REPORT

Three ACI-sponsored initiatives
Lessons for system-wide change

Clinical Program Design and Implementation
The Agency for Clinical Innovation (ACI) works with clinicians, consumers and managers to design and promote better healthcare for NSW. It does this by:

- **service redesign and evaluation** – applying redesign methodology to assist healthcare providers and consumers to review and improve the quality, effectiveness and efficiency of services
- **specialist advice on healthcare innovation** – advising on the development, evaluation and adoption of healthcare innovations from optimal use through to disinvestment
- **initiatives including guidelines and models of care** – developing a range of evidence-based healthcare improvement initiatives to benefit the NSW health system
- **implementation support** – working with ACI Networks, consumers and healthcare providers to assist delivery of healthcare innovations into practice across metropolitan and rural NSW
- **knowledge sharing** – partnering with healthcare providers to support collaboration, learning capability and knowledge sharing on healthcare innovation and improvement
- **continuous capability building** – working with healthcare providers to build capability in redesign, project management and change management through the Centre for Healthcare Redesign.

ACI Clinical Networks, Taskforces and Institutes provide a unique forum for people to collaborate across clinical specialties and regional and service boundaries to develop successful healthcare innovations.

A priority for the ACI is identifying unwarranted variation in clinical practice and working in partnership with healthcare providers to develop mechanisms to improve clinical practice and patient care.

Foreword

The Agency for Clinical Innovation (ACI) works with clinicians, consumers and managers to design and promote better healthcare for NSW.

This report shares the results of examination of three ACI projects involving hip fracture care, delirium and dementia in older patients, and acute stroke care.

The report of this work is important – it shows we are willing to look critically at our own practice. It is important because we will learn from it, and will make changes in how we support innovation and collaboration. It is also important because the pace of change in society is increasing, largely driven by technological developments, yet healthcare systems have traditionally found it difficult to adapt quickly.

This report signals a shift in thinking about how to bring about change in complex systems. Traditional approaches emphasise processes that seek to affect individuals’ knowledge and beliefs. Emergent approaches don’t ignore that, but substantially target practice – what is done, how it is done, and what can be done instead. This shift in focus reflects the reality that bringing about meaningful change has not been easy with traditional approaches.

I would like to acknowledge Donella Piper and Rick Iedema who worked in partnership with ACI Network teams to carry out the research and compile this report. It is important work which will contribute to better understanding about how to drive sustainable change and improvements in healthcare.

Nigel Lyons
Chief Executive
NSW Agency for Clinical Innovation
# Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>5</td>
</tr>
<tr>
<td>Recommendations</td>
<td>7</td>
</tr>
<tr>
<td><strong>Section 1</strong></td>
<td></td>
</tr>
<tr>
<td>Overview</td>
<td>8</td>
</tr>
<tr>
<td>Aims and questions</td>
<td>8</td>
</tr>
<tr>
<td>Methods</td>
<td>8</td>
</tr>
<tr>
<td>Theoretical approach</td>
<td>9</td>
</tr>
<tr>
<td>Conclusion</td>
<td>10</td>
</tr>
<tr>
<td><strong>Section 2</strong></td>
<td></td>
</tr>
<tr>
<td>Implementation research theory</td>
<td>11</td>
</tr>
<tr>
<td>Implementation research and implementation science</td>
<td>11</td>
</tr>
<tr>
<td>How do we understand practice change?</td>
<td>11</td>
</tr>
<tr>
<td>Dominant approaches and emerging directions</td>
<td>12</td>
</tr>
<tr>
<td>Conclusion</td>
<td>13</td>
</tr>
<tr>
<td><strong>Section 3</strong></td>
<td></td>
</tr>
<tr>
<td>Minimum standards for the management of hip fracture in older persons</td>
<td>15</td>
</tr>
<tr>
<td>Background</td>
<td>15</td>
</tr>
<tr>
<td>Critical issues in managing the project</td>
<td>16</td>
</tr>
<tr>
<td>Health service sites and staff issues</td>
<td>21</td>
</tr>
<tr>
<td>Maintaining project progress amid complexity</td>
<td>23</td>
</tr>
<tr>
<td>Conclusion</td>
<td>23</td>
</tr>
<tr>
<td><strong>Section 4</strong></td>
<td></td>
</tr>
<tr>
<td>Care of confused hospitalised older persons</td>
<td>24</td>
</tr>
<tr>
<td>Background</td>
<td>24</td>
</tr>
<tr>
<td>Major issues</td>
<td>25</td>
</tr>
<tr>
<td>Conclusion</td>
<td>32</td>
</tr>
<tr>
<td><strong>Section 5</strong></td>
<td></td>
</tr>
<tr>
<td>Quality in acute stroke care</td>
<td>34</td>
</tr>
<tr>
<td>Background</td>
<td>34</td>
</tr>
<tr>
<td>FeSS Clinical Protocols</td>
<td>35</td>
</tr>
<tr>
<td>Results</td>
<td>35</td>
</tr>
<tr>
<td>Self-declared limitations</td>
<td>36</td>
</tr>
<tr>
<td>Findings</td>
<td>36</td>
</tr>
<tr>
<td>Conclusion</td>
<td>40</td>
</tr>
<tr>
<td><strong>Section 6</strong></td>
<td></td>
</tr>
<tr>
<td>Concluding discussion</td>
<td>41</td>
</tr>
<tr>
<td>Comparing the three initiatives</td>
<td>41</td>
</tr>
<tr>
<td>Lessons for the implementation of large-system transformation</td>
<td>42</td>
</tr>
<tr>
<td>Conclusion</td>
<td>43</td>
</tr>
<tr>
<td><strong>References</strong></td>
<td>44</td>
</tr>
</tbody>
</table>
Executive summary

Background
This project investigated three large-system transformation initiatives from the NSW Agency for Clinical Innovation (ACI), involving hip fracture care, delirium and dementia care in older patients, and acute stroke care.

Aims
The aim of the project was to describe in detail and analyse three clinical innovation and large-system transformation projects undertaken by the ACI.

Key questions
The questions driving the study were as follows.

• What implementation approaches do the initiatives adopt and how do they differ?
• What aspects of these approaches are deemed successful by ACI staff and people in the participating health services?
• What contextual factors impose implementation constraints and provide implementation opportunities?
• How might these factors be integrated into ACI’s implementation approach more generally?

Approach
The study was grounded in the following assumptions:

• system transformation initiatives take place amid complex social and organisational circumstances
• this complexity demands sensitivity to local constraints and needs
• this complexity means that accounting for system transformation means engaging with the process of implementation as well as its ultimate outcomes to understand better why some activities were successful and others less so.

The research approach was grounded in the ‘transformational research and evaluation’ paradigm, to enable rapid conversion of its findings into practice.

Method
The study included interviews, observational methods and document analysis. The study interviews were undertaken with both ACI staff and health services’ staff members involved in the initiatives. The research was based on the ‘researcher-in-residence’ model promoted to ensure a closer connection between research process, outcomes and practitioner learning. The report uses case study reporting to allow details to be specified.

Findings
Findings emerged in the following four domains: the initiative context; the project complexity; the dynamics of initiative implementation; and, chance affecting the implementation initiative.

Findings pertaining to context

a) Site project staff and front-line clinicians played a central role in negotiating appropriate adaptations of the proposed change to suit local practices and sites. A common finding across projects was that proposed changes were adapted rather than adopted.

b) There were high levels of variability in site readiness and site project staff preparedness, creating significant unpredictability for ACI staff and for projects generally.
Findings pertaining to project complexity

c) The complexity of specific initiatives was an important consideration for both ACI and health service staff in determining resourcing, expectations, project dynamics, likely outcomes, and potential challenges and opportunities. This complexity was not always explicitly factored into the implementation approach.

d) Project complexity was not always apparent up front; in some instances it manifested as the project was under way.

Findings pertaining to actual project dynamics

e) To mitigate project complexity, site project staff and front-line clinicians’ involvement depended heavily on explicit and ongoing communication between those implementing change, those advocating for the change in their sites, and those enacting the change. The quality of their relationships and communication influenced to a significant degree how the change was perceived and responded to by front-line clinicians.

f) Technologies had a prominent, but not always beneficial, influence on the implementation process. Technology-mediated horizontal connectivity (communication among sites made possible by ACI staff) was critical in enabling peer-motivated learning. On occasions, negotiating access to large datasets slowed projects down.

Chance affecting progress and achievements

g) Each of the projects benefited from participants and stakeholders creating ad hoc connections with prior and parallel developments.

h) This chance and serendipity played an important role in whether initiatives gained momentum and maintained sustainability.

Recommendations

The project’s recommendations key in to the four domains described above. Thus, recommendations centre on: the assessment of site readiness and staff preparedness (context); a determination of projects’ apparent and potential complexity (design); a structure for conducting the implementation of systems transformation (the implementation process), and accounting for projects’ progress and achievements (the roles of chance and planning).
### Recommendations

#### Recommendations pertaining to the assessment of site readiness and staff preparedness

1. **Recommendations pertaining to the assessment of site readiness and staff preparedness**

   1.1 That a tool and method be created allowing an in-depth site assessment and an in-depth site project staff-preparedness assessment to take place before initiatives commence, enabling site and ACI staff to identify local challenges and opportunities.

   1.2 That site-assessment tools and methods account for historical and recent service upheavals and interpersonal events, as well as clinical-organisational and patient cohort specifics, such that these are known when initiatives commence.

   1.3 That preparedness tools and methods for site project staff account for staff experience with systems change projects, specifically data gathering and analysis, stakeholder engagement, solution design, solution assessment and solution implementation, such that these are known when initiatives commence.

   1.4 That ACI commit to sites with lower levels of site project readiness with targeted pre-project and during-project assistance.

   1.5 That ACI provide targeted pre-project training to site and project staff with lower levels of project experience.

#### Recommendations pertaining to implementation project design

2. **Recommendations pertaining to implementation project design**

   2.1 That ACI analyse proposed initiatives in terms of their focus and purpose (adherence? co-design? learning?), depth of intended impact (environmental adjustments? process redesign? behavioural change?), resourcing (staffing, money, time), projected sustainability and overall complexity.

   2.2 That ACI projects harness as many existing resources, current initiatives and parallel developments as possible, to capitalise on the congruence between them and new ACI projects, and thereby enhance such projects’ chance of success.

   2.3 That ACI staff develop tools and strategies for negotiating complex and challenging interpersonal professional relationships and situations arising during projects.

   2.4 That ACI staff develop tools and strategies for negotiating and renegotiating appropriate levels of project resource investment.

   2.5 That ACI staff take into account the need for potentially lengthy ethics approval and site-specific authorisation processes.

#### Recommendations pertaining to the implementation of systems transformation

3. **Recommendations pertaining to the implementation of systems transformation**

   3.1 That ACI develop, and make available to participating sites, an overview map of, and flow chart for, the use of its project implementation resources and evaluation capability.

   3.2 That ACI projects rely as much as possible on local (Australian) research to provide evidence in support of project aims.

   3.3 That ACI acknowledge in its implementation approach that its linear approach to project planning and management will be flexible in practice.

   3.4 That ACI staff articulate and keep updating goals about what is expected to be achievable (for example, environmental adjustments) and what may be more difficult to achieve (for example, behavioural change).

   3.5 That the logic of converting specific diagnostic findings into solutions be articulated and clarified, and that proposed solutions be mapped against a hierarchy of potential solution interventions.

   3.6 That ACI staff make explicit as part of their implementation approach that initiatives involve sites in ‘horizontal’ (cross-site) learning and sharing.

   3.7 That ACI staff arrange ACI-internal time-outs to discuss progress and changes brought about by complex circumstances, particularly those that affect goals, processes and timelines.

   3.8 That site project staff be encouraged to identify commonalities among service-level initiatives through which to create leverage for the project.

#### Accounting for projects’ progress and achievements

4. **Accounting for projects’ progress and achievements**

   4.1 That ACI’s accounts of projects reflect the complexity of the implementation process, including its unanticipated (positive) outcomes and unintended (less positive) consequences, and its potentially unacknowledged contextual (enabling and constraining) conditions.

   4.2 That ACI-funded projects be required to detail how projects unfold, such that the full complexity of practice improvement and systems change is revealed.
This project investigated how the NSW Agency for Clinical Innovation (ACI) initiatives operate, what processes they put in train, and what outcomes they produce. The project focused on implementation of the following three initiatives:

- hip fracture care guideline (HIPs)
- care of confused hospitalised older persons (CHOPs) guideline
- quality in acute stroke care project (QASC).

Aims and questions

The aim of the project was to describe in detail and analyse three clinical innovation and large-system transformation projects undertaken by ACI.

The guiding questions were:

- What implementation approaches do the initiatives adopt and how do they differ?
- What aspects of these approaches are deemed successful by ACI staff and people in the participating health services?
- What contextual factors impose constraints and provide opportunities for implementation?
- How might these factors be integrated into ACI’s implementation approach more generally?

Methods

The study was conducted using interviews, observational methods and document analysis.

Interviews

Staff from both ACI and participating local health districts were interviewed.

Some interviews were structured, others occurred in ad hoc ways when opportunities presented themselves, and when questions arose about how projects were progressing.

Overall, 57 interviews were conducted, with:

- 15 ACI staff, comprising:
  - Clinical Program Design and Implementation – 8
  - ACI network managers and projects officers – 6
  - other – 1
- 42 local health district staff, comprising:
  - project staff – 22
  - allied health staff – 7
  - nursing staff – 6
  - nursing unit managers – 5
  - medical staff – 2
Observational methods

The study’s observational component targeted, and sought to account for, the dynamics of meetings and initiatives. Researchers attended 19 meetings for the hip fracture guidelines initiative and 21 for the confused hospitalised older persons (delirium and dementia care) initiative. No project meetings were attended for the acute stroke care initiative as that was led by an outside research centre.

Meetings attended included those formally arranged and attended by ACI staff, ones involving ACI staff and health service staff, and ad hoc meetings with people encountered in the course of the project at ACI and at the various sites. They included in-house project management meetings, site lead meetings, on-site project meetings, on-site management meetings where the initiatives were discussed, project initiation meetings, data collection meetings and training events.

Document analysis

Document analysis consisted of systematic scrutiny of relevant publications, reports and presentations, including the ways in which meetings were minuted and documents circulated, and the use of chat rooms and information and communication technologies.

The ‘case study’ method was used to detail findings (see below).

Theoretical approach

The study approach was based on the assumption that systems transformation initiatives tend to take place amid complex social and organisational circumstances. The overarching question was: how was the initiative ‘shaped, enabled and constrained by the interaction between the context of the program and the chosen mechanisms of change?’.

This question acknowledges that a variety of factors and circumstances influence outcomes. Posing the question invites responses dealing with how the initiatives unfolded rather than a focus on causes and practical outcomes.

The detail and specificity of our approach are central to producing knowledge and learning about how to act amid complexity. Complex circumstances tend to resist generalisation, and instead demand specification and fine-grained description. As Russell and Greenhalgh argued, fine-grained case study descriptions may sensitise us to what is possible, and likely to be effective, in unique circumstances.

The case study method

The case study is the means par excellence for learning to tackle complex phenomena; for building up knowledge from complex circumstances and events. It is not surprising that the case study is prominent in both the law and medicine where complex situations and events are commonplace, and where learning from these complex situations and events is critical for furthering legal and medical expertise. In these disciplines, case studies are used to alert us to matters ‘that have not been recognised so far’ and that enable us to tackle ‘other specificities [that] may be transferable’:

> Because they are not representative of something larger (a ‘theory’), cases are able to do all kinds of other work. For instance, they may sensitise the reader to events and situations elsewhere that have not been recognised so far … They may suggest ways of thinking about and tackling other specificities, not because they are ‘generally applicable’ but because they may be transferable, translatable.

Besides providing details about specific events and circumstances, the case study method lets us set out our interpretation of what happened. All research methods, even the most rigorously designed large-sample study, use interpretation. An important difference between large-sample studies and observational research is that the latter prioritises interpretation, and offers an opportunity for collaborative interpretation through participant feedback. The rationale for the participative approach is drawn from (and legitimated by) what is referred to as ‘transformative research and evaluation’ on the one hand, and the ‘researcher-in-residence’ model on the other.
Transformative research and evaluation

This study adopted a research approach akin to Mertens’ ‘transformative research and evaluation’\textsuperscript{1}. Transformative evaluation research circumvents the strict scientific-positivist paradigm, where researchers expect to generate simple (‘elegant’) statements of causation.

Transformative research and evaluation studies aim to account for the political, social, cultural and personal dimensions of initiatives. That is, such studies describe in depth what happened, how the initiative affected practices, what roles individuals played in the initiatives, and how roles, practices and unique events shaped the overall initiative. They work with ‘how and why’ questions aimed at improving our understanding of what happened. Questions of ‘how many’ and ‘to what degree’, which seek proof and generalised explanations, are left to others.

**Researcher-in-residence**

Generating ‘how and why’ information requires the researcher–evaluator to be closely involved with the practices, initiatives and processes under investigation. Hence, this study adopted what Marshall and colleagues call the ‘researcher-in-residence’ approach\textsuperscript{2}. Researcher-in-residence is an approach that has been conceived to bring together the knowledge and practice of the researcher and the practitioner. The ‘researcher-in-residence’ is able to:

- become familiar with the challenges facing a person, service or unit
- adjust their approach, questions and thinking to unique and emerging circumstances
- find opportunities to share research knowledge with practitioners
- follow up on challenges, trace issues and map critical factors.

The key aspect of the researcher-in-residence approach is the time required to gain knowledge and understanding. ‘Hit-and-run’ research approaches (such as one-off interviews, focus groups and surveys) assume that relevant knowledge and understanding can be made explicit and captured in one go. This is rarely the case, particularly in complex circumstances: meanings, significances, connections and explanations may take time to emerge, and may even then remain contested.\textsuperscript{8,9}

The researcher-in-residence model combines in-depth or ‘thick’ description with ‘hot feedback’. ‘Hot feedback’ becomes possible when the researcher-in-residence engages in discussions about the work with agency staff, asking questions, eliciting explanations and encouraging reflection. While most of these conversations seek clarification, some also make possible the sharing of impressions and formulation of conclusions about the work, its focus, its modus operandi and its impacts.\textsuperscript{10}

**Conclusion**

Useful knowledge can be derived from delving into the details of what goes on in the workplace, and by involving oneself as researcher in processes as they unfold. This approach to generating knowledge differs from that favoured by conventional science, where the boundary between the scientist and the subject is strictly maintained, in principle, if not necessarily in practice. The objective of an unconventional research approach is precisely not to divorce oneself from what is observed, in this case, systems change. The objective here, rather, is to become involved in change and generate a detailed map of its unfolding. We do so on the assumption that the uniqueness of our account may instruct others elsewhere about how to plan scenarios\textsuperscript{11} for acting amid complexity.\textsuperscript{5}
Implementation research and implementation science

Implementation research draws on ‘implementation science’\(^a\). Using the term ‘science’ highlights the prevailing view that large-system transformations can be planned and executed according to scientifically derived principles that specify what works, what does not and why. There is growing recognition, however, that many aspects of large-system transformation evade conventional scientific analysis and explanation. The complexity of large-system transformation is such as to necessitate accounts and explanations that match, rather than erase, the complexity of the processes in question.

How do we understand practice change?

Implementing a change requires us to have sufficient influence over work practice. This is likely, given the various ways in which organisations and bureaucracies have been able to transform occupational and professional practices in the past\(^12\), and our knowledge of how people gradually adopt specific changes.\(^13\) The explanation of how change comes about, however, remains contested.

Implementation theories emphasise how important it is to plan and manage the change process, on the assumption that those targeted will be clear about what is expected, and that changes will be monitored and recorded. They also favour the view that an effect requires a push, a directive or invitation to individuals in the system that elicits uptake, or at least an interpretation, of the change, to achieve a measurable and ameliorative transformation.

While implementation theory originally favoured processes that sought to affect individuals’ knowledge and beliefs (the ‘theoretical domains framework’\(^14\) \(^15\)), the emphasis is increasingly on engaging with, and affecting, practice. With practice-change programs, practitioners can decide how to adapt their work to meet the new targets. Thus, the approach targets practice (what is done, how it is done, and what can be done instead) rather than knowledge and belief. This is an important shift in focus, as implementation theory grapples increasingly with the practical reality of accomplishing change in intractable circumstances.

The more implementation theory acknowledges the complexities facing those ‘at the pointy end’ of change, the more help front-line employees get to integrate changes into existing practice. At that point, how a specific change fits in with current practice becomes more important than meeting the full demands of the original change program.

Additionally, the change program may not cover everything that is relevant and important to practice. Practical experience and learning may demonstrate a need to amend the change program; hence the recent coining of the term ‘practice-based evidence’\(^16\) to complement ‘evidence-based practice’ and ‘evidence-informed practice’.\(^17\) ‘Practice-based evidence’ acknowledges the complexities that come into play as we seek to change the ways in which people work, and the often sophisticated ways in which practitioners solve local problems and challenges. The term also points to the need for more sophisticated ways of thinking about how front-line staff can be supported in making practice changes.

Where traditional implementation theory favoured linear and causal thinking, newly emerging approaches promote non-linearity and ‘complexity thinking’. This is not to dismiss the importance of conventional

---

\(^a\) The field of implementation science now has its own journal, *Implementation Science*, which brings together studies of large-system transformation initiatives from around the world.
approaches to implementing systems change, but to acknowledge that alternative ways of thinking about implementation are possible and, at times, necessary. ‘Complexity thinking’\textsuperscript{18} acknowledges that changes may not unfold in a linear fashion, and that change may not eventuate in the way it is set out in change directives, policies, guidelines or protocols. Indeed, complexity thinking engages with the multiple ways in which front-line actors interpret, enact, bend and ignore change plans to suit their existing ways of working.\textsuperscript{19}

**Dominant approaches and emerging directions**

 Complexity thinking makes it possible for us also to engage with how actors are always already entangled in relationships, rituals, routines and circumstances that may be more or less receptive or even incommensurable with the changes sought. Acknowledging that service-level circumstances may not readily lend themselves to the implementation of change means that we can begin to confront the huge task of understanding practitioners’ existing and current work relationships, rituals, routines and circumstances, and exploring to what extent they indeed may be open to transformation.

In Figure 2.1 (below), copied from a recent NHS publication\textsuperscript{20}, the prevailing or dominant approach to systems change is represented as linear and analytical. In essence, the dominant approach has its intellectual origins in the classical mechanics of Newtonian physics: objects exert measurable force on one another and thereby produce more or less congruent change effects.\textsuperscript{21} Here, the implementation of change is like a game of billiards, where the main focus is on applying the right push in the right direction. When change effects are not commensurable with the original force applied, so this thinking goes, the change effort must be deficient, or the change is obstructed through local resistance.

This dominant approach is contrasted with an ‘emerging direction’. According to this emerging perspective, implementing change is more like playing billiards on a ship at sea, where few components of the system occupy known positions for very long. On this view, a system’s behaviour cannot be deduced from the behaviour of its constituent components. Because the behaviour of the system is subject to pressures and influences other than its own make-up, it is complex. In essence, such system’s behaviour is ‘over-determined’: what happens cannot be attributed once and for all to specific, isolated and isolatable causes. Downing a billiard ball may be due to excellent billiard skills, but it may also be due to the ship’s movements or to other balls knocking our ball in the right direction. Typically, in these situations, more goes on than can be easily accounted for or fully measured, and often all we can glean from what is happening is that ‘connections’ yield special and unique opportunities that appear to lead to novel situations and outcomes (see Figure 2.1).
The significance of the concept ‘connection’ in complexity thinking is apparent from the roles played by ‘sharing’, ‘emotional connection’, ‘viral (uncontrollable, unpredictable) spread’, ‘openness’ and ‘relationships’ (also listed in Figure 2.1). These concepts all reference complexity thinking: there needs to be contact (through connection) between entities for change to occur, but the manifestation of that contact (for example, as influence, cause, directive, or managed change process) may not (or only partially) be amenable to description, measurement, management, analysis and replication.

The importance of connection through relation also bears on how the researcher-observer is positioned vis-a-vis that which is observed. It may well be possible for the observer to detail how systems adapt to emerging circumstances. However, the specific and unique location of the observer who accounts for what is happening is not entirely arbitrary to what is seen and how it is seen. As acknowledged in the ‘hard’ sciences ever since Niels Bohr recognised that his method of seeing determined what he saw (waves or particles), the role played, and the position occupied, by the observer mean that what is observed is a complex mix of real-world phenomena and local perspective. This additional understanding of ‘connection’ also plays a role in emergent perspectives on systems change: change is no longer a matter of applying appropriate force. Instead, change is about negotiating local complexities such that all stakeholders (and not just those initiating the change) may benefit from it.

**Conclusion**

A new approach, emerging direction, lets us engage more effectively with the complexities of actual systems change processes. Establishing causation and measuring outcomes and effects are still important, but this emergent approach lets us account for matters whose role in change processes have previously been discounted. Moving our perspective from managed linear change to change complexity affects how we undertake change, how change is described and measured, and how change is reported. It lets us talk in different terms about how change relates to people’s actions, habits and intentions, and to organisational roles, rules and routines.
It is important to note that, given the rising complexity of health care, practitioners are increasingly expected to engage in continuing professional development or ‘lifelong learning’. This points to another opportunity opened up by emerging perspectives on implementation: letting practitioners engage in more probing, sophisticated and critical attitudes towards care provision. With the change agenda and implementation program now seen as rough guides rather than absolute endpoints, practitioners and change agencies like ACI can learn from one another to realise changes that are at once system-wide, locally appropriate and tangibly beneficial for patients’ care.
Background

This section reports on the Minimum Standards for the Management of Hip Fracture in the Older Person project. A number of sources provided impetus for improving hip fracture care practice, including related international initiatives. One important local source was the ACI’s Orthogeriatric model of care: Clinical practice guide, a 2010 publication that provided a practical guide to the management of frail, older orthopaedic patients. In 2011 the Clinical Excellence Commission (CEC) published Fractured hip surgery in the elderly, based on an analysis of 26 root cause analysis reports and a range of other surgery and anaesthetics reports into problems after surgery. That analysis concluded that orthogeriatric co-management, and an orthogeriatric model of care that ensures patients are operated on within 48 hours, are critical for improving the management of hip fracture patients and reducing 30-day mortality.

In 2013 the ACI’s Unwarranted Clinical Variation Taskforce made improving hip fracture care a priority. This initiated the Minimum Standards for the Management of Hip Fracture in the Older Person project, a collaborative effort of two ACI portfolios: Surgery, Anaesthesia and Critical Care, and Primary Care and Chronic Services. The seven minimum standards are shown in Figure 3.1.

Figure 3.1: The seven minimum standards for the management of hip fractures in older persons
The project involved, among other things, developing videos outlining the importance of each of the minimum standards for stakeholders in the local health districts. Also, ACI’s Health Economics and Evaluation Team undertook an analysis of hip fracture care across each local health district.

**Critical issues in managing the project**

**Interpersonal dimensions**

Managing the Minimum Standards for the Management of Hip Fracture in the Older Person project required many skills and activities, of which the most important were establishing, maintaining and furthering relationships with clinicians in participating sites. The interpersonal skills of the network manager and implementation team were critical, particularly given the politically charged nature of the practice changes sought, and the power and positional sensitivity of the stakeholders. Interpersonal skills manifested in strategically and persuasively communicating to health staff the benefits of, and evidence for, the orthogeriatric approach to hip fracture care. In addition, interpersonal skills let the implementation team monitor how the information was received, and keep on side people who objected to (or perhaps just signalled concern about) the required changes. Vignette 3.1 presents an example of these delicate but critical dynamics.

---

**VIGNETTE 3.1: THE FIRST MEETING**

The project manager arranged a meeting with staff at a hospital in Sydney’s west. The meeting is attended by a clinical nurse consultant, allied health staff, a geriatrician and the nurse unit manager. ACI is represented by the project manager, the research manager and an ACI consultant called in to assist with the Minimum Standards implementation. The meeting is held in a tiny room and people squeeze around a large table. The meeting kicks off before the surgeon arrives. The project manager goes through the slides and speaks in a very engaging, relaxed voice, positioning himself close to the thinking of the clinicians. He presents the project in terms that reassure those present that this is not going to drastically alter their work practices. Going with the rhythm and mood that dominate the room, he speaks slowly, giving people time to respond, ask questions and critique. Then the surgeon arrives in scrubs and sits down without going through any formal introductions. The meeting suddenly seems quite ‘icy’. Soon after, however, the surgeon contributes some constructive comments. Indeed, he and the geriatrician exchange some views about hip fracture patients in a fairly amicable way, suggesting that progress towards realising the orthogeriatric model may be possible. The surgeon is called away a little while later for another hip fracture operation, and he leaves again with little emphasis on formality. Not long after, the meeting concludes and people leave on a positive note. The project manager comments afterwards that, comparatively speaking, the exchange between the geriatrician and the orthopaedic surgeon was positive and friendly. Even though no concrete plans were formulated, this was a good meeting. It compared favourably to other meetings where medical staff barely spoke with one another or failed to attend altogether.

---

**Recommendation**

That ACI staff develop tools and strategies for negotiating complex and challenging interpersonal professional relationships and situations.

**Negotiating resources for implementation**

Negotiating involvement from health services requires clarifying how the project will function. Health services want to know what resources (aside from the project’s financial contribution) ACI offers to help them meet project expectations and carry out project tasks. ACI offers a smorgasbord of formal document resources, designed to help

---

\*‘Positional sensitivity’ refers to stakeholders’ careful and often intense attention to how any proposed changes might affect their established personal positions and associated practices, and to what extent such changes might reduce their control over those positions and practices.
sites structure their data collection, diagnostic analysis, solution formulation, stakeholder management, project reporting, and so forth. There is also training in AIM (accelerated implementation methodology) and project management training, in addition to personalised coaching of selected health service staff around their roles in project implementation and practice change. Not all the resources are discussed in the initial meeting, whose focus remains on the more general aspects of, and evidence for, the new model of hip fracture care.

One project team member commented in an interview that they would have opted for more training and a more measured approach to project expenditure if they had known more about the challenges of implementation, stakeholder engagement, practice diagnostics, solution design and the like. Instead of volunteering for a project with limited experience, they would have preferred pre-project training. And instead of spending the available funds on one full-time person for six months, they felt they would have been better off stretching the appointment out over a year, or even 18 months. These realisations may only become apparent from an in-depth analysis of staff experience and from a site-readiness appraisal (see below).

**Recommendation**

That ACI staff develop tools and strategies for negotiating and renegotiating appropriate levels and modes of project resource investment.

**Project flexibility**

Central to effective project management was the flexible negotiation of issues, concerns and interests and resources. At site meetings, the project was presented within the framework of ACI’s implementation approach and plan, which come with clearly set out and well-developed resources outlining linear stages, timeframes and strategies. These resources were presented as available for use if the sites wished, rather than necessarily determining how the project was to be rolled out.

The formal resources provided tended to favour linearity (see Figure 3.2), but clearly flexibility was embedded into the project from the start. For example, ACI staff varied their approach to implementation and redesign tasks according to the priorities, interests, capability and readiness of the service. In one case, ACI staff spent three days providing assistance at a regional site, where they collaborated with site project staff in data gathering and analysis.

---

b The full panoply of implementation resources includes: an implementation guide; templates for setting up meeting agendas and meeting minutes, designing Gantt charts, managing communication with stakeholders, doing the diagnostic and formulating solutions, and keeping track of risks and important issues; a project management plan; and a walk-around tool.
**Figure 3.2: ACI’s implementation and practice redesign methodology**

<table>
<thead>
<tr>
<th>Project initiation and start-up</th>
<th>Diagnostics</th>
<th>Solution design</th>
<th>Implementation planning</th>
<th>Implementation checkpoints</th>
<th>Evaluation sustainability knowledge sharing</th>
</tr>
</thead>
<tbody>
<tr>
<td>To develop the project scope and set up project, change, communication and stakeholder management plans</td>
<td>To collect and assess critical data about processes, patients and staff. Identify key issues to be resolved and build the case for change</td>
<td>To design and prioritise solutions to issues and build stakeholder support</td>
<td>To develop a comprehensive plan for implementing solutions and measuring benefits</td>
<td>To implement solutions and confirm that benefits are being delivered</td>
<td>To identify ways to improve the process, share lessons and drive sustainability</td>
</tr>
</tbody>
</table>

- **Project Management**
  - Project Objectives & Measuring Benefits
  - Project Scoping
  - Governance & Reporting
  - Roles & Responsibilities
  - Project Deliverables & Scheduling
  - Project Costs
  - Risk Management
  - Change Management
  - Stakeholder Management
  - Communications Management

- **Diagnostics**
  - Process Mapping
  - Diagnostic Tools & Techniques
  - Staff Interviews
  - Patient Interviews
  - Patient Tag Alongs
  - Data Collection & Analysis
    - Baseline KPIs
    - Issues Identification
    - Issues Prioritisation
    - Root Cause Analysis
    - Building the Case For Change

- **Solution design**
  - Literature Search for Best Practice Solutions
  - Facilitated Problem Solving & Brainstorming
  - Solutions Identification
  - CostUBenefit Analysis of Solutions
  - Prioritisation of Solutions
  - Detailed Solution Statements
  - Develop Quick Wins

- **Implementation planning**
  - Implementation Plans for Quick Wins
  - Business Cases
  - Implementation Teams
  - Change Readiness Assessment
  - Sponsorship Roles & Responsibilities
  - Project, Stakeholder, Communication & Change Management Plans
  - Performance Management
  - KPI Definition & Measurement Plan
  - Piloting Initiatives

- **Implementation checkpoints**
  - Implement Quick Wins
  - Implement all Solutions
  - Trouble Shooting
  - Coaching & Support
  - Monitoring and Reporting

- **Evaluation sustainability knowledge sharing**
  - Post Implementation Evaluation
  - Review & Redesign of Unsuccessful Initiatives
  - Continuous Cycle of Redesign - Sustainability
  - Sharing of Knowledge
  - Writing For Publication

**Project + Change + Stakeholder + Communication Management**
Through such assistance, health service staff gained the confidence that they could conduct the necessary tasks and act on the data collected. Site staff learned, for example, how to spot emerging patterns, to what extent they should be guided by those emerging patterns in subsequent data gathering and analyses, and to reach solutions from the analysis. Such collaborations were important for confirming ACI as both support agency and change agency. This flexibility was further enhanced by the project being able to draw on a variety of ACI staff from the relevant networks, the implementation team and the evaluation team. One interviewee commented on the impression of ACI credibility that was thereby created.

Flexibility was further imposed on the project ‘from outside’. ACI staff had to adjust project timelines and scope due to the unpredictable impact of specific project resources; notably, the data gathering and analysis tools. The project had sought to enrich data collection and analysis by supplying software that would facilitate data management and identification of results. Vignette 3.2 describes the various challenges arising from the project’s inclusion of two software packages for these purposes.

**VIGNETTE 3.2: THE CHALLENGES OF DATA COLLECTION AND DATA ANALYSIS**

The hip fracture project involved sites in doing a diagnostic audit of their hip fracture care processes. Two data gathering and analysis tools were trialled: QARS (Quality Audit Reporting System) issued by the Clinical Excellence Commission; and STARS (SLHD Targeted Activity and Reporting System) developed by Sydney Local Health District. QARS was designed for national accreditation reporting. The trial of QARS revealed limits on data gathering (allowing for only ‘yes/no’ answers) and some basic software problems, so the software had to be abandoned. Project management had to decide whether to choose a different data collection tool or hold off until QARS, which had been promoted as a project resource, was improved. Unfortunately, the STARS deployment on the hip fracture project was slowed down by technical, access and sign-off issues. STARS was housed within SLHD, and thus not accessible for other local health districts. Local health districts needed to give STARS access to their data, which was not necessarily in a suitable state for providing access to surgical data reports. There were further questions around data classification, for example, some patients with a hip fracture may not be classified as hip fracture patients because hip fracture was not their primary diagnosis. Then there were difficulties connecting different databases, for example, STARS had trouble extracting data from SurgiNet automatically, and linking datasets took more time than expected.

Consequently, the data-gathering dimension of the project faced intense uncertainty for a number of months. Besides time delays, this uncertainty also threatened to affect on-site relationships: ‘We sold STARS as a great way to see all the data and now it’s not there’ (12.01.2015). The complexity of managing data-diagnostic obstacles with the sites, software bugs with the entities that produced the packages, and data access permissions with data custodians, added to the already significant complexity of the project. Software packages such as STARS can illuminate (among other things) the number of surgery cancellations, the number of days patients fasted, the relationship between complications and length of stay. However, the doubts and uncertainties about the functionality and data access status of the software packages required much effort from project managers to reassure sites that progress was still feasible and important.

The challenges sketched in Vignette 3.2 gave way to yet further complexities, such as whether and how to tie project initiatives in with other ‘parallel’ initiatives, or when to mobilise complementary data analytical activities. For example, could (or should) the hip fracture project capitalise on the National Hip Fracture Registry initiative, or the Clinical Excellence Commission’s falls, sepsis or SIBR (structured interdisciplinary bedside round) initiatives. These questions proved pressing for those working in health service sites challenged by a multiplicity of initiatives that overlap in concerns and aims (see more on this issue of parallel initiatives below).

Tackling these questions and negotiating answers to them necessitated a delicate balance between maintaining the overall coherence, structure and direction of the implementation process while also allowing for alternative directions and emergent solutions. This resulted in a sophisticated trade-off between implementation planning and program flexibility. Overall, the project was characterised by the following implementation logic: accommodate deviations, and even deficiencies, when doing so might lead to significant gains that outweigh
implementation planning problems. This implementation logic was both pragmatic and strategic: yielding on issues over which ACI staff had limited control anyway (how soon? how many wards? how many standards?) tended to engender commitment from site project staff to issues over which they had some control, and where they were able to achieve progress.

Recommendation

That ACI acknowledge in its implementation approach that its linear approach to planning will be flexible in practice.

This recommendation recognises that projects may not go fully to plan, and reinforces that projects’ progress and planning must be continually negotiated and reconfirmed with project participants.

Implementation as two-way learning

The previous section emphasised the importance of letting health districts change at their own pace and in areas that are most urgent and/or feasible for them. This strategy ensures that sites have ownership over the tasks they initiate, and that they remain in charge of what is to be done, changed, monitored and learned. It is noteworthy that this implementation logic harbours yet another form of flexibility: two-way learning. That is, learning did not flow in one direction (from ACI to the health service sites) but in two directions (from ACI to the health service sites and from the sites, and elsewhere, back to ACI). For example, on the one hand, the minimum standards were expanded to track patients’ fasting and, on the other, the importance of managing patients’ pain was acknowledged. The project also benefited from other sources, such as dedicated trauma lists, and early rehabilitation and refracture-prevention practices.

This ‘bi-directional learning’ underscores the value of the interaction between the overarching hip fracture project and the ways in which sites respond to the project. The implementation process is more than a programmatic unfolding of a linear plan: part and parcel of ACI staff interactions with health service staff were ongoing negotiations about realising change and about the scope and nature of the changes sought.

Recommendation

That ACI staff make explicit as part of their implementation approach that initiatives involve sites in ‘horizontal’ (cross-site) learning and sharing.

Politics and tactics

The implementation process had to be extremely ‘agile’ because of the political landscape within the health organisations. The term ‘political’ here refers to the way people tend to protect vested interests and privilege their priorities over those of others. Thus, an act is ‘political’ if it remains anchored in minority interests, preventing different and additional stakeholders from renegotiating the original terms of reference. To navigate through such political acts, agents and agencies of change need to be agile; sensitive to people’s claims and to what is at stake, and aware of what is negotiable for whom and how.

Thus project staff have to know how to shape and influence situations so that project priorities do not drop off the agenda. On several occasions, opportunities were discussed with people who could influence progress towards the goals. In some cases, assistance was sought to motivate sites that were making slow progress on certain tasks or with providing critical data. In other cases, higher level management was advised to wait for further data rather than jumping to early conclusions and prematurely imposing solutions on front-line staff. These situations were delicate and required a lot of tact.
One question that was frequently asked by ACI project staff was, ‘what’s in it for [the sites]?’ This helped ACI staff imagine what it was like for the health service staff who were promoting and managing the project in their workplace. The question was also critical to ensuring that ACI’s activities, structures and expectations remained aligned with the health services’ activities, structures and expectations.

At times, however, the answer was not straightforward. Interpretations of project ownership and project responsibilities varied within local health districts. Specifically, ACI’s invitation to a site to become involved in the project sometimes became transformed into a directive from a local health district with a parallel or overlapping agenda. This risked invoking resistance to the initiative on the part of front-line staff.

The diversity of responses to the initiative meant that the proposed implementation approach, goals and processes were sometimes subtly refracted away from ACI’s original framework. One interviewee described this complication as being due to ‘the tangle of relationships’ that tended to characterise practice change projects. This tangle was described as confronting site-level project participants with different stakeholders’ agendas, which could be collaborative, resistant or directive. Negotiating project aims and processes with service-level stakeholders in these circumstances called for enormous sensitivity to local developments and relationships on the part of ACI staff, and required considerable agility to satisfy local interests and manage local perceptions.

**Health service sites and staff issues**

**Variable site practices**

**VIGNETTE 3.3: AN ADVANCED SYSTEM FOR THE MANAGEMENT OF NECK OF FEMUR FRACTURES**

One site participating in the hip fracture project had very advanced solutions in place for dealing with older hip fracture patients. Their range of extensive solutions included, among other things, the routine application to hip fracture patients of an intravenous block to manage their pain (a ‘fascia iliaca block’). It was reported that once, when a patient arrived for surgery and the block was noted to be absent, an incident report was filed to report the missing block. This site had also put in place a way of monitoring the length of time patients were fasting, to avoid situations where a surgery cancellation might lead to excessive continuous fasting. In this particular case, this site’s involvement with the ACI hip fracture project led to its excellent practices being shared with other sites with poorer hip fracture processes and outcomes.

When initiating a project like the hip fracture project, ACI staff encounter a considerable variety of site-specific practices. Some sites were quite advanced with respect to some, or even most, standards. Some sites developed their own approaches to fixing hip fracture surgery problems, adopting sophisticated solutions and at times operating well beyond the scope of the hip fracture standards (Vignette 3.3).

There were also sites with few, if any, strategies for ensuring adequate hip fracture care. This might be due to staffing constraints preventing such sites (generally rural and remote) from providing weekend physiotherapy, on-time surgical care or appropriate pain management. Such sites rarely found themselves neatly aligned in the project starting blocks. On the contrary, health services were more likely to have to grapple with all sorts of site-specific challenges, tensions and dilemmas before they could realise the proposed model of care, and raise their practice to meet the required standards. Taking these local challenges, tensions and dilemmas seriously was necessary for making local progress in the more general domains of hip fracture care.

**Recommendation**

That a tool and method be created allowing an in-depth site assessment to take place before initiatives commence, enabling site and ACI staff to identify local challenges and opportunities.
Variable staff experience

ACI project staff encountered considerable variety in the level of practice improvement experience among front-line clinicians and health service staff involved in the project. Project staff varied in their project management and implementation capability, and front-line staff varied in their ability and readiness to change.

Site project staff were not always able to attend training despite efforts on the part of ACI project staff to extend opportunities to participating services. Some staff felt under-qualified to deal with the various technical, clinical, relational and managerial dimensions of the project. Some interviewees were concerned that the project did not reach its full potential because of their lack of project experience. On the other hand, the steep learning curve experienced while involved in the project meant that staff were subsequently well placed to participate in future projects. Indeed, feedback from some interviewees included that they now knew to allow projects, such as the hip fracture project, more time and to appoint part-time (and hence longer term) staff rather than full-time staff to make funds last longer.

Other site project staff were trained and experienced in practice improvement methods and clinical redesign. Some brought with them their experience with the Essentials of Care framework, which helped them tackle, in addition to the technical and clinical dimensions of hip fracture care improvement, the social and interpersonal challenges of convening a multidisciplinary team and ensuring continuity of care across specialty and ward boundaries. One feedback comment was that the project lent itself very well to horizontal communication and peer mentoring, and that more such cross-site communication and peer mentoring would be beneficial. That said, the US Institute for Health Improvement practice improvement software acquired especially for this purpose did not generate the levels of interest and use one might expect, given that feedback.

Front-line staff not involved in the project also varied in their readiness for change. As noted, some sites had already moved towards very sophisticated approaches to hip fracture care, driven by local front-line champions. Other sites were less progressive, with staff feeling less qualified and less well prepared. This variability too imposed additional demands on ACI project staff, who had to accommodate variations in implementation expertise, stakeholder engagement experience, project management and data gathering and analysis.

Some interviewees commented that site-readiness and staff-preparedness workshops would have been useful for both site staff and ACI project staff, in addition to a simple assessment of clinical-technical dimensions of care. Such site-specific workshops could identify some of the critical enablers and barriers ahead of the project, potentially enhancing both site readiness and staff preparedness.

Recommendation

- That preparedness tools and methods for site project staff account for staff experience with systems change projects, specifically data gathering and analysis, stakeholder engagement, solution design, solution assessment and solution implementation, such that these are known when initiatives commence
- That ACI provide targeted pre-project training to site and project staff with lower levels of readiness and project experience.

Some interviewees commented that site-readiness and staff-preparedness workshops would have been useful for both site staff and ACI project staff, in addition to a simple assessment of clinical-technical dimensions of care. Such site-specific workshops could identify some of the critical enablers and barriers ahead of the project, potentially enhancing both site readiness and staff preparedness.

Recommendation

That ACI develop, and make available to participating sites, an overview map of, and flow chart for, the use of its project implementation resources and evaluation capability.
Acknowledging that targeted 'surgery workshops' were held for site staff as part of the project, we regard a readiness and expertise assessment workshop and pre-project training as potentially putting site project staff in a better position with regard to project timelines and other requirements. Such workshop and training would also strengthen staff's stakeholder engagement role, giving them greater knowledge about the full scope of resources and activities that may come into play with ACI initiatives, and of the enablers and barriers that potentially play a role in the project’s implementation. Some interviewees commented that the full scope of an ACI initiative only became apparent to them in piecemeal fashion. This piecemeal process made less effective the ways in which site project staff communicated about, and sought support for, the ACI initiative with their managers and sponsors.

Readiness assessments might also take into account the number and kinds of similar and simultaneous initiatives being undertaken at a site. Interviewees often mentioned the CEC’s sepsis and falls programs. Despite the obvious opportunities provided by links between initiatives, simultaneous initiatives were sometimes seen as possibly slowing, diluting or marginalising the ACI project. However, some interviewees clearly saw the potential for such initiatives to cross-fertilise and strengthen one another.

**Maintaining project progress amid complexity**

The above-mentioned complexities and site-specific variations would appear to render project progress challenging. Interviewees commented however on the fact that ACI staff commitment and persistence kept project uncertainties and complexities manageable. While ACI’s full scope of functions may be hard to comprehend at first for outsiders, interviewee feedback underscores the great value of ACI helping health service staff maintain momentum on various fronts in the face of uncertainty and complexity.

**Conclusion**

The study identified the following overarching issues:

- Systems transformation initiatives are introduced into a variety of complex contexts: services vary in receptiveness, and staff vary in their readiness to implement change and improve their practice.
- Projects, such as the hip fracture project, are initiated under circumstances that cannot be fully controlled, designed and known: projects are susceptible to unexpected conditions, unpredictable influences and unintended consequences—in both positive and negative ways.
- An agile project approach by ACI staff is central: this is evident in their dynamic engagement with challenges and opportunities and translates into a deeply collaborative involvement with their sites, service project staff and front-line staff.
Background

The Care of Confused Hospitalised Older Persons (CHOPs) program was funded by a National Health and Medical Research Council (NHMRC) Partnership Centre dealing with cognitive and associated functional decline in the elderly. Funding included resources for work to be undertaken by ACI staff on the implementation of the CHOPs key principles across New South Wales health services. In this regard the project was unusual: ACI was funded, rather than having to provide funding itself. The CHOPs key principles are shown in Figure 4.1.

Figure 4.1: CHOPs key principles

- **Principle 1:** Cognitive screening
- **Principle 2:** Delirium risk identification and prevention strategies
- **Principle 3:** Assessment of older people with confusion
- **Principle 4:** Management of older people with confusion
- **Principle 5:** Communication processes to support person centred care
- **Principle 6:** Staff education on caring for older people with confusion
- **Principle 7:** Supportive care environments for older people with confusion

CHOPs aimed to ensure that clinicians identify, treat and provide appropriate care for older people presenting to their hospitals with confusion. Research suggests that inadequate prevention of, and substandard treatment for, delirium, and inappropriate care of people with delirium and dementia, may lead to avoidable functional decline, increased morbidity, mortality and adverse events. Poor care of confused older patients is further associated with prolonged hospitalisation and a higher risk of admission to, and increased lengths of stay in, residential care. Staff who lack training, confidence and support in managing confused older patients, and who deal with patients who are agitated and aggressive, may find their work more stressful than otherwise, resulting in increased staff burnout and attrition.
The CHOPs project targeted a range of activities relating to patient care safety to enhance outcomes for confused hospitalised older persons. Priority areas included:

- cognitive assessment and risk of delirium identification of older patients
- appropriate management of older patients’ confusion
- limiting the use of medications and physical restraints to manage confusion
- effective communication to support older patients
- education of staff about these principles
- the creation of supportive care environments for people with confusion.

**Major issues**

We first outline the major issues that arose in the feedback received from ACI staff. We next address issues that arose for health service staff.

**ACI staff feedback**

**BALANCING PLANNING AND FLEXIBILITY**

One of the most challenging aspects of the CHOPs project was sticking to its timetable and planning. Where original plans measured most components of the project in terms of weeks, some components took several months. One major reason (but by no means the only one) for this time blow-out was the time it took to obtain overall ethics approval (Human Resource Ethics Committee) and site-specific authorisation (SSA). The latter in particular posed a major challenge for project planning and project continuity.

One ACI-based interviewee noted that the delays caused by the need to obtain SSA approval for individual sites highlighted the incongruity of sites expressing a willingness to be involved in the project and then requiring a quite cumbersome site-specific authorisation. The extra effort involved in obtaining ethics approval and site-specific authorisation demanded a high level of resilience from ACI staff. CHOPs meetings were occupied with frequent discussions about how to juggle project progress as projected in the original plans and the obligation to obtain appropriate approvals.

**PROJECT COMPLEXITY**

In many ways, CHOPs was a complex project. As the previous section showed, the orthogeriatric hip fracture model of care comprised specific and quite well defined interventions (such as applying the fascia iliaca block, conducting pre-operative assessment (including a urinary catheter), ensuring minimal fasting, engaging the patient in post-operative breathing, providing nutritional support and assisting with early mobilisation). While in many respects the care of confused older patients is facilitated by quite simple interventions (for example, environmental adjustments ensuring appropriate lighting, signage and wall colours), such care nevertheless also remains quite challenging as it relies on behavioural interventions on the part of staff.

While a good proportion of CHOPs’ key principles centre on risk monitoring and risk avoidance, the rising number of older people receiving surgical treatments in care means that cognitive impairment poses a significant and increasingly frequent dilemma for front-line staff across the whole health service. To manage patients with cognitive impairment, staff are expected to practise behavioural interventions centring on reorientation and reassurance strategies, such as relaxation exercises, assistance with meals and careful communication. In addition, such care requires familiarity with social strategies, such as allowing visitors and ensuring care is provided by

---

**Recommendation**

That project plans take into account the need for potentially lengthy ethics approval and site-specific authorisation processes.
familiar staff through rostering adjustments. The full variety of interventions that staff are to put into play as part of delirium management is shown in Figure 4.2 below, taken from clinical practice guidelines for the management of delirium in older people (reproduced in the ACI’s Key principles for the care of confused hospitalised older persons).

The delirium literature includes many papers on diagnosis, prevention and clinical treatment, and much discussion of the problems associated with the use of psychotropic drugs and physical restraints. Explicit behavioural guidelines, setting out what clinicians are to know and do when managing delirium in situ, such as shown in Figure 4.2, have been published only quite recently.

Figure 4.2: Management of the older person with confusion (from: ACI’s Key principles for the care of confused hospitalised older persons)

The challenges associated with the in situ management of delirium were evident from feedback provided by staff attending CHOPs focus groups. Participants commented on the difficulties involved with managing patients’ aggression. Some clinicians expressed reluctance about caring for delirious patients, and one even expressed a deep fear.

The challenge inherent in improving care for confused older patients is clear. Consider advice provided by the Australian Commission on Safety and Quality in Health Care in their 2014 document, A better way to care, for clinicians to establish a connection with the patients in question. A recent editorial in the Medical Journal of Australia expresses this new expectation as follows: ‘A Better Way to Care tells us that we must not dismiss these patients as just old, not coping or “pleasantly confused”, a description that has been used in hospital notes’. Advising that clinicians caring for delirious older patients must be prepared to devote extra time to connecting with their patients, A better way to care prescribes better relationships between clinicians and patients such that delirium may be mitigated, perhaps prevented, and most certainly more appropriately managed in situ.
As presented in Figure 4.2, the front-line clinician is expected to have at their command, and is advised to apply, the following relational strategies. They should:

- not make assumptions about a patient’s capacity
- assess the patient’s decision-making ability, but not the specific decisions they make
- apply the presumption of capacity
- be aware that the patient’s capacity may fluctuate
- apply ‘substitute decision-making’ (that is, control over the patient) only as a last resort.

Clearly, these skills require high levels of communication capacity on the part of the clinician, plus patience and time.29

Figure 4.3: Reproduced from Australian Commission on Safety and Quality in Health Care. (2014). A better way to care: safe and high-quality care for patients with cognitive impairment (dementia and delirium) in hospital. Sydney: Australian Commission on Safety and Quality in Health Care.

BE ALERT TO DELIRIUM AND THE RISK OF HARM FOR PATIENTS WITH COGNITIVE IMPAIRMENT

Don’t make assumptions that a person lacks capacity because of their age, appearance, disability or behaviour: A person’s capacity should be assessed on their decision-making abilities.

Assess a person’s decision-making ability - not the decision they make: A person cannot be assessed as lacking capacity merely because a decision may appear to others as being unwise, reckless or wrong. However, if a person appears to be making a decision against their own interest, careful consideration to their capacity should be given.

Capacity is decision specific: Apply the presumption of capacity to every decision. If a person can make some but not all decisions, then they have a right to make as many decisions as possible.

Capacity is fluid: A person’s capacity can fluctuate over time or in different situations, so whenever there is doubt about a person’s capacity, their capacity should be assessed for each decision.

Respect a person’s privacy: In most cases, individuals must give their prior consent to personal information being collected about them or provided to others. Personal information should only be used for purposes relevant to the capacity assessment.

Substitute decision-making is a last resort: Before lack of capacity is determined, everything possible should be done to support individuals to make their own decisions. When a person is assessed as not having capacity, follow the guardianship legislation in your jurisdiction to consult their substitute decision-maker.

Carrying out environmental interventions (such as making sure that spaces are quiet and not overly lit, and that objects are clearly visible) and social interventions (amending visiting hours for families and rostering on familiar staff) may be relatively straightforward. Putting in place behavioural interventions (such as outlined in Figure 4.2) is considerably more demanding. Behavioural interventions are particularly demanding in environments where the clinical focus is on meeting emergency care targets or maintaining surgical flow. These considerations are offered here in anticipation of some of the consumer and staff focus group feedback that will be addressed below, and to contextualise the next sections on the project’s data gathering and diagnostic analysis.

Recommendation

That ACI analyse proposed initiatives in terms of their focus and purpose (adherence? co-design? learning?), depth of intended impact (environmental adjustments? process redesign? behavioural change?), resourcing (staffing, money, time), and projected sustainability, in order to arrive at an assessment of their (potential) complexity.
DATA GATHERING—SCOPE AND FOCUS

Overall, ACI’s contribution to the CHOPs project included:

- structured implementation project planning, communication tools and supporting resources
- expertise, guidance and analysis of progress for the project team
- facilitation of networking and knowledge sharing at a local and a state level
- facilitation of access to clinical experts for specific guidance and education
- support during the implementation phases of the project; with regular contact including site visits, teleconferencing and videoconferencing
- guidance relating to data collection requirements; including providing measures and clarifying data entry points to assist teams in reviewing their progress
- acknowledgment of team achievements at a local and state level.

Medical records were audited to record the prevalence of cognitive screening, the use of psychotropic medications and any diagnoses of delirium, among other matters. Data also emerged from the ‘patient experience trackers’ distributed to the participating sites, and from focus groups conducted by the Patient Experience and Consumer Engagement (PEACE) Team. With this wide range of data sources, sites could be audited against each of the ACI’s Key principles for the care of confused hospitalised older persons.27

This audit produced important insights into different sites’ approaches to:

- levels of cognitive screening (Principle 1)
- delirium risk identification and prevention strategies (Principle 2)
- consistency in assessing older people with confusion (Principle 3)
- management of older people with confusion (Principle 4)
- communication processes that support person-centred care (Principle 5)
- staff education on caring for older people with confusion (Principle 6)
- supportive care environments for older people with confusion (Principle 7).

Medical record analyses provided much information about sites’ approach to delirium, particularly with regard to their cognitive screening rates, risk assessment results and delirium assessment practices (very low in some cases and reasonably high in others). The record audits also highlighted some of the challenges associated with how sites manage confused patients particularly with regard to levels of psychotropic prescription.

Some participating sites were very active in providing staff education on caring for older people with confusion, and there were several examples of how sites changed ward environments to bring them in line with design standards for dementia and delirium spaces. Perhaps not surprisingly, the most challenging, and at the same time elusive, facet of the project was ascertaining and addressing how confused patients were cared for in situ. The question of how to care for confused patients was quite prominent in the staff focus groups. Staff mentioned feeling uncertain about what to do with ‘patients hanging off the picture rails’, and being ‘fearful about having to deal with confused patients again’. These comments highlight the intensity of challenges faced by staff and the urgency of finding solutions.

In light of the sophisticated behavioural expectations set out in documents such as A better way to care, it is understandable that the program’s data analytical and diagnostic reach remained sensitive to what was achievable. The clinician behaviours needed for the management of cognitively impaired older patients, as set out in the Key Principles and A better way to care, require targeted training and awareness raising — some of which may fall outside CHOPs’ remit, given its timing and resourcing.
Awareness was raised through video interviews portraying some of the more vexing issues that arose in the focus groups. The extent to which these solutions helped staff realise and meet the new standards is not yet clear.

**Recommendation**

That ACI staff articulate, and keep updating, goals about what is expected to be achievable (for example, environmental adjustments) and what may be more difficult to achieve (for example, behavioural change).

**DATA GATHERING—COMPLEXITIES**

CHOPs started out with quite ambitious data-gathering goals, which had to be renegotiated to maintain progress as the demands of ethics and site-specific authorisation applications caused delays, and local health centres awaited their turn to join the project. The pragmatic goal of keeping the project moving conflicted with the logistics of formal research and expectations of consistency and comparability. Delays necessitated recalibration of expectations and rethinking of personal investments in approaches and tactics (see Vignette 4.1).

**VIGNETTE 4.1: HOW DO WE NEGOTIATE PROJECT PRIORITIES?**

The project implementation officer (PIO) saw a difficulty with how the diagnostic information was used by the project team and the participating sites. The move from ‘this is the problem’ to ‘we need more training’ or ‘we need policy’ was deemed too quick. The PIO decided to go to one site and help them analyse their diagnostic data and convert their diagnostic information into solutions. The PIO was conscious that ‘solutions’ was used as a catch-all term for anything from awareness raising (project posters and educational initiatives) to environmental adjustments (clocks, different wall colours and clear signage), systems changes (for example, a floating position enabling a ward nurse to keep an eye on patients needing extra attention) and forcing functions (for example, structural changes in how isolation rooms were henceforth to be used). The PIO raised this as a potential issue at a project meeting.

The project team proceeded to question the need to spend more time on the diagnostic findings, on understanding the issues behind the diagnostics, and on seeking to firm up the link between diagnostics and solutions. The project team talked about this potentially incurring more work for the sites. The PIO explained that local sites might not be able to take on all the issues revealed during the diagnostic process and that some kind of solution prioritisation process was inevitably necessary. The project team was conscious, however, that the project was behind schedule already and could not afford itself the luxury of spending more time on linking diagnostics to solutions.

The tension appeared to come down to contrasting allegiances. The project team had allegiance to the participating sites, needing to keep them on board, and supporting their concerns about the unwieldy nature of the project implementation approach, the burden of doing project paperwork, the unrealistic timelines and so forth. The PIO was concerned about assisting site staff to conduct an in-depth diagnostic process and convert important diagnostic findings into solutions, as well as capitalise on ‘low hanging fruit’. The tension was certainly alleviated by how project staff conducted themselves in the meeting—conciliatory, apologetically—but the tension was not tackled at its root. That is, it did not address the problem of how to help sites tackle delirium according to the standards, and the seemingly insurmountable task of achieving environmental adjustments as well as behavioural enhancements (clinicians taking extra time with their patients and deploying highly sophisticated behavioural responses for dealing with patients’ cognitive impairment).

In summary, it was clear that ACI staff were engaged in very complex work. It may therefore be inevitable that, at times, ACI staff find themselves privileging different agendas and entertaining incommensurable concerns. The tensions arising in this way do not warrant being personalised, however, because what staff are doing is inevitably challenging.

---

*a* CHOPs funding comes in part through the NHMRC Partnership Centre on dealing with cognitive and related functional decline in older people.

*b* This issue brings to mind the National Centre for Patient Safety’s RCA (Root Cause Analysis) ‘Hierarchy of Actions’ (http://www.patientsafety.va.gov/docs/TIPS/TIPS_MarApr07.pdf). This hierarchy differentiates RCA recommendations according to their likely impact on practice, and hence their implementation difficulty. Thus, it distinguishes between less invasive solutions (training, policy) and more challenging ones (process redesign and behaviour change).
As the project progressed, the switch from the original data-gathering goals to more pragmatic ones was not smooth. It took stakeholders within the ACI some time to rationalise the complex circumstances in which they found themselves, and justify abandoning original goals. The intervening period was challenging for those still striving to meet the original goals while the general consensus on the question of their achievability had already tacitly begun to shift. This dilemma highlights the importance of staff involved in projects such as CHOPs—those associated with the networks, those working within the implementation team, and those who represent the Health Economics and Evaluation Team (HEET) and the Patient Experience and Consumer Engagement Team—maintaining close communication about how project challenges need to be converted into project adaptations, to obviate misunderstandings.

**Recommendation**

That ACI staff arrange ACI-internal time-outs to discuss progress and changes brought about by complex circumstances, particularly those that affect goals, processes and timelines.

**ALIGNING IMPLEMENTATION AND EVALUATION**

The wide variety between sites at the start of the project raised questions about evaluation. As noted above, this variety of starting points meant that the project’s implementation strategies varied from site to site. The more formal assessments, such as the medical record audits, the staff surveys and focus groups, and the patient experience surveys and consumer focus groups, could be standardised. Less easily standardised was how sites responded to their diagnostic findings (that is, how solutions were formulated from the findings, and what solutions were formulated), who initiated those responses and solutions (project staff? front-line staff?), whether and how these responses keyed in to the issues raised through the audits and during the focus groups, and whether and to what extent the responses realised any or all of the Key Principles, or whether they were pragmatic compromises accommodating local constraints.

A further question was whether it is possible to account for how different projects unfolded, for their agility and flexibility, their ways of dealing with emergent issues, with scheduling problems, with variability in the readiness and capability of site and project staff, and so forth. Making possible a deeper understanding of why projects succeeded or failed, such an account would give an in-depth description of the implementation process, taking into account unanticipated (positive) outcomes and unintended (negative) consequences, as well as potentially unacknowledged contextual (enabling and constraining) conditions and circumstances.

**Recommendation**

That project accounts reflect the complexity of the implementation process, including its unanticipated (positive) outcomes and unintended (less positive) consequences, and its potentially unacknowledged contextual (enabling and constraining) conditions and circumstances.

**Health service staff issues**

**THE COMPLEXITY OF CONTEMPORARY CARE PRACTICE**

How to manage cognitively impaired patients is increasingly queried, since research has shown that adverse consequences are likely to result from the use of psychotropic drugs and physical restraints. The question is also becoming increasingly important because rising numbers of older patients are affected by some kind of cognitive impairment. One interviewee commented that ‘delirium and dementia patients were now omnipresent in the hospital, and no longer confined to the dementia ward’. Others reported colleagues having complained about cognitively impaired patients now ‘being everywhere’.
These views confirmed that the CHOPs project was likely to be relevant for many clinicians dealing with older patients, and that it was becoming difficult to isolate wards and specialties where the delirium and dementia principles should be applied. Thus CHOPs’ key principles are more broadly applicable than was the hip fracture project discussed earlier. Vignette 4.2 depicts the complexity of the problem.

**VIGNETTE 4.2: THE COMPLEXITY OF THE PROBLEM**

One morning, project staff from the second wave of participating hospitals caught up via teleconference with ACI project staff to discuss progress, needs and wants. The meeting started off with the representative from Hospital A talking about the low level awareness among front-line staff of the project. He arranged to attend a ward meeting to inform staff about the project (again), and heard from some of the nurses how they feel about dealing with confused patients. Some said they were afraid to go near patients with difficult illnesses, for issues such as rectal examinations and enemas. He said, ‘staff feel browbeaten’, and, ‘a lot of them have got hit’ by aggressive patients. He reported some nurses as saying, ‘I’m sick of the aggression’ and ‘I leave those patients alone’. A representative from another site spoke up, saying ‘the other day the mother of two clinicians here stepped on a guard’s toe and kicked him in the shins’.

The staff focus groups revealed similar tensions. Clinicians reported trying to work according to the guidelines, and that they were also conscious of the limitations placed on them by being held accountable for the time and resources spent on caring for patients. In effect, staff felt caught between the exigencies of task-structured clinical practices and services’ efficiency targets, and the demands placed on them by patients who need extra attention, care and communication.

For their part, the family carers used the focus groups to express uncertainty about the care that was provided for their loved ones. In their view, the care was confused and unclear; staff did not communicate with them or well enough, and the decision-making around confused patients was not sufficiently respectful and consultative.

The vignette above reveals a disjunction between how carers view the care provided, and how professionals juggle service priorities and patient care needs. The vignette raises the following vexing questions for CHOPs as an implementation initiative: does the project help sites address cognitive impairment in ways that address the challenging issues raised by staff and consumers in the focus groups? Or were the time and resource pressures such that only ‘low hanging fruit’ solutions were feasible? Put differently, what strategic weight was given to the various findings? And what change strategy was attached to the collection of staff and consumer focus group feedback, given the rather urgent nature and emotional intensity of people’s comments and responses? Finally, what logic (other than capitalising on what is locally possible and pragmatically achievable) governs the conversion of diagnostic findings into solution design?

**Recommendation**

That the logic of converting specific diagnostic findings into solutions be articulated and clarified, and that proposed solutions be mapped against a hierarchy of potential solution interventions.

**THE BREADTH AND DEPTH OF THE DATA GATHERING AND DIAGNOSTIC ANALYSIS**

Data gathering and data analysis were generally lauded by health service staff as highly illuminating, and critical to helping them confirm the legitimacy of the project and its aims. There were some questions, however, about the breadth and depth of intelligence gathering. These questions arose from concerns among service staff that the current situation and established routine could not be divorced from service and interpersonal history: past upheavals, rivalries and conflicts, and traumatic experiences—all phenomena that were seen to play an important role in what findings were uncovered, how the data should be interpreted, what solutions could be formulated, and what progress might be achieved towards practice change.
OPPORTUNITIES IDENTIFIED BY HEALTH SERVICE PROJECT STAFF

Some health service project staff had considerable experience in clinical practice improvement. For these project staff, CHOPs represented an opportunity to validate arguments and further agendas into which they had already invested considerable time and energy. Thus, the audits of the medical records, which in some cases revealed insufficient cognitive screening and poor identification of delirium patients, helped project staff draw the attention of colleague clinicians to the problem of clinicians' under-recognising (and inadequately coding) cognitive impairment.

For these project staff, CHOPs played a part in a much broader set of developments. One interviewee described her approach and situation as one of ‘trying to catch waves that come past’. One example given of such a ‘wave’ was the link that became possible between CHOPs and the new *A better way to Care: cognitive impairment in hospitals* document. By linking the project to this new publication, project staff were able to enhance CHOPs' legitimacy and take advantage of the momentum towards focusing on confusion.

Another interviewee described a ‘wave’ in a different direction, where CHOPs was harnessed to an existing project (a wound initiative) that had already generated interest from clinicians. CHOPs was tactically associated with the wound initiative by emphasising that delirious patients may scratch themselves, which makes delirium an important complication to look out for and diagnose in wound-affected patients.

This example is significant because it showed that site project staff could identify parallel initiatives that, if bolted together, might benefit from each other’s relevance to practice and safety. Anticipating the bundling of pillar initiatives, this tactic accomplishes a site-specific bundling of initiatives. Explaining the relevance of the CHOPs project for the already existing wound initiative meant that the legitimacy of both was enhanced, and that people’s attention and improvement energies were preserved.

Recommendation

That site-assessment tools and methods account for historical and recent service upheavals and interpersonal events, as well as clinical-organisational and patient cohort specifics, such that these are known when initiatives commence.

Conclusion

The CHOPs project is a practice-change initiative faced with maximum complexity. This complexity was evident at various levels. First, there was the level of internal ACI relationships and processes. Here, project staff needed to constantly renegotiate differences in interpretations about what was possible, and necessary, to be done with, and for, services. The main internal ACI challenges were preventing the unpredictable dimensions of the project from causing personal tensions, and reconciling people’s different interests and divergent agendas.

Second, there was considerable complexity at the service end of the project. The varying levels of project experience and domain knowledge of service project staff resulted in differing momentum and progress between sites. Some service project staff were experienced project managers with very high levels of domain knowledge, and these staff oversaw exceptional progress and came up with a wide range of ‘solutions’.

Third, there were the dynamics at the front line of care, where relationships between project staff and front-line staff were negotiated and maintained. This is also where the relationships among front-line clinical staff themselves tended to have a significant influence on how front-line staff tackled challenging care situations, and whether less patient-centred approaches were kept in play to minimise the burden posed by cognitively impaired older patients.

---

See Footnote b on how to differentiate solutions according to their relative strength.
Overall, CHOPs provided important impetus to service-level activities that sought to further the care of confused hospitalised older patients. CHOPs legitimated the message of staff paying more attention to older patients and their plight, and to the important difference between delirium and other kinds of cognitive impairment. The ways in which sites realised delirium and dementia care varied according to their levels of experience and interest. As a large-system transformation initiative, CHOPs harbours numerous important lessons. We will return to these more general learnings in Section 6 of this report, Concluding discussion.
Background

This section of the report describes interviewees’ feedback about the quality in acute stroke care (QASC) project. As noted in Section 1 (Overview of the study), site project staff, managers, researchers and front-line clinicians were interviewed. Interview questions were shaped by the last recommendation in the QASC Final Report, namely, to conduct ‘a further exploratory process evaluation of [the Quality in Acute Stroke Care Implementation Project]’ \(^{31}\) (p. 41). This recommendation proposed asking the following questions:

- Why did some sites perform better than others?
- What were the barriers and enablers to implementing each of the FeSS clinical protocols?
- What could be done to support better implementation of treatment practices?
- What did sites actually do locally to implement the FeSS clinical protocols? \(^{31}\) (p. 38)

The quality in acute stroke care project was conducted by researchers at the Australian Catholic University, under the leadership of Professor Sandy Middleton. (In comparison, the hip fracture care project was led by ACI network managers and ACI implementation staff, while the delirium and dementia care project was a shared initiative between ACI and an NHMRC-funded Centre for Research Excellence.)

The QASC project examined the impact of a targeted evidence-based intervention on processes of care. It was carried out over a short time frame of eight months (commencing in May 2013 across all 36 stroke services in New South Wales). The intervention was to apply a practice guideline on treating fever, assessing swallowing and measuring blood glucose (see Figure 5.1 below).

Referred to as ‘fever-sugar-swallow’ or FeSS, this combination of clinical protocols had been tested previously using a cluster randomised controlled trial \(^{32}\):

> The QASC Trial was a cluster randomised controlled trial which showed that a multidisciplinary, evidence based intervention involving supported implementation of clinical protocols to manage fever, hyperglycaemia and swallowing dysfunction following stroke decreased death and dependency by 16% (p=0.002). The implementation strategy used in the original trial changed clinical practice and, as a result, outcomes for patients were significantly improved. \(^{31}\) (p. 33)

The QASC project deployed the same implementation approach as did the original cluster randomised controlled trial:

> The ACI funded a fast paced (14 months), large scale, state-wide evidence translation project using the same implementation strategy from the original QASC cluster randomised controlled trial (multidisciplinary workshop to assess barriers and enablers, reinforcement of teamwork and provision of interactive education and training, reminders in the form of site visits and telephone and email support) to support the delivery of evidence based care across the state. We were particularly mindful about explicitly not adding any additional implementation components to those used in the QASC Trial. This was undertaken to maintain intervention fidelity to the original QASC Trial and to evaluate a pragmatic process to upscale and spread evidence to improve clinical outcomes. \(^{31}\) (p. 33)
The overall timeline for the implementation of the project was eight months. As the Final Report acknowledges, ‘This timeline was tight for clinical champions to effect change locally across three clinical processes’. 31(p. 33)

Results

The QASC project’s clinical outcomes were generally seen as positive (see the Final Report for complete details):

> Overall, there were significant improvements in adherence to all three clinical protocols. When we examine monitoring practices alone, statistically significant and clinically important improvements were found in all three practice areas. While treatment element for all three protocols did not show any statistically significant improvements they do demonstrate important favourable trends. This mirrors results from the original QASC Trial processes evaluation and raises the question of why certain elements of the clinical protocols were more challenging to implement successfully than others. 37(p. 33)

A paper that evaluated the QASC process in order to explain these ‘significant improvements’ states:

> Our process evaluation shows that significantly more patients were managed according to the fever, sugar, and swallow protocols, demonstrating a clear positive influence of our intervention on behaviour change. However, although protocol adherence significantly improved, management of fever, hyperglycemia, and swallowing dysfunction following stroke remained sub-optimal with low absolute rates in both groups. That we also found non-significant differences in treatment practice between groups is of interest. Although there was no improvement in treatment of fever within intervention ASU [Acute Stroke Units] fewer patients developed fever, this in itself is a positive outcome [sic]. We postulate that perhaps fewer patients in the intervention group developed fever because nurses were observing them more closely and providing other measures to control their temperature. We note also that there was no difference between the groups in the proportion of people treated for hyperglycemia. 33 (p. 774)

The exact reasons underpinning the changes in outcomes observed therefore remain unknown. As one interviewee commented:

> At this stage many questions remain unanswered … as the [Drury] paper states, [QASC]’s changed the monitoring practices and the swallowing practices but we still have suboptimal outcomes for administration of medications … nurses themselves have quite good control over the monitoring practices but when it comes to the administration of medications there’s other parties involved. [Interviewer: “Like doctors?”] Exactly. So we’re just wondering if that was one of the reasons.

We return to this issue in more detail below, as it harbours important lessons for how best to implement change in systems. One lesson is that process accounts drawing on a variety of data, and conducted over the duration of a project, are necessary to reduce uncertainty about observed outcomes.
Senior and front-line staff were found to participate fully in implementing the practice change:

*Strengths of our project included 100% participation of all NSW stroke services in the implementation and evaluation process … In addition, provision of individual hospital audit profiles for all 36 hospitals with benchmarked data was a project strength as this allowed sites to examine their individual results and plan for improvements.* 31(p. 38)

The Final Report further suggests that the tight timeline of the ACI-funded study may have limited the project’s overall improvement potential. The above positive conclusions notwithstanding, the Final Report therefore acknowledges that ‘whilst our results demonstrate their success, that this was not achieved for all patients may be a result of this compressed timeline [of eight months].’ 31(p. 33)

**Self-declared limitations**

A number of limitations pertain to how the project was conducted and how results were collected and determined. One was that the difficulty of using independent auditors and obtaining ethics clearance for them meant that the health service audits were self-reported:

*The audits were self-reported, i.e. conducted by clinicians at their own sites and this may have introduced selection bias as well as responder bias. This potential for selection bias was present for both the pre and/or post-implementation data, so unlikely to have resulted in differential bias from pre- to post-implementation.* 31(p. 37)

Another self-declared limitation related to the selection of patients: ‘Pre-implementation patients were selected from computerised hospital databases using ICD-10 codes, and post-implementation patients were identified while still in hospital by the auditors.’ To minimise the impact of the selection process, the report states that ‘we aimed to generate identical inclusion and exclusion criteria for both cohorts in an effort to minimise selection bias’. 31(p. 33)

A third limitation was that three different protocols were implemented at the same time:

*A challenge of the project was the implementation of three different clinical protocols simultaneously. The original QASC Trial showed a benefit in patient outcomes from the combination of all three protocols and for this reason this approach was essential. However, the implementation required support from multiple clinical specialties (speech pathology, nursing, medical staff including stroke team and endocrinology team for the sugar protocol) enhancing the complexity of the implementation process, particularly noting the tight project timeframe.* 31(p. 37)

**Findings**

A process assessment was conducted into the QASC project in October and November 2014, and this was continued again from March until May 2015. The process assessment involved conducting interviews with 30 staff at sites that were involved in QASC and five members of the QASC Project Management Committee. Only two doctors were interviewed. The interviews were semi-structured, and 10 to 40 minutes long. As reported above, the questions used for the interviews were based on questions raised in the QASC report itself.

**Implementation strengths**

Implementation of the practice changes was helped by seven factors.

**FORTUITOUS PROJECT TIMING**

Perhaps the key factor that supported the project’s implementation process was that a number of local health districts were already in the process of writing, or revising, a stroke care pathway that contained the QASC protocols (although the project showed that existing protocols were not necessarily being implemented). Overall, this meant that local health districts did not come to the study ‘cold’, and staff were to some extent aware of expectations in acute stroke care. As one interviewee said, ‘It was all fairly good timing, really, we were implementing new pathways’. Another said, ‘It builds on what we’re already doing. It wasn’t any added work for nursing staff’. 
Any stroke care elements that did require behaviour or practice change were legitimated and supported by being part of a very well designed stroke care pathway (even if it was not necessarily implemented). Project staff confirmed that the FeSS protocols slotted easily into existing practice, saying, ‘It was part of our stroke pathway, it was just about reminding people’, and ‘It was already implemented so we didn’t have to change a single thing’. For others, participation in the original trial meant that they too were up to speed with what was expected: ‘We were in the trial so we put that into practice and we’ve never taken it off’.

**Recommendation**

That ACI projects harness as many existing resources, current initiatives and parallel developments as possible, to capitalise on the congruence between them and new ACI projects, and thereby enhance such projects’ chance of success.

**CLOSE INVOLVEMENT OF LHD STROKE TEAM LEADERS**

A second factor that benefited QASC was the close involvement of local health district stroke leads in designing the research project and selecting the research team. It is at this level that medical involvement was most evident. The project thus benefited from bringing together an existing and very strongly developed collaborative team with a track record in the improvement of acute stroke care. This gave relevant local health districts a head start with regard to the behaviour and practice changes dictated by the QASC protocols, and with regard to achieving compliance with the QASC protocols.

**Recommendation**

That local project staff be encouraged to identify commonalities among service-level initiatives through which to create leverage.

**SIMPLE AND PRACTICAL CHANGES**

A third factor that underpinned the ready adoption of QASC protocols was the project’s focus on simple, practical and achievable changes in practice, which were, in turn, simple to monitor. Front-line clinician interviewees commented that ‘It wasn’t a lot of change for us’. Indeed, the project researchers consider that the simplicity of monitoring the protocols’ implementation may explain the improved outcomes originally reported for the QASC trial.

QASC’s approach to monitoring practice change was made possible by the project’s focus on sticking to protocol. Thus, behaviour change was not subject to lengthy processes of negotiation, explanation, education and interpretation (as was the case with HIPs and CHOPs). This focus on complying with monitoring reduced the risk that changes in practice would not occur, or would only occur in part.

**TARGETED TRAINING AND STRAIGHTFORWARD TASK EXPECTATIONS**

A fourth factor lies in the nature of the training provided and the excellent resources provided, and arrangements made, for health service staff. The project’s emphasis on protocol adherence and scientific evidence bolstered the conviction of project staff that the protocols should be applied in everyday practice. The simplicity of the protocols reduced the need for complex and demanding education, and protocol simplicity was understood to enhance practitioners’ protocol adherence. Confirming this view, interviewees’ statements highlighted the quality of the training provided.

*It [the training] was very organised. They provided us with excellent tools to use. They were very easy to make relevant to our site. I actually think that was exceptional. The workshop we came down for was very organised and very informative and we came away with why we should implement these protocols.*
AUTