guidelines, patient/client pathway, variance record</p>

Notes

section 2: processes for development

2.1 Getting Started

So you have decided to go ahead and develop an ICP. One of the first things to consider is the factors that need to be in place in your organisation to increase the chances of success. Many of these factors are also key factors for a redesigned service and fortunately in Scotland we are currently seeing redesign in the NHS on an unprecedented scale.

The Scottish Executive Health Department (SEHD) **Centre for Change and Innovation** (CCI) was set up at the end of 2002 to work with Scottish Ministers, the Health Department and all health bodies in Scotland to spread good practice in service redesign within NHS Scotland. Resources were allocated over several years to ensure a focus on change, innovation and service redesign. National programmes were set up to improve patient/client and carer experience and satisfaction with projects such as improving access and reducing delays at GP practices and for unscheduled care. At the end of 2006 the CCI migrated to the Directorate of Delivery and is now known as the **Improvement and Support Team (IST)**.

The following table shows the factors that need to be in place for a Redesigned Service and for an ICP to succeed:



ICP	Redesigned Service
<ul style="list-style-type: none"> • Documents the care given and facilitates the evaluation of outcomes for continuous quality improvement • Team based approach • Multidisciplinary/evidence based • Supported by senior management with clinical involvement and ownership. 	<ul style="list-style-type: none"> • Focuses on the patient/client and the quality of their experience • Widespread involvement of key stakeholders • Focus on core patient/client processes which cross whole organisation • Based on best practice • Driven from top, ideas from bottom.

These lists show that ICPs and redesign compliment each other. Redesign methodologies can enhance ICP development and ICPs can underpin redesign changes. Your organisation should have taken part in some of the national redesigns, so many of the key factors required for ICP success may already be in place.



For a systematic review of ICP development see Jayne Wood's thesis on the <health groups yahoo> website or any of the books listed). Location on site: Files 07 Jul 2003, Folder ICP) -

 **Activity 4**

Write down the key factors that are in place or need to be in place in your organisation to ensure the success of ICP development.

Presuming that you have decided that there is enough active support – what next? There are various documented methods of developing ICPs, among them:

- A 4-meeting model as described in the recent Welsh document, “Integrated Care Pathways: a Guide to Good Practice” (2005)
- Belgian-Dutch Clinical Pathway Network 30-step model (2001)
- Leeds 9-step model (*see websites*)
- The original Welsh framework of 5-steps (1999)

For simplicity’s sake, we’ll follow the headings in the 1999 Welsh one:

1. Awareness raising and gaining commitment
2. Putting systems into place
3. Documentation
4. Implementation
5. Evaluation

Now that you have decided that you still want to go ahead with an ICP, someone will need to start the development process off. ‘Failing to plan is planning to fail’, so with that in mind the next page has a basic checklist of what to do.



The IST website has many good references to help you. You will need an Athens password to access the toolkits but this is available to all NHS staff:

- Improvement Toolkits – <http://athens.goodpractice.net/nhs/nhs.aspx>
- “A Guide to Service Improvement” (2005) – has a section on process mapping amongst other tools.

The Five-Step Framework

Step 1



Identify the general client group	For example, 'Emergency Caesarean Section', 'Chronic Obstructive Pulmonary Disease', 'Paediatric Acute Breathing Difficulties', 'Psychiatric Rehabilitation Services'.
Convene a stakeholder group	Medical, nursing, AHPs, pharmacy, etc. Don't forget to include primary care staff where appropriate, administrative, medical records, IT staff, clinical governance, ambulance staff, patients/clients, carers, voluntary groups, social care and other partner agencies.

Step 2

Set yourself parameters and a timeframe	For example, 'First three days of uncomplicated MI', Admission to Acute Mental Health Ward, 'Last Days of Life'.
Map the expected multidisciplinary care (the patient/client's 'pathway of care')	Who does what and when? Back this up with evidence/protocols/guidelines (see Section 2.2). This may involve a literature search/appraisal of evidence (remember to keep this in the Project Profile).
Baseline data and evidence collected	What currently happens: use clinical audit, have as an improvement project, develop indicators.

Step 3

Draft a pathway	See Section 2.2
Identify and act on educational issues	Training in new processes required by the ICP, as well as the ethos behind them and use of the ICP documentation.
Identify indicators of success to build into the ICP (standards, guidelines)	Ensure that the paperwork can support any process issues which can be used as a measure of 'good/best practice'.

Step 4

Pilot the ICP with local co-ordinator to monitor it's implementation	Local co-ordinator will need protected time to support and enthuse staff during the pilot phase.
--	--

Step 5


Track Variances	Initially as quickly as possible to monitor staff understanding of implementation (see Section 3.2). Then on a regular basis, noting recurring items for education and clinical feedback.
Have good and regular communication	MDT meetings, feedback of variance tracking results.
Review ICP and act on issues raised from audits and implementation	Review variances, staff questionnaire or other structured feedback, amend ICP as required. Use combination of indicators as proxies for outcomes and completion rates.

Conflict Resolution

When the going gets tough, the tough remember:

- ✓ To keep the patient/client as the focus, coming back to what are their best interests
- ✓ To have a chairperson with good multidisciplinary regard: not necessarily the key clinician
- ✓ To praise progress and celebrate small successes – this is a marathon, not a sprint, expect a few dead-ends
- ✓ To make the multidisciplinary meeting relaxed and summarise progress/actions at the end.
- ✓ To laugh occasionally.



 Activity 5 Complete this shortened development checklist for your ICP	
Step 1	
Identify the general client group	
Convene a stakeholder group	
Step 2	
Set yourself aims and objectives such as a timeframe and parameters	
Map the expected multidisciplinary care (the patient/client's 'pathway of care')	
Collect baseline data and evidence	
Step 3	
Draft a pathway	
Identify and act on educational issues	
Identify indicators of success to build into the ICP (standards, guidelines)	
Step 4	
Pilot the ICP with local co-ordinator to monitor its implementation	
Step 5	
Track, analyse and act on variances	
Have good and regular communication	
Review ICP and act on issues raised from audits and implementation	

2.2 Drafting the process

Let's look at the development steps in more detail.

Shown below are a couple of key questions you have to answer 'yes' to, in order to take that first step in developing your ICP:

- **Has the idea of ICPs been talked about enough to make for some interest?**
- **Are there enough key people willing to give it the benefit of the doubt?**

The Belgian/Dutch network people say their first task is to "irritate" staff. By that they mean to show them that there are alternatives, some of which could lead to improvements. They hope staff will say, 'Why can't we do this/that/the other?' and use their "irritation" to motivate them to consider and support change.



Beware of staff who can sabotage change by a strategy called 'passive aggression': saying little at the time, going with the flow, and then at a later stage deciding to raise objections they could have brought up earlier.

Activity 6

Your project – what do you want to do and why?

Key question: what's in it for the patient/clients?

You now know what you want to do, why you want to do it and you think there is enough going for it to make success more likely – what do you do next?

Over the page in Activity 6 we have listed some starter questions for you to complete to get you going in the right direction.

 **Activity 7**

- Do you already know the topic you want to start with? *If yes, write it here:*
- If you don't know which topic to start with, pick one which is relatively common and simple, one for which the pathway is fairly clear. NB If you pick one that is seen as a 'problem' you may get more support. *If you haven't already done so above, write your topic here:*
- Who should chair the first meeting to get the ball rolling?
- What needs to be done first?
- To win people over what other things might the ICP be helpful for?
- What other agenda could an ICP help? *(waiting times, risk management)*
- What's in it for the organisation?
- What sort of commitment will stakeholders want to see before they will get involved?
- Who should be involved in your project? *Start a list by profession, geography, etc.*

Mapping the Process

Once the multidisciplinary group is organised, the next step is to map out the patient/client journey to ensure that you really know what is happening with the people using the service.

There is a wide range of literature on types of patient/client journey mapping and five are described below.

1. Gold Standard:

This would involve someone taking the time out to research the procedure or condition and draw the pathway of care from the evidence available, with no regard to cost, geography or personnel issues.

2. Time/Task Matrix:

This involves plotting the activity which the condition or procedure routinely needs over the various phases of care. Start by identifying the main phases and activities that take place. This can be used to develop the content of the ICP. Here is part of one devised for 'possible exacerbation of Multiple Sclerosis (MS)'.

'Basic' patient's map of care	1a Primary Care	1b – Secondary Care: On receipt of referral
Medical Consultations	Patient reports symptoms to GP/Neurologist/MS nurse. GP to review GP to consider referral to secondary care.	Discuss need for steroids with MS Nurse/Neurologist via GP referral. Contact patient (?phone) Medical/Nursing assessment. Discuss need steroids, IP/DC or PHCT referral.
Assessment	History taken. Rule out other causative factors, checking for obvious ill health which may not be related to MS factors.	Phone triage/1:1 assessment by CNS. History taken, algorithm initiated. Rule-out other causative factors. Appropriate for steroids + IP/OP treatment.
Investigations/ Observations	MSU and Infection screen. Temp/Pulse/BP.	
IV Medications		
Other Medication	If infection found, treat with antibiotics before considering any steroids. Can symptoms be managed with other drugs? Check for drug interactions. Oral steroids (as per local regime) if appropriate	List all current medications
Fluids, Intake, Elimination	Check for signs/symptoms suggestive of UTI. Encourage healthy bladder and bowel management (?Continence Advisor)	Check for signs/symptoms/results of suspected UTI.
Education/ Information	Patient aware that: <ul style="list-style-type: none"> • Infection may exacerbate MS symptoms • Steroids are not necessary if ADL's unaffected • If prescribed oral steroids, ensure that they have info on side effects • Needs to await Sec. care daycase instructions. 	Confirm arrangements for date/time,etc. Advise of steroid use side effects/efficacy
Risk Management	PHCT to triage the contact: deciding whether: <ul style="list-style-type: none"> • Episode to be managed in Primary care (Rapid Response Team) or • Episode which requires Sec. care admission. 	Contra-indications for giving steroids discussed. MDT need to be involved prior to admission? (Rapid Response) Identify M&H, ADL, Dietetics, SALT issues
Discharge Planning	Referral to MS team for assessment of '?MS relapse' Determine if patient needs admission or can be treated as a daycase	Book all investigation required. PHCT contact numbers given in event of deteriorating condition (GP, NHS24, etc.)
Goals	MS Relapse identified or excluded. Identify appropriate treatment options. Early referrals actioned. Risk to patient minimised.	Possible MS relapse identified or excluded. Risks to patient minimised. Patient aware of management plan.

3. Reality Mapping:

This can be demonstrated by a quote from Dr Denise Kitchener (Paediatric Cardiac Surgeon, Liverpool) from the abstract to a presentation given at the national ICP conference in 1999.

"Care Pathways were introduced to the Cardiac Unit at the Royal Liverpool Children's Hospital in July 1994. They were developed for patient undergoing cardiac surgery for [names of 7 procedures]. The pathways were based on the median experiences of the last 40 patients operated on for these conditions (control group). A further 60 patients formed a pilot group and 744 patients were treated after the establishment of the programme. Variations from the pathway have been analysed in order to evaluate and improve clinical practice".

The key sentence here is, *"The pathways were based on the median experiences of the last 40 patients operated on for these conditions"*. The purpose of the baseline exercise is to map out the patient's **actual pathway** through the process, before developing the ICP documentation.

4. Patient/Client Flow Analysis

Similar to reality mapping, this type of analysis looks at the care process from a patient/client perspective and maps the work flow. Start and end points are identified and the patient/client is followed through their journey, identifying the activities taking place, delays, handovers, and who is clinically responsible for the patient/client at each stage. The time taken for each part of the process is noted and it can be calculated how much of the time the patient/client has spent being treated as a percentage of the total time spent. This can help identify inefficiencies to be targeted for improvement.

5. Process mapping:

This involves identifying the start point and end point for the journey you are going to be mapping. The first person who comes into contact with the patient/client describes what happens from the point they meet them until they hand them on to the next person (hand-offs). The next person then describes what they do, and so on, till the end point. It often emerges that patient/client processes have evolved over the years as change has been grafted onto established practice.

By following this process the number of hand-offs are identified, as well as areas of segmentation (where processes are split creating different rates of flow for different groups), batching and bottlenecks. Identifying these areas can help a team to know where to start making improvements that will have the biggest impact for patients/clients and staff. *(See the IST website for more information on this)*

Here is a quote about the impact of really knowing what's going on – in this case by mapping the patient journey – from the 'Cancer Service Improvement Programme Newsletter' (April 2005).

"I attended the [area] Colorectal Redesign Day wondering if it was a good use of a day away from work for busy people. In the event, one of the best parts of the day was a chance to talk and think as a team away from the pressures and distractions of work. As the visiting oncologist, it was useful to get an overview of the whole patient pathway and the problems at each step of the process. It was good to hear the perspectives of all the members of the team and that their opinions and suggestions for solutions were heard. Some of the solutions to the problems that were identified, were very simple and could be put into practice almost immediately which helped to create a sense of immediate achievement while others will need more planning before changes could be made.

I am hopeful that as a result patients will have better access to colorectal cancer services and a smoother journey through the system. This can only lead to better communication and improved job satisfaction, let alone meeting targets. The next challenge is to sustain momentum and do what we plan."

Consultant Oncologist, Cancer MCN website

Activity 8

For your chosen topic, which type of mapping would be the best approach?

How will:

- a) It be organised?

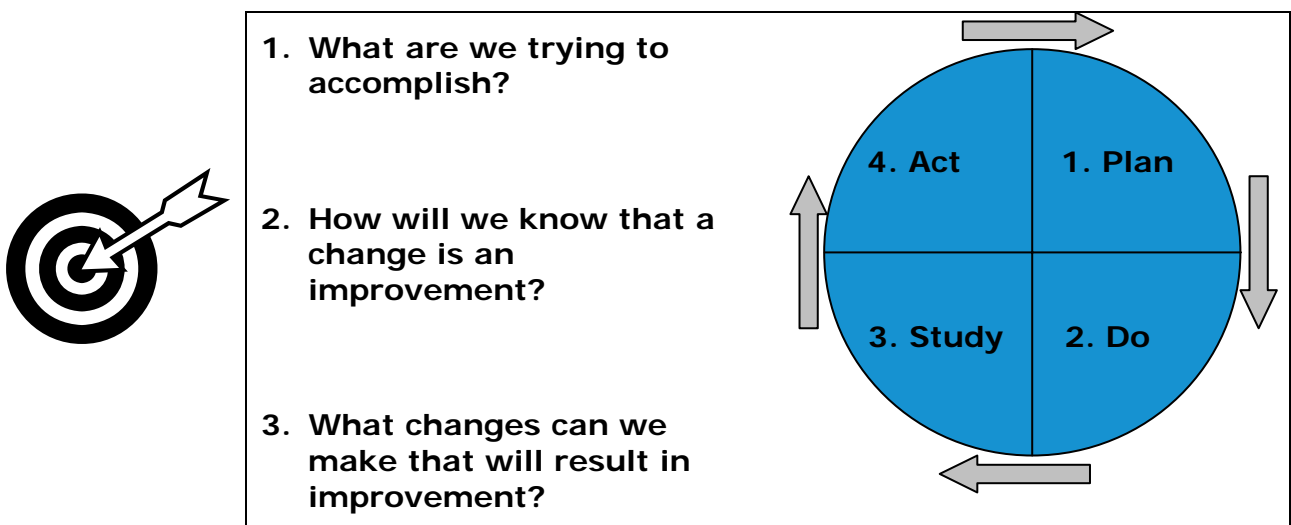
- b) The final draft be agreed by stakeholders?

Planning for Change

Once the process mapping has identified areas where changes can be made the next stage is to plan how to make these changes.

The Improvement and Support Team advocate the use of the **PDSA Model** as a framework for developing and implementing changes that lead to improvement. This framework includes 3 key questions and the PDSA – Plan, Study, Do, Act cycles for testing change ideas.

The three questions which should be completed before starting a PDSA cycle are:



The information from mapping the patient/client journey can be used to answer these questions and PDSA cycles used to test out these improvement ideas on a small scale before implementing the change.

The 4 stages of the PDSA cycle are as follows:

- **Plan:** Plan the change to be tested or implemented
- **Do:** Carry out the test or change
- **Study:** Study the data before and after the change and reflect on what was learned
- **Act:** Plan the next change cycle or plan implementation

It is more effective to start small and test your change with:

- One patient/client
- One nurse
- One doctor

If it works for one patient/client – try with 2, 3, 4 Over the course of a week you may progress to all patients/clients in a ward/caseload. If it doesn't work for one patient/client it won't work for 10 and you need to go back and plan the change again.

(More information about the PDSA Cycle can be found on the IST website)


The outcome of this activity should be incorporated into the design of the ICP.

Activity 9

What improvement ideas have you identified to incorporate into your ICP?

2.3 Issues for Documentation

In addition to the content of the ICP, a wide range of documentation issues must also be considered by the development group when developing the initial draft document. The following are not exhaustive checklists of documentation and content issues, but should be helpful to use as a starting point while drafting your documentation.

Documentation Style	Action Required
Front sheet – how much patient/client information should be on the front	
Local paperwork or across boundaries – acceptability, portability, etc.	
Layout – portrait versus landscape (what is local practice, what is hoped for) A4 versus A5.	
Format – booklet, stapled, folder with sections, etc.	
Sections on each page – by profession/patient/client process/time sequence.	
Detail – to include Unitary Patient/Client Record, Single Shared Assessment, (or equivalent)?	
Patient/client information aspects – taken out or integrated.	
Protocols – appropriate to include referral criteria, flowchart of patient/client pathway or keep as laminates separate from the documentation but included in the patient/client's folder?	
Variations – detail on individual pages versus held at end of document.	
Audit of ICP – sheet within ICP documentation versus separate audit sheet, versus audit items highlighted in some way (e.g.  11)	
Space for pre-printed patient label, or name and CHI number (or both?), DOB? – on both sides of paper?	
Name of the ICP in header section	
Version number, page x of y, ownership (NHS Lanarkshire, etc.), version date in footer	

Content of Individual ICP	Action Required
Signature/Initials Sheet.	
Top sheet for patient/client details and entry criteria.	
Variations recorded on a separate sheet or each page – what level of detail for local variations required.	
Consent Forms – include/exclude, standard/adapted?	
Nursing assessment/Medical Clerking/Uni-professional sections/Multi-professional sections?	
Peri-operative Record	
Protocols for referral, progress, specific investigations/practices – include or not?	
Specific assessments – insert assessment form or space for results only, insert table, multiple scores on same sheet, etc.?	
1 day/2 days to a page for multidisciplinary care and treatment? Separate sections for each professional involved in care?	
Review/audit sheet – what specific indicators required?	
Background information/instructions to aid staff completing it – what to include/exclude.	
Patient/client comment space?	



The long lists above may seem to be a bit extreme, but experience has taught many of us that discussion really does have to get down to this level of detail to avoid early problems and minimise the possibility of failure for 'technical' reasons.



Summary

By this point you should have agreement on:

- The title of your ICP
- Inclusion and exclusion criteria
- Start and end points
- Guidelines and best practice to include
- Content
- Clinical/Care Governance input
- Where and how to pilot the ICP
- Timescales for the pilot, implementation, first review, feedback
- Training needs.

Self-Assessment 2: Processes for Development

Well done! You have now completed the second section of the workbook and should attempt the assessment questions below.

Please tick (✓) one box only
<p>1. What is the relationship between ICPs and Redesign?</p> <p><input type="checkbox"/> Complimentary</p> <p><input type="checkbox"/> Unrelated</p> <p><input type="checkbox"/> Opposite</p>
<p>2. What should you consider when writing an ICP?</p> <p><input type="checkbox"/> How little the user will fill in</p> <p><input type="checkbox"/> How to run ICPs in parallel with current documentation</p> <p><input type="checkbox"/> How to incorporate a variance into an ICP</p>
<p>3. The 5-step model of ICP development consists of:</p> <p><input type="checkbox"/> Awareness raising, putting systems in place, applying for funding, implementation, and evaluation.</p> <p><input type="checkbox"/> Identifying the development group, mapping the process, drafting the pathway, tracking variances, making changes.</p> <p><input type="checkbox"/> Awareness raising, putting systems in place, documentation, implementation, evaluation.</p> <p><input type="checkbox"/> Focus on the patient/client, multidisciplinary team, documentation, and implementation.</p>
<p>4. What is process mapping:</p> <p><input type="checkbox"/> Plotting the activity and phases of care for a particular condition.</p> <p><input type="checkbox"/> Identifying what happens to a patient/client at each stage of their journey and finding out where the hand-offs, segmentation, batching and bottlenecks occur.</p> <p><input type="checkbox"/> Defining the work flow for a group of patient/clients.</p>
<p>5. What are the parts of the PDSA Cycle?</p> <p><input type="checkbox"/> Practice, Deliberate, Study, Analyse.</p> <p><input type="checkbox"/> Change, Improve, Review.</p> <p><input type="checkbox"/> Plan, Do, Study, Act.</p> <p><input type="checkbox"/> Postulate, Deliberate, Support, Activate.</p>

section 3: issues for implementation

3.1 Who's Agenda to Consider



ICPs are implemented best where the documentation serves more than one function effectively.

This can be for:

- Improving patient safety
- Better risk management
- Clarity of audit
- Staff education
- Patient/client education
- Improving documentation standards
- Multidisciplinary records
- Involving patients/clients in care planning
- Standardising documentation

If care pathways have the aim:

"to enhance the quality of care by improving patient outcomes, promoting patient safety, increasing patient satisfaction and optimising the use of resources".

European Pathway Association, Slovenia Board Meeting, Dec. 2005

.....then the secondary uses of the documentation need to be thought about **early** and built into the development process.

Activity 10

What else can your ICP be used for?

3.2 Variance and Variance Analysis



A key 'added-value' which ICPs bring is the ability to easily and routinely monitor the quality of care received. This is achieved with the use of **Variance Analysis**. Variances are often the part of ICPs that people have most difficulty with, but without variance analysis you don't have an ICP!

As mentioned earlier, the ICP is designed to meet the needs of 80% of your patients/clients, so what about the other 20%? How do you deal with those who vary from the expected pathway of care?

This 20% of patients/clients consists of both those who are very close to the pathway and those with clinical reasons for not being managed according to the pathway:

- The former group can be managed according to the ICP with variations in their care from the expected pathway (followed by the 80% of patients/clients), recorded on the ICP as variances.
- The latter group probably should not join the current version of the ICP. There may be sections of it which would be appropriate, but the pattern of recovery for these patients/clients would be so far from the 80% pathway that chopping and changing paperwork would be confusing and not assist with their care.

Even for the 80% however, there will be times when not every part of the ICP is appropriate or possible to carry out. In these cases **a variance should be recorded** on the ICP at that point, with further details at the appropriate place in the documentation.

In this way we are able to compare planned care with the care actually given. This continuous monitoring of practice can then allow us to amend the ICP or practice as appropriate to ensure that the best possible quality of care is given to patients/clients.

Types of Variance

Variances come in two main types:

- Positive/Negative
- Avoidable/Unavoidable

A **Positive** variance is one where the patient/client is ahead of the pathway, i.e. recovering more quickly than the 80% ICP suggests.

A **Negative** variance occurs when an expected action in care cannot take place. This may have no major effect on the patient/client's overall care. However, sometimes this may be so extreme as to mean that the patient/client should be removed from the ICP either for a while (to re-join at a later date) or totally. (An example of the latter would be a cardiac arrest).

An **Avoidable** variance is one which need not have affected care with more planning.

Unavoidable variances are those which planning could not have prevented, and includes those outwith our immediate control.

What Should Variance Recording Look Like?

A well written variance should be in three sections, which attempt to bring issues to resolution:

- a. **State the item** which could not be followed: e.g. "IV fluids could not be discontinued"
- b. **Give the reason** why this has happened: e.g. "Patient/client unable to tolerate oral fluids".
- c. Give some comment on the **action taken/resolution**: e.g. "Dr. Smith informed, blood chemistry tests ordered, review tomorrow."

An example of the format of a variance sheet is given below:

Record of Variance						
Date	Time	Variance Code	Description of Issue	Reason for Variance	Action Taken /Outcome	Initials

Analysing Variances

There are many different ways of analysing the variances that occur as patients/clients travel through their treatment and care via the ICP. In some areas a sheet similar to the example shown above is used, either at the end of the ICP or after each section or daily page depending on the type of ICP. Variance analysis can then be carried out by reviewing a number of ICPs at regular intervals and picking out the most frequent variances for further discussion as part of the evaluation process (use of variances for evaluation is discussed further at Section 4.1).

In practical terms though, analysing every variance often proves to be an enormous and time consuming task. If you can think for example, of how many different ways there are of writing "raised blood pressure", then you might grasp the size of the task ahead!

The use of "variance codes" (as indicated in the example above), does help with this by standardising the types of variance recorded.

These codes can then be picked up at the ICP reviews and analysed using a database or spreadsheet. However, this can result in the production of large and complicated lists of codes which staff need to consult in order to complete the activity.

Another drawback is that unless you have time or staff available to review or somehow pick up the variances while the patients/clients are still on the ICP, then you will need to pull case notes for reviewing at some point after they are discharged. This, as any of you who have tried it will know, is a time consuming and sometimes frustrating exercise.

One way of making variance analysis easier to manage is to limit the number of variances you examine at any one time. The ICP development group agree which variances they want to examine when the ICP is being developed. These can be linked to areas the ICP has been designed to improve or to ensure guidelines are being implemented.



It does not mean that only certain variances are recorded – **all variances must be recorded together with the alternative actions taken to document the care and treatment given to patients/clients and to meet legal requirements.** These are often recorded in the free text section of the ICP. The difference here is that only particular variances are examined. Over time the variance questions can be changed to reflect new guidelines or standards being implemented or to monitor areas of concern.

This method involves marking the variances to be recorded throughout the ICP documentation. In the variance sheet below the questions relate to highlighted sections in the ICP. For example question 8 relates to this section shown from the front page of the actual ICP. The variance sheet is attached at the back of the ICP and is detached when the episode of care is completed and returned for analysis and reporting.

Variance Sheet →

ICP front page ↓

SECTION ONE		Yes	No	SECTION TWO											
Q7 (a) Time of admission documented (agreed local best practice)		<input type="checkbox"/>	<input type="checkbox"/>	Q7 b) If no, please specify why not:											
Q8 (a) Does the patient have a Named Person? Part 17 Chapter 1 Mental Health (Care and Treatment Scotland) Act 2003		<input type="checkbox"/>	<input type="checkbox"/>	Q8 b) If no, please specify why not: <input type="checkbox"/> Patient does not have a named person <input type="checkbox"/> Patient does not wish to have a named person <input type="checkbox"/> Other (please specify)											
Q9 a) Patient's perception of presenting problems/needs recorded?		<input type="checkbox"/>	<input type="checkbox"/>	Q9 b) If no, please specify why not: <input type="checkbox"/> Unable to due to patient condition <input type="checkbox"/> Patient unwilling to co-operate <input type="checkbox"/> Other (please specify)											
<table border="1"> <tr> <th>Named Person: (Mental Health (Care & Treatment) (Scotland) Act (2003))</th> <th>Family Contact Name: (Next of Kin)</th> </tr> <tr> <td>Name and relationship:</td> <td>Name and relationship:</td> </tr> <tr> <td>Address (include postcode):</td> <td>Address (include postcode):</td> </tr> <tr> <td>Telephone No:</td> <td>Telephone No:</td> </tr> <tr> <td>Consent to inform of admission? Yes <input type="checkbox"/> No <input type="checkbox"/></td> <td>Consent to inform of admission? Yes <input type="checkbox"/> No <input type="checkbox"/></td> </tr> </table>		Named Person: (Mental Health (Care & Treatment) (Scotland) Act (2003))	Family Contact Name: (Next of Kin)	Name and relationship:	Name and relationship:	Address (include postcode):	Address (include postcode):	Telephone No:	Telephone No:	Consent to inform of admission? Yes <input type="checkbox"/> No <input type="checkbox"/>	Consent to inform of admission? Yes <input type="checkbox"/> No <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Q10 b) If no, please specify why not: <input type="checkbox"/> Patient does not have a carer <input type="checkbox"/> Patient does not wish carer involvement <input type="checkbox"/> Carer not available/not present on admission <input type="checkbox"/> Carer does not wish to be involved <input type="checkbox"/> Other (please specify)	
Named Person: (Mental Health (Care & Treatment) (Scotland) Act (2003))	Family Contact Name: (Next of Kin)														
Name and relationship:	Name and relationship:														
Address (include postcode):	Address (include postcode):														
Telephone No:	Telephone No:														
Consent to inform of admission? Yes <input type="checkbox"/> No <input type="checkbox"/>	Consent to inform of admission? Yes <input type="checkbox"/> No <input type="checkbox"/>														
Section 275-276 Mental (care and Treatment Scotland) Act 2003				Q11 b) If no, please specify why not: <input type="checkbox"/> Patient has not made an advanced statement <input type="checkbox"/> Not applicable <input type="checkbox"/> Other (please specify)											
Q12 a) Doctor informed of admission within 3hrs? (agreed local best practice)		<input type="checkbox"/>	<input type="checkbox"/>	Q12 b) If no, please specify why not: <input type="checkbox"/> Doctor unavailable <input type="checkbox"/> Other (please specify)											

As with any method there are drawbacks to be considered:

- **Duplication** – information already recorded in the ICP must be written again in the variance sheet. With existing time constraints for staff, completion can be an issue.
- **Returns** – not only do the sheets have to be completed, but they also have to be removed from the ICP and a system put in place to ensure that they are collected for analysis. The return rates for variance sheets can vary greatly.

Experience has shown that the completion and return rates often depend to a great extent on the amount of education and staff training on ICPs that has been carried out. Those using the ICP need to be aware of how important variance analysis is in monitoring actual practice compared to that planned, and therefore its part in the future development of the ICP and ultimately the continuous improvement of patient/client care. Administrative staff have an important part to play in this and they should be included in the training as experience has shown that their help with both the completion and collection of variance sheets has proved to be invaluable. *(See further discussion on variances in Section 4.1, p44)*



So, assuming you have worked out how to carry out your variance analysis and have managed to collect and analyse your data, what do you end up with? Hopefully the kind of information that can help monitor the service you are providing to your patients/clients and show if you are providing the service that you had planned to. The data below is taken from the variance example shown earlier.

Data Analysis		
Time of admission documented? Yes 288 (99.0%) No 3 (1.0%) <i>(n=291, data missing = 1)</i>		'No' Reasons (3): <ul style="list-style-type: none"> • Patient on pass 1 hour after admission (1) • Data missing (2)
Does the patient have a named person? Yes 73 (25.3%) No 216 (74.7%) <i>(n=289, data missing = 3)</i>		'No' Reasons (216): <ul style="list-style-type: none"> • Patient does not require/wish a named person (187) • Data missing (29)
Patient's perception of presenting problems/needs recorded? Yes 275 (95.5%) No 13 (4.5%) <i>(n=288, data missing = 4)</i>		'No' Reasons (13): <ul style="list-style-type: none"> • Unable to due to patient condition (8) • Patient unwilling (2) • Patient on pass 1 hour after admission (1) • Data missing (2)

 **Activity 11**

What type of variance recording and variance analysis do you want to use?

What issues can you foresee about variance analysis and how will you go about resolving them?

Who do you need to involve?

3.3 Supporting Implementation and Maintaining Momentum

The most important aspect to consider when implementing an ICP is the support that the stakeholders will require. Training in particular has been identified as a long term commitment required to ensure the success of ICPs (CRAG 1999). This support can be broken down to what is required before, during and after initial implementation.

Before Implementation

- Gain active support from a senior manager/clinician.
- Ensure all stakeholders are involved from the very start of the development process. This includes the multidisciplinary team, administrative and medical records staff, representatives from all areas using the ICP, service users and carer representatives, other partner agencies – social services, voluntary sector.
- Agreement on a plan for communication and education.
- Development of checklists/information leaflets/presentations/DVDs, etc. instructing everyone how to use the ICP.
- Information for patients/clients and other stakeholders on the process, what it means for them, and how to contribute their views.
- Printing costs and funding identified to produce the documentation. The initial cost of the documentation is an added expense which should ultimately be covered by the discontinuation of pre-ICP documentation.
- Pre-implementation launch and training sessions for staff, as and when they are available. For example, back-fill, ward training sessions at hand-over times, night time training for night staff, etc.

During Implementation

- Clear lines of communication – named ICP link staff, regular development group meetings and email/newsletter updates.
- Key staff at ward level to act as ICP 'champions' on a day-to-day basis as the pilot progresses.
- A contact name and phone number on the documentation – no matter how much education and training takes place, some staff will not know who to contact and need a phone number handy!
- Agreed method to feedback comments, e.g. log books, etc.
- The ability to produce small print runs initially, to make changes quickly if required and get revised documentation out. Linked to that, the control of the supply of documentation to ensure the quality of the copies and that only the latest version is being used.
- Ongoing training sessions to pick up staff who missed the initial training or new staff.

After Implementation

- Ongoing development group meetings to discuss feedback from staff and dissemination of information to stakeholder group.
- Staff and patient/client questionnaires to find out how the pilot went.
- Ongoing training for new staff and updates for existing staff.
- Feedback from pilot/implementation and variance analysis/audit to ensure a continually evolving document. (also see Section 4.1)

Maintaining Momentum

The literature on ICPs emphasises that one of the hardest tasks for any health organisation is maintaining the momentum once the initial development has been undertaken (Middleton et al. 2000). Experience in Lanarkshire found that factors such as service re-organisation, a lack of ownership of the ICP at ward level, and lack of ongoing ICP development and staff training, meant that some ICPs which started off successfully 'withered and died' (Kent & Chalmers 2006).



For ICPs that are not very successful at the initial implementation it can be an even harder task. It is important therefore to remind people at the outset that it can take time to produce an ICP that the majority are happy with and that works well. In the beginning it can often be a case of ***'two steps forward, one step back'***.

However, once some success has been achieved then this is an important factor in helping to maintain the momentum. It is vitally important then that evaluation of the ICP is an ongoing feature and that the results of this evaluation are fed back into the ICP development process so that continuous improvements to patient/client care are seen to be happening. These success stories must be fed back to ***all of the people 'at the coal face'***, not just the development group, as well as all other interested parties to ensure that local ownership is maintained.

Activity 12

What plans have you made to maintain momentum once the ICP has been implemented?

How will you celebrate or broadcast success?



See reference from New Zealand, "They wanted a clinical pathway, but we ended up with a Clinically Integrated System: what went wrong and what went right" (2000)

<http://www.clanz.org.nz/learning/index.cfm?fusesubaction=subarticle&documentid=22&articleID=27&subarticleID=84>

3.4 Using and Completing ICPs



A critical factor in the successful implementation of an ICP is the ability of staff to use it. It is no good having the most comprehensive, well researched, guideline and standard based, stakeholder agreed ICP if no-one knows how or where to get a copy, when and how it should be used, or what to do with it afterwards.

Our experience has also shown that step-by-step instructions in how to use an ICP are a useful method of ensuring that the implementation gets off to a good start. An example of a 'how-to' leaflet instructing staff in the use of ICPs is shown here.

This Integrated Care Pathway (ICP) has been developed by the Paediatric Respiratory Steering Group to improve how we provide the daily care given to patients. The aim of this documentation is to ensure that all care and treatment activities, (based on the Roper, Logan and Tierney nursing model of care, best practice, and local and national guidelines) are recorded and meet the current documentation standards. We also want to reduce the amount of writing that nursing staff do on a daily basis.

This ICP is an add-on to the Acute Breathing Difficulties ICP and consists of an admission assessment, guidelines and a flow chart on Bronchiolitis management, daily care and treatment pages, education and discharge checklist and an outcomes based variance analysis sheet. The daily pages include a fluid balance chart, observation chart and a treatment and care page. This page has pre-printed tasks that have been agreed as being required for the majority of children with this condition. Since patients are all individuals with different needs we do not expect it to cover all of the patients, all of the time, so if an activity is not relevant to a particular patient then the reason can be documented together with any alternative actions required. In addition, there is a section for individualised care if there is extra care required for a patient.

The daily pages are made up of several sections and to help you when first starting to use them, an example has been given here with suggested entries and additional information on how to complete it.

This section has a pre-printed multidisciplinary plan which you should complete for the patient each day. The person carrying out the activity should sign the relevant box with the time carried out and any details required. If something cannot be done you should write the reason why and give any alternative actions taken. You can use additional continuation sheets if you need to record more information. The multidisciplinary plan is numbered so that if an activity takes place throughout the day then the Record of Care section on the back of the page can be completed as the actions are carried out. In this example, hygiene needs, feeding and voiding urine are recorded by the people involved in this care, entering the time activities were carried out and their initials.

The "Individualised Care" section is where you can write any additional care that is required for this particular patient.

Ward, patient details (use label if available), inpatient day and date should be recorded on each sheet used.

Medical staff should complete this section or alternatively, nursing staff can enter relevant information from the ward round, for example, details of who saw the patient and any actions required.

Since the daily pages are based on a 24hr period of care, there are 3 boxes for each shift to sign. The nurse in charge of the patient's care should sign the box for the shift they are covering (for long shifts sign both relevant boxes). Night shift staff should sign the box for the day they started. If the person on the next shift carries out the same tasks with no changes, there is no need to sign in the individual boxes. All that is required is that you sign the box at the bottom of the page for that shift. If however, a change is made to the care or treatment or if any extra task is carried out, then this should be written and signed for in the Record of Care or Continuation sections. Activities required throughout the day should be completed in the Record of Care section by staff on all shifts for that day.

Please turn over ➡

The general instructions on the use of ICPs should also explain:

- Where and when to order stocks of ICP documentation and who is responsible for doing so (this depends on where the supply comes from, how long it takes to reproduce, etc.)
- In what circumstances photocopying is permitted. This is a tricky question since photocopying often leads to the production of illegible copies and increases the chances of using out of date versions, but it is often unavoidable if stock problems arise.
- Where the documentation is situated in the wards/departments.
- The criteria for patient/client to be started/not started on an ICP.
- If there is a variance sheet – what to do with it upon completion of the ICP.
- Where the ICP gets filed in the case notes.

Self-Assessment 3: Issues for Implementation

Well done! You have now completed the third section of the workbook and should attempt the assessment questions below.

Please tick (✓) one box only
<p>1. Variance can be defined as:</p> <p><input type="checkbox"/> a. When a patient/client requires complex nursing care</p> <p><input type="checkbox"/> b. Lack of consensus</p> <p><input type="checkbox"/> c. Difference between what was expected and what actually happened</p>
<p>2. The only source of variance is when the patient/client does not comply with the clinical pathway?</p> <p><input type="checkbox"/> a. True</p> <p><input type="checkbox"/> b. False</p>
<p>3. A complex variance should be reviewed by:</p> <p><input type="checkbox"/> a. Medical staff on each shift</p> <p><input type="checkbox"/> b. The Clinical Nurse Manager</p> <p><input type="checkbox"/> c. The Chief Executive</p> <p><input type="checkbox"/> d. All team members on each shift</p>
<p>4. Individualisation of ICPs:</p> <p><input type="checkbox"/> a. Is not possible</p> <p><input type="checkbox"/> b. Is not necessary</p> <p><input type="checkbox"/> c. Is documented as special needs</p> <p><input type="checkbox"/> d. Indicates a variance has occurred</p>
<p>5. Variance analysis and monitoring is:</p> <p><input type="checkbox"/> a. A continuous evaluation and quality improvement tool</p> <p><input type="checkbox"/> b. A medical records responsibility</p> <p><input type="checkbox"/> c. A method of statistical analysis</p>

section 4: evaluating the process

4.1 The 4-Part Model



You have developed and implemented an ICP and now you want to know how it has gone.

TOO LATE!!! *

The evaluation should be planned during the main development so that you can be confident that all the data items you require are known **before** implementation and built into what you are developing. Preparation beforehand will mean that you have your baseline information with which to compare post-ICP data – “you don’t know how far you have moved unless you know where you started” (Middleton et al 2000).

[not entirely too late, but you have made life difficult for yourself.]*

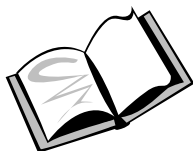
The literature on ICPs suggests that evaluating ICPs involves four main headings [see de Luc (2001) for more detail]:

- A. Compliance with using ICP documentation**
- B. Achievement of any standards or outcomes monitored**
- C. Information on the variations**
- D. Staff and patient/client comments and problems**

The ICP development group has to decide about overall objectives of the evaluation, such as:

- Do you want to measure staff attitude? If so then this has to be designed before implementation.
- Have you identified the standards you want audited against?
- If what your patient/clients think is important for your project (and it should be), have you got a baseline to compare against?

The development group may also wish to make conscious decisions about two phases of evaluation: the pilot and the main phase. Time spent ironing out the pilot may pay dividends in the main phase.



For information on evaluating a whole ICP programme rather than an individual ICP see de Luc (2001)

Pilot Phase:

- You may prefer to have an exhaustive baseline of compliance, measuring each data item. This will be a longer slog, but means you have 'data in the bank' for the future. In particular, this compliance audit means you can better target training to areas of particular concern.
- Using the pilot to refine the indicators for the main phase; these should become part of routine clinical governance practice.

Main Phase:

- After an agreed number of cases/period of time a sample should be audited, for at least the first three of the 4 categories listed on the previous page, numbers should be locally agreed, but around 20 is reasonable.
- A programme to ensure this is carried out routinely thereafter needs to be developed.

In all cases the results need to be fed back very quickly to the team involved in the development and then to the wider users and stakeholders to ensure that everyone is moving along together with the development.

Let's look at the four evaluation headings in more detail.

A. Compliance with using ICP documentation

Compliance auditing is the measurement of how well a document is completed. In many healthcare areas this type of audit is carried out on a regular basis for nursing and AHP documentation and may even be part of the clinical/care governance responsibilities in your organisation.

With compliance auditing, a sample of case notes or in this case ICPs are examined to find out how many sections have been completed. Percentages can then be worked out to determine the compliance rate for each section as well as overall compliance. There are several methods of doing this and two are shown here.

Example 1: Counting all sections using an audit form. This audit works on a Yes/No basis: completed or not. You may also want a little more information or bundle items together such as 'signed/ dated/timed' and measures of compliance with the item as a whole.

Page no.	Section (looking at whether done or not)	Frequency (n=10)	
1.	Label used or name and address written	10	
	Patient/client's home telephone number	10	
	Pre-admission: Ward number	8	
	Date	10	
	Time	10	
	Named Nurse	8	
	CHI number	7	
	Admission: Ward number	6	
	Date	8	
	Time	7	
	Named Nurse	3	
	TOTAL		87
	COMPLIANCE RATE FOR THIS SECTION		79%

Example 2: Uses a stamp with a 0/1/2 scale for absent/ incomplete/'as good as it gets' to calculate completion.

CURRENT MEDICATIONS – including complementary medicines / vitamins etc		Tick if none <input type="checkbox"/>
Drugs	Drugs	
1	7	
2	8	
3	9	
4	10	
5	11	
6	12	
Baseline Obs:		
Pulse	BP	
		0 1 2
		19
Admitting Nurse:		
Initials	Date	Time.....
		0 1 2
		19
Anyone delivering care must complete an entry in the 'Key to initials' table on front page		

Activity 13

What are the advantages of compliance audits in your situation?

And the disadvantages?

B. Achievement of any standards or outcomes monitored

The ICP you have implemented may incorporate the latest guidelines for the particular condition/client group covered by the ICP. It may also involve the introduction of new standards or changes in practice. These factors all have to be evaluated to find out if they have been achieved.

The table below shows a sample list of key indicators to audit and the factors to determine whether they have been achieved or not.

Criteria used for this audit	How defined <i>(p number relates to the ICP page number)</i>
1. Completion of sections of Contra-Indications to Thrombolysis	Tick for each criteria (p1) overall Yes/No box completed, section signed, etc.
2. Ability to identify data to complete door-to-needle time	Time on ARU sheet and time for Thrombolysis (p1)
3. Ability to identify data to complete diagnostic ECG-to-needle time	Time of diagnostic ECG (p7) and time for Thrombolysis (p1)
4. Signing off of 2 hour ECG Post-Thrombolysis	Completion of section (p10)
5. Prescribed Aspirin both immediately and later in care (or CI noted)	Completion of Aspirin prescribed/considered (p6 and p29)
6. Prescribed standard secondary prevention (or CI noted)	Completion of ACE and BB considered (p29)
7. Consented by doctor for rehabilitation (or reason given why not appropriate)	Completion of 'Consent for Heart Manual Programme' section (p27)
8. On days 1-3, that there is a signature/designation, etc. for each set of initials used in the ICP	Check initials used on Day sheets is matched by corresponding explanatory entry at foot of page or p9
9. Items noted as variances on Day sheets are logged appropriately on variance sheet	Check that variance logger on Day sheets are matched by full entry on variance sheet
10. The medical 'Daily Review' sheets are completed	Entry for each row for each day patient/client is on ICP (p29)
11. A general comment about the ICP	Text comment on general state of the paperwork

Activity 14

What key indicators do you need to look at?

C. Information on the Variations



As part of the ongoing monitoring, maintenance and development of the ICP, the valuable information stored as variances needs to be collated and analysed. As stated earlier, it is important to agree a schedule of variance analysis: how often, how many cases, etc.

During the pilot phase in particular it is important to keep raising awareness about the ICPs and feedback on the variances analysed so far will lead to increased commitment.

In an ideal world each case would have its variances noted and fed into the local quality improvement programme. If you are using the selected variance type of analysis then depending on the throughput and return rate, variances could be analysed on a quarterly or six monthly basis, using a database or spreadsheet.

However, in few cases in most organisations are the conditions in place to make this a practical proposition and usually some form of sampling technique will be necessary – 20 cases per quarter, 10 per month, or whatever is possible locally. A sample data collection form is shown here and is used with an analysis spreadsheet.

Pathway:	Phase:				
	Pilot <input type="checkbox"/>		1 st Review <input type="checkbox"/>		Other <input type="checkbox"/>
Entry	1	2	3	4	5
Date (POD3)					
Missed variance?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Heading/Topic on ICP					
Reason for variance and actions taken					
Variance code USED					
Variance code SHOULD					
Justified	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No
Type* (1,2,3,4)					
Outcome** (1,2,3)					
Avoidable?	Yes/No	Yes/No	Yes/No	Yes/No	Yes/No

* 1=patient/client/family, 2=clinical/caregiver, 3=system/hospital, 4=community/social

** 1=Resolved, 2=Unresolved, 3=Undetermined

If the data captured by this method is entered onto a spreadsheet it becomes possible to find out information such as:

- When in the patient/client's journey variances are happening – pre-op, day of discharge, etc.
- Was the variance recorded in the correct section or somewhere else and potentially 'missed' (unless you are going through the whole of the ICP, not just the variance sheet/sections)
- What clinical headings they occur under, e.g. frequent 'diet' variances may indicate a local issue with the Fasting Policy.
- What the source of the variance is – patient/client/carer, etc.
- What educational issues arise from recording variances in a way that does not leave them resolved?

Generally though, the main use is that recurring variances can identify issues with the writing of the ICP that need to be considered by the development group. For example, a similar set of blood chemistry results continually requested on a day where this is not routinely indicated on the ICP would suggest that a decision needs to be made whether this requires a justified change to the ICP or further education of clinical staff.

 **Activity 15**

How often are you going to carry out variance analysis, for how many cases, etc.?

And whom do you need to involve?



Chang et al paper on Urology (1999) – without taking into account lessons learned from variances they would not have got the benefits of ICPs they sought.

D. Staff and Patient/Client Comments and Problems

The Scottish Executive's response to the Kerr Report, "**Delivering for Health**" (2005), the implementation plan to deliver safe, quick, sustainable healthcare which responds to the changing needs of the population, states that patients/clients should:

"experience a smooth and quick 'journey of care' wherever and however they may access services".

It is essential that we get the views of service users to find out if we are achieving this.

The CRAG Report discussed earlier showed that patients seemed to value ICPs. There were however, misgivings about the response rates indicating a possible bias, with those patients who took the time to complete questionnaires being overwhelmingly positive about ICPs and their role in keeping them informed.

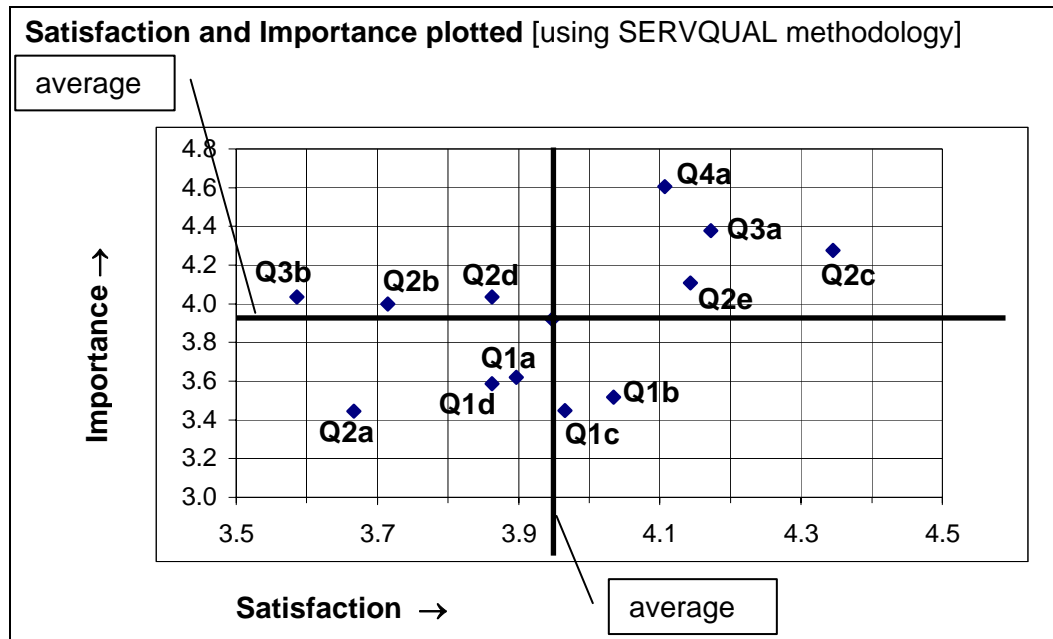
The report also showed evidence from the case note/ICP reviews of increased patient education following the introduction of ICPs. The solution to finding out what service users think may therefore be a mixture of case review and questionnaires.

Various formats for staff questionnaires have been developed over the years and for different parts of the ICP evaluation process. Initial questionnaires focus on the development process, training and the initial experience of using ICPs. For the implementation phase questions are asked about communication, information given to patient/clients, guideline implementation, and reduction in time spent documenting care, etc.

It is important that questionnaires are anonymous and that all efforts are made to achieve as large a return rate as possible. This can be improved by mailing out to each member of staff involved with the ICP and including stamped, addressed envelopes for returning them. Enlisting the support of Clinical Audit staff is recommended if you want to set up any kind of ongoing system.

You may wish to consider a "**SERVQUAL**" methodology: where as well as looking at satisfaction, you also consider the level of importance (Parasuraman et al, 1998). Ask the same questions as before, but have an additional rating scale for importance beside the one for satisfaction. Plot the average scores for each scale on a graph with a horizontal and vertical line for **overall** satisfaction and **overall** importance.





The graph shows:

- High satisfaction (above average) and high importance (top right quadrant) – objectives have been met and doing well.
- Below average satisfaction but below average importance (bottom left quadrant) – disappointing, but not a priority.
- Above average satisfaction and below average importance (bottom right quadrant) – reassuring, but not a priority
- Below average satisfaction and above average importance (top left quadrant) – your priority for action.

You can do it overall by profession, or objectives of the project. There are numerous possibilities and more importantly a great deal of useful data can be produced.

Activity 16

How are you going to look at staff and patient/client comments?

4.2 Models from Research

Most ICP research uses a 'before' and 'after' model – CRAG (1999), Chang (1999), though this needs to be on a short timescale and using standardised process to reduce effects of 'secular drift', where your later figures are down because every hospital's figures are down (may be a new process, drug, etc.)

Randomisation is difficult but not impossible – see Sulch et al on Stroke (2000), Cunningham, McMurray et al on Paediatric Acute Wheeze [in press]. The question is, is randomisation to ICP or non-ICP ethical in the light of evidence for ICPs?

The Critical Appraisal Approach has also proved useful in aggregating research: Kwan et al for Cochrane on 'ICPs and Stroke' concluded that 16 out of 21 indicators showed significant improvement with the ICP group. [Cochrane Collaboration (2002), updated 2006]

The main difficulty is defining the research question.

Activity 17

What would be your research question?

Is randomisation feasible/ethical in your situation?



Massive amount of work done in Italy, Pannella et al (2004). Belgian / Dutch Network has published extensively, found by searching under Sermeus and/or vanHaecht.

4.3 Embedding the Evaluation

Once you have your first ICP success under your belt, embedding the evaluation as a way to maintaining the momentum is crucial to the successful establishment of an ICP culture. Here are a few pointers.

- 1. Get an action plan together and present to directorates, Board, etc. Consider:**
 - What you want to achieve.
 - Why?
 - What steps you need to take.
 - What resources you will need.
 - Who should be involved?

- 2. Sell specific potential benefits, i.e. ICPs reduce variations, duplication, and length of stay. Consider:**
 - Infiltrating charge nurse/team meetings.
 - Presenting at directorate level, specialty team meetings, clinician's educational sessions.
 - Selling to risk managers as a tool to reduce risks.
 - Finding champions.

- 3. What about the mechanisms to maintain a high profile? Consider:**
 - Notice boards, leaflets, information folder on wards, newsletters, using the intranet.
 - Developing information packs.
 - Arranging informal awareness sessions.
 - Writing a column for your organisation's newsletter, bulletin.
 - Circulating information to patient/client/public/stakeholder groups.

- 4. You need support. Consider:**
 - Ongoing resource support for variance tracking and feedback (admin, audit, IT, clinical leads) and where to get it.
 - The possibility of costing the project and going cap in hand to the finance director.

- 5. Keep everyone informed. Consider:**
 - Giving regular updates to key stakeholders
 - Sending reports to Board, Head of Clinical Governance, etc.

- 6. How will you train staff? Consider:**
 - Monthly ICP awareness sessions.
 - Induction day training.
 - Enlisting the help of the Training and Development Department.

 **Activity 18**

Write down what you going to do to ensure that a system for evaluation and ongoing ICP development is established?

This month:

Next month:

This year:

How will you know the ICP has made a difference and who will you tell?

Self-Assessment 4: Evaluating the Process

Well done! You have now completed the fourth section of the workbook and should attempt the assessment questions below.

Please tick (✓) one box only
<p>1. ICP evaluation can only be planned once the pilot phase of implementation is completed.</p> <p><input type="checkbox"/> a. True</p> <p><input type="checkbox"/> b. False</p>
<p>2. What are the main areas to examine when evaluating ICPs?</p> <p><input type="checkbox"/> a. Standard/Outcome achievement, Variances, Compliance</p> <p><input type="checkbox"/> b. Compliance, Achievement of standards/outcomes, Information on variations, Staff and Patient/client comments</p> <p><input type="checkbox"/> c. Pilot phase, main phase, overall objectives</p>
<p>3. Compliance auditing measures:</p> <p><input type="checkbox"/> a. How well a document is completed</p> <p><input type="checkbox"/> b. How well the ICP meets the needs of the patient/client</p> <p><input type="checkbox"/> c. The number of ICPs used in each ward</p>
<p>4. Staff satisfaction is important to measure?</p> <p><input type="checkbox"/> a. No – it is just a ‘tick box’ exercise and makes not a jot of difference</p> <p><input type="checkbox"/> b. Yes – staff use the document so it is vital we know what they think</p> <p><input type="checkbox"/> c. Each item in the survey is of equal weight and we need to keep asking things even if we can’t change them</p> <p><input type="checkbox"/> d. Staff surveys are good practice for your patient/client and carer one.</p>
<p>5. Embedding the evaluation means:</p> <p><input type="checkbox"/> a. Drawing up an action plan</p> <p><input type="checkbox"/> b. Selling the ICP tool</p> <p><input type="checkbox"/> c. Congratulating yourself</p>

section 5: other related issues

5.1 Pitfalls



Congratulations to you, and everyone involved, as by now you will have no doubt successfully implemented your first ICP!

What do you mean, 'it hasn't been 100% successful'. Surely that can't be possible, after following all of the advice in this workbook and the supplementary information listed?

Well actually, it most certainly can, and if you are still having some 'challenges' implementing your ICP, do not despair, you are not alone. The following sections highlight some of the common pitfalls experienced by ICP developers over the years and how we have tried to overcome them. The activity boxes for each section let you have the opportunity to write down what your own actions could be to avoid/solve issues. Writing it down in this way will also help you get the next one right first time! (*Refer back to Professor Hindle's Q&A list on page 5 for pointers.*)

Pitfalls in the Development Phase

'We can't get our ICP started because no-one has the time to attend the meetings'. This is a familiar story for anyone trying to schedule a stakeholder meeting to develop an ICP. It would be tempting to say, just go ahead with the people you can get, but this may lead to problems further on if you can't then get buy-in from those who were not involved at the start. Sometimes the most significant benefits from developing ICPs are achieved by just getting people together face to face, so it's an opportunity you don't want to miss.

Planning ahead is quite often the answer, and may mean that it takes longer to get the ICP started, but will enable those people with very busy diaries to schedule the time to attend. Once you get the group together a couple of times it is much easier to communicate by email, or even conference call and smaller working groups can be created to help get the various parts together to feed in to less frequent whole group meetings.

Another common early pitfall is only having one or two staff members in favour of developing the ICP. This can prove to be one of the more fatal mistakes and the general rule is that more than half the staff must be on board or at least not opposed, otherwise the chances of failure are high. (Middleton et al 2000)

 **Activity 19**

My solutions to potential/actual pitfalls in the development phase:

Pitfalls in the Implementation Phase

A common occurrence for some ICPs at this point is lack of input from junior medical staff and this is where it is vital that you have secured the support of consultant medical staff. If you have their support and input then they will no doubt instruct their juniors as to the treatment of their patients/clients and this should also give the 'ICP champions' more power to query incomplete documentation.

Quite often it is the mistaken impression that ICPs somehow limit individual clinical judgement which leads to this reluctance of some staff to comply. It is important to stress that the ICP is a guideline for what we expect to happen for the majority of patient/clients and that clinicians are expected to use their judgement to determine if it should be followed or not.

Other implementation pitfalls include complaints of increased paperwork and time taken to complete it. These are often issues of unfamiliarity with a new way of doing something. Staff can be reassured that long experience has shown that once the initial 'newness' has worn off, it does usually mean less time spent on paperwork than before. For those people who need further evidence, you may have to resort to auditing the pre-ICP documentation to highlight the amount of duplication which took place and which has now been greatly decreased.

 **Activity 20**

My solutions to potential/actual pitfalls in the implementation phase:

Pitfalls in the Evaluation Phase

“The strength of ICPs lies in the process of continuous review and the analysis of variances. If this is not done, they are merely a glorified guideline.” (Johnson, 1997)

ICPs that are not evaluated continuously are by definition then not ICPs at all. Presumably having gone through this and other ICP literature, you haven't gone so far as to avoid evaluation completely, but there is another quite similar pitfall that many do find themselves falling into.

What happens is that the ICP is implemented and a form of continuous ad hoc review is begun, particularly in the early stages of the implementation. In this way the ICP is evaluated and altered on a regular basis until any obvious variance is eliminated. Evidence has shown that in this way changes can be made to clinical practice resulting in reduced costs and increased quality of care and results in staff using the ICP having less need for formal evaluation. (CRAG 1999)

This does however give you a problem when you try to implement your next ICP or to encourage other staff to become involved who were reluctant to join in at the start – you can't prove to them that using the ICP enabled these changes to be made. **You don't have any evidence!** As if that wasn't bad enough, you don't even want to think about how you are going to justify to hospital management what you have been spending all of your time on for the past year or however long you have been developing the ICP.

Formal evaluation must be carried out as part of the whole ICP process so if you don't have it working already, it may mean that you will have to back track. You must make sure that the ICP documentation will enable you to get the evidence you need to prove that you are making a difference to patient/client care. It might seem like quite a set back, but it will be worth it in the end when you have an ICP system which “provides a dynamic platform within which changes can be made and outcome constantly audited” (Johnson, 1997).

Activity 21

My solutions to potential/actual pitfalls in the evaluation phase:

5.2 Issues for the Future

Single System Working

This is the move away from Primary and Acute Care Trusts towards having network systems across community health, local authorities, social care and specialist health services with a strong emphasis on partnership working (Partnership for Care, 2003). Examples include:

- Single shared assessment
- Long term condition management
- Electronic referral systems.

Where ICP fit in snugly to move forward in Single System Working is by their flexibility to be developed in bite-sized chunks. Examples include:

- Patient held ICPs in Chronic Pain Management
- Diagnosis, general management, acute phase, rehabilitation phase of Type 2 Diabetes
- Incorporation of ICPs into electronic patient records.

Quality Improvement Scotland (QIS) Mental Health ICP Standards Development

Having identified the development of local ICPs by NHS Boards by 2008 in the mental health services section of *Delivering for Health* (Scottish Executive, 2005), the strategic work programme – *Improving the quality of mental health services in Scotland 2005 – 2008* (NHS Quality Improvement Scotland, 2005), gave further information on how they would implement this new approach:

- Local development of content and delivery of ICPs rather than a 'national ICP'.
- Possible development of ICPs for the same problem in several localities through Managed Clinical Networks (MCNs).
- A co-ordinating role for QIS, working with existing national groups.
- The development of a quality assurance scheme for local ICPs involving partner agencies.
- Joint and multi-agency assessment of needs as an integral part of the locally agreed ICPs.
- Use of information systems to help establish and quality assure ICPs.

National Standards for ICPs for schizophrenia, bi-polar disorder, dementia, depression and personality disorder are now being developed and will be disseminated by the end of 2007 together with evidence summaries for the five named conditions and an ICP development framework to assist health boards in developing their own local ICPs. An accreditation system will also be developed and implemented by 2008.



As part of this programme, generic standards for these mental health ICPs will also be developed and although they will only be assessed against the five conditions specified, they may be relevant in the future for ICPs covering other mental health conditions or indeed for all ICPs developed in Scotland.

Electronic ICPs

A key message in *“Delivering for Health”* (2005) is that “patients/clients will have access to their own Electronic Health Record and so will all staff who treat them.” This is good news for ICP developers as implementing and monitoring of ICPs can be much easier using electronic systems. Indeed some areas are already using this type of technology for ICPs with some success.

It is essential that electronic systems are built to support the use of ICPs and would support the following:

- **Variance Analysis:** issues with duplication for variance sheets, access to case notes, ‘losing’ variances in the ICP, inputting data onto spreadsheets and databases, etc. would be avoided as the data would already be ‘in the system’. Reporting would be easier.
- **Compliance:** mandatory fields would eliminate completion issues.
- **Location of the ICP/access by more than one person at a time:** by having an electronic document it can be accessed by all who require to use it, wherever they are based.
- **Viewing trends/Reviewing Care:** the difficulty of finding out what has been happening over a time period or trends in the patient/client’s condition would be much improved by using the software capabilities in an electronic ICP.

Unfortunately the situation in the majority of healthcare premises in Scotland today is that we are quite far from achieving an electronic patient/client record. A major issue is not only a suitable software system to integrate with existing patient/client administration systems and produce the information and variance reporting required, but the amount of computer equipment that would be needed in every area to make it a practical proposition.

However, the ongoing achievements in information technology with the various systems currently in operation or being implemented across Scotland, gives encouragement that it will be achievable in the future.



For more information on electronic ICPs see de Luc, K. Todd, J. (2003)

Completion!

Well done! You have now completed the fifth and final section of the workbook and you will be happy to see that there is no self-assessment section!

We hope that this workbook has been helpful. The references and appendices in the following pages should also give you further sources of information and advice.

If you are not already a member of the Scottish ICP organisation, **Integrated Care Pathway Users Scotland (ICPUS)**, we would recommend that you join and come along to the bi-annual open meetings, workshops and conferences. You can find out how to join by logging onto the website at www.icpus.org.uk.

If your imagination is wider than Scotland, you may consider the annual ICP conference in London organised by Healthcare Events, or joining the **European Pathway Association**, the EPA.

We look forward to meeting you and discussing your new ICP!

glossary

Term	Definition
Centre for Change and Innovation (CCI) – now the Improvement and Support Team.	The Scottish Executive Health Department Centre for Change and Innovation (CCI) was set up in November 2002 to work with Scottish Ministers, the Health Department and all health bodies in Scotland to spread good practice in service redesign within NHSScotland. In 2006 it migrated to the Directorate of Delivery and became the Improvement and Support Team. Web address: www.scotland.gov.uk/Topics/Health/NHS-Scotland/Delivery-Improvement
Community Health Index (CHI)	The CHI is a unique patient/client identifier that is allocated to every patient/client registered with a GP in Scotland. It is entered onto a database that underpins a wide range of patient/client care processes in Scotland. There are strict controls on access to patient/client identifiable details.
Clinical Audit and Resource Group (CRAG)	CRAG was the lead body within the Scottish Executive Health Department promoting clinical effectiveness in Scotland. The main committee, together with its subcommittees provided advice to the Health Department, acted as a national forum to support and facilitate the implementation of the clinical effectiveness agenda and funded a number of clinical effectiveness programmes and projects. On 1 January 2003, CRAG was merged with four other clinical effectiveness bodies to create NHS Quality Improvement Scotland (QIS).
Clinical Audit	The systematic and critical analysis of the quality of clinical care.
Clinical Governance	A framework through which NHS organisations are accountable for both continuously improving the quality of their services, and safeguarding high standards of care, by creating an environment in which excellence in clinical care will flourish. Management of clinical risk at an organisational level is an important aspect of clinical governance. Clinical risk management recognises that risk can arise at many points in a patient/client's journey, and that aspects of how organisations are managed can systematically influence the degree of risk.
European Pathways Association (EPA)	This association, set up in September 2004, is an international network of Clinical Pathway/ Care Pathway Networks, User Groups, Academic Institutions, Supporting Organisations and individuals who want to support the development, implementation and evaluation of clinical / care pathways. Web address: www.E-P-A.org
Integrated Care Pathway Users Scotland (ICPUS)	ICPUS formed in January 2001, is an established network of NHS staff from all over Scotland, who are using ICPs in many different clinical areas. ICPUS aims to be aware of what ICPs have been or are being developed in Scotland and the UK, and is a point of contact for ICP users. Open meetings are held twice a year as well as an annual conference. Web address: www.icpus.org.uk

Term	Definition
Kerr Report	A report by Professor David Kerr, "Building a Health Service Fit for the Future", published in 2005 which gives a national framework for developing NHS services in Scotland.
Managed Clinical Network (MCN)	MCNs are linked groups of health professionals and organisations from primary, secondary and tertiary care, working in a co-ordinated manner, unconstrained by existing professional and Health Board boundaries, to ensure equitable provision of high quality clinically effective services throughout Scotland.
MRSA	Methicillin-resistant Staphylococcus aureus (MRSA) is a common type of germ, known as Staphylococcus aureus, that has become resistant to a group of antibiotics, which can make it harder to treat, but there are still some antibiotics that can treat it.
National Institute for Clinical Excellence (NICE)	NICE is part of the NHS. It is the independent organisation responsible for providing national guidance on treatments and care for those using the NHS in England and Wales. Its guidance is for healthcare professionals and patient/clients and their carers, to help them make decisions about treatment and healthcare. NICE guidance and recommendations are prepared by independent groups that include healthcare professionals working in the NHS and people who are familiar with the issues affecting patient/clients and carers. Website address: www.nice.org.uk
National Pathways Association (NPA)	The NPA was a UK wide organisation supporting ICP users which ceased at the end of 2001 (www.the-NPA.org.uk)
Quality Improvement Scotland (QIS)	NHS Quality Improvement Scotland (NHS QIS) was established as a Special Health Board by the Scottish Executive in 2003, in order to act as the lead organisation in improving the quality of healthcare delivered by NHSScotland. By 'improve', we mean the improving of the experiences of patient/clients and the outcomes of their treatment while in the care of NHSScotland. We work to achieve these goals through an analysis of scientific evidence, by listening to the needs and preferences of patient/clients and carers, as well as the experiences of healthcare professionals. Web address: www.nhshealthquality.org
Scottish Intercollegiate Guidelines Network (SIGN)	SIGN was established in 1993 by the Academy of Royal Colleges and Faculties in Scotland, to sponsor and support the development of evidence-based clinical guidelines for NHS Scotland. Where a SIGN guideline exists for a specialty or service for which CSBS had set standards, or NHS QIS is taking forward standards, it will be referenced. For further information relating to SIGN guidelines or the methodology by which SIGN guidelines are developed, contact: www.sign.ac.uk
Scottish Pathway Users Group/Scottish Pathways Association (SPUG/SPA)	SPUG was set up originally as part of the CRAG project (1996-1999), and changed its name to SPA along the way. At one point it had 222 members, with approximately 300 ICPs recorded. Following completion of the project a lack of funding or an organiser meant it officially ceased to exist.
Stakeholders	Those people and organisations who may affect, be affected by or perceive themselves to be affected by a decision or activity.
Variance	A deviation from an activity set out in an ICP.

sources of information

Primary 'Don't-leave-home-without-it' Sources

Belgian/Dutch Network	www.nkp.be/00000095de0808c10/index.html
CRAG Project Report	Clinical Audit and Quality using Integrated Pathways of Care, Project CA96/01 www.show.scot.nhs.uk/crag/pdf/icp9601/report.doc
European Pathways Association	www.E-P-A.org
ICPUS	www.icpus.org.uk
Leeds Care Pathway Network	http://www.lhp.leedsth.nhs.uk/icp/
London ICP Conference	www.healthcare-events.co.uk
National Electronic Library for Health (NeLH)	www.library.nhs.uk/pathways/
ICP discussion Forum	http://health.groups.yahoo.com/group/EPAonPathways/
Centre for Change and Innovation – now the Improvement and Support Team	www.scotland.gov.uk/Topics/Health/NHS-Scotland/Delivery-Improvement

Useful Websites/Documents on Websites

A Guide to Service Improvement, Scottish Executive (2005)	www.scotland.gov.uk/Resource/Doc/76169/0019037.pdf
Bandolier Forum	Document on "On Care Pathways" (2003) – useful summary of the evidence base for ICPs www.jr2.ox.ac.uk/bandolier/Extraforbando/Forum2.pdf
Clinical Leaders Association New Zealand	Fogarty A, Murdoch H "They wanted a clinical pathway, but we ended up with a clinically integrated system: what went wrong and what went right" http://www.clanz.org.nz/learning/index.cfm?fusesubaction=subarticle&documentid=22&articleID=27&subarticleID=84
"Clinical Governance and Risk Management – National Standards", NHS Quality Improvement Scotland (2005)	http://www.nhshealthquality.org/nhsqis/files/CGRM_CSF_Oct05.pdf

Useful Websites/Documents on Websites (cont.)

Effective Interventions Unit	Type "Integrated Care Pathways" into: www.drugmisuse.isdscotland.org/publications/eiupublications.aspx?AreaFlag=EIU for documents on ICPs: papers 1 – 4 are introductory documents, while 5 - 9 are more specific to situations or processes.
Evidence Base for ICP Development	Jayne Woods MSc Thesis (Notts University) – she has kindly made it available on the <health groups, yahoo> website (<i>see above</i>)
Getting Started with Integrated Care Pathways (Saskatchewan, Canada)	A great introductory document (the authors may be Canadian but the principles are universal, evidenced by their development format being followed by the Effective Interventions Unit in Scotland). Click on the link below and look under the Resources tab for HSURC Archives then select the heading How-To-Guides . http://www.hqc.sk.ca
"Improving the quality of mental health services in Scotland 2005-2008" NHS Quality Improvement Scotland (2005)	http://www.nhshealthquality.org/nhsqis/files/Final%20Strategy.pdf
"Integrated Care Pathways: a guide to good practice"	National Leadership and Innovation Agency for Healthcare, Nicola Davies ed. (2005) NHS Wales www.wales.nhs.uk/sites3/docopen.cfm?orgid=484&ID=46539&874D4561-981E-4F7C-959FE20469D55E46
"Delivering for Health", Scottish Executive Health Department (2005)	www.scotland.gov.uk/Resource/Doc/76169/0018996.pdf
Kings Fund	The most up-to-date ICP Reference List can be found via http://www.kingsfund.org.uk/resources/information_and_library_service/index.html & searching on 'care pathways'
National Institute for Health and Clinical Excellence	www.nice.org.uk
"Partnership for Care" Scottish Executive Health Department (2003)	www.scotland.gov.uk/Resource/Doc/47032/0013897.pdf
Scottish Intercollegiate Guidelines Network	www.sign.ac.uk
What's an Integrated Care Pathway?	Middleton, Barnett and Reeves (2001) www.evidence-based-medicine.co.uk/ebmfiles/whatisanICP.pdf

reference list

Primary 'Don't-leave-home-without-it' Sources

- Campbell, H. Hotchkiss, R. Bradshaw, N. Porteous, M.** (1998) Integrated Care Pathways. *British Medical Journal* **316**: 133-137
- De Luc, K.** (2001) *Developing Care Pathways - The Toolkit*. Radcliff Medical Press, Oxford
- NHS Wales.** (2005) *Integrated Care Pathways: a guide to good practice*. NLIAH
- Overill, S.** (1998) A practical guide to Care Pathways. *Journal of Integrated Care* :**2**, 93-98
- Panella et al.** (2003) *International Journal of Quality in Healthcare* **15**:6; 509-521
- The Belgian-Dutch Clinical Pathway Network.** (2001) *Journal of ICPs* **5**, 1, 10-14

Books and Journal Articles

- Anders, R.L. Tomai, J.S. Clute, R.M. Olson, T.** (1997) Development of a scientifically valid coordinated care path *Journal of Nursing Administration* **27**: 5 (45-52)
- Barker, A. Frostdick, P.** (1999) Integrated Pathways of Care. *The Pharmaceutical Journal* **263**: 7075; 950-951, http://www.pharmj.com/Editorial/19991211/articles/pathways_care.html
- Bradshaw et al.** (1998) Guidelines & care pathways for genetic diseases: the Scottish collaborative project on tuberous sclerosis *European Journal of Human Genetics* **6**, 445-8
- Bragato, L. & Jacobs, K.** (2003) Care pathways: The road to better health services?, *Journal of Health Organization and Management* **17**, 3; 164-180
- Chang, Wang, Huang, Hsieh, Tsui and Lai** (1999) Effects of implementation of 18 clinical pathways on costs and quality of care among patients undergoing urological surgery. *Journal of Urology* **161**: 1858-1862
- Crombie, I.K. & Davies, H.T.O.** (1998) Beyond health outcomes: The advantages of measuring process. *Journal of Clinical Evaluation in Clinical Practice*, **4** (1), 31-37.
- Cunningham, McMurray et al.** *in press* on an ICP for Paediatric Acute Wheeze
- Currie** (1998) Directory of UK NHS Trusts using Care Pathways [RCN Institute, Oxford]
- Currie, L. & Harvey, G.** (2000) Researching Care Pathways [RCN publication, London]
- De Luc, K. Todd, J.** (2003) *e-pathways: computers and the patient's journey through care* Radcliff Medical Press, Oxford
- Duncan & Moody (2003)** Integrated Care Pathways in Mental Health Settings: an Occupational Therapy Perspective. *The British Journal of Occupational Therapy* **66**: 10: 473-477.
- Ellershaw, J. Foster, A. Murphy, D. Shea, T. Overill, S.** (1997) Developing an Integrated Care Pathway for the dying patient. *European Journal of Palliative Care*. **4**:6 pp203-207
- Hall, J. Howard, D. eds.** (2006) *Integrated Care Pathways in Mental Health*. Churchill Livingstone
- Johnston, S. ed.** (1997) *Pathways of Care*. Blackwell Science, Oxford
- Kent, P. Chalmers, Y.** (2006) A decade on: has the use of integrated care pathways made a difference in Lanarkshire? *Journal of Nursing Management* **14**, 508-520

Books and Journal Articles (cont.)

- Kitchener, D. Davidson, C. & Bundred, P.** (1996). Integrated pathways: Effective tools for continuous evaluation of clinical practice. *Journal of Evaluation in Clinical Practice*, 2(1), 65-69.
- Kitchener, D. Bundred, P.** (1998) Integrated Care Pathways increase use of guidelines. *British Medical Journal* vol.317, pp 147-148
- Kitchener, D.** (1995) Multidisciplinary pathways of care series: Analysis of variance in patients. *Healthcare Risk Report September* pp16-17.
- Keetch & Buback** (1998) A Clinical-care pathway for decreasing hospital stay after radical prostatectomy *British Journal of Urology* vol.81, pp 398-402
- Kwan & Sandercock** (2002) In-hospital Care for Stroke. *Cochrane Library Issue 2*
- Middleton, S. & Roberts, A.** (2000) *Integrated Care Pathways: A practical approach to implementation*. Butterworth Heinemann, Oxford
- NHS Wales.** (1999) *An Introduction to Clinical Pathways*. VFM Unit
- Rayner, L.** (2005) Language, therapeutic relationships & individualized care: addressing these issues in mental health care pathways *Journal of Psychiatric & Mental Health Nursing* 12, 481-7
- Parasuraman A; Zeitham L, Valerie A; Berry, Leonard L.** (1988) SERVQUAL: A multiple item scale for measuring consumer perceptions of service quality. *Journal of Retailing* Vol. 64 No.1 (Spring)
- Pinder, R.; Petchey, R.; Shaw, S.; Carter, Y.** (2005) "What's in a care pathway? Towards a cultural cartography of the new NHS", *Sociology of Health and Illness* vol 27; 6, pp. 759-779
- Playford, E. D. Rossiter, D. Werring, D. J. Thompson, A. J.** (1997) Integrated Care Pathways: Evaluating in patient rehabilitation in stroke. *British Journal of Therapy and Rehabilitation*. 4:2 pp97-102.
- Playford, E. Sachs, R. Thompson, A.J.** Integrated care pathways: outcome from inpatient rehabilitation following nontraumatic spinal cord lesion. *Clinical Rehabilitation*. 2002 May; 16(3): 269-75. .
- Sally G. & Donaldson L.J.** (1998) Clinical governance and the drive for quality improvement in the new NHS in England. *British Medical Journal* 4 July: 61-65
- Sulch, Perez, Melbourn & Karla** (2000) Randomized controlled trial of integrated (managed) care pathway for stroke rehabilitation. *Stroke* 31: 1929-1934
- Vanhaecht, Bollmann, Bower, Gallagher, Gardini, Guezo, Jansen, Massoud, Moody, Sermeus, Van Zelm, Whittle, Yazbeck, Zander, Panella** (2006) Prevalence and use of clinical pathways in 23 countries - an international survey by the European Pathway Association. *Journal of Integrated Care Pathways* 10: 28-34
- Wilson, J.** (1997) Integrated Care Management: The Path to Success. *Nursing Management (UK)* 4:7 pp 18-19
- Whittle et al.** (2004) Developing the ICP Appraisal Tool. *Journal of ICPs* 8; 77-81

Also see the Journal of Integrated Care Pathways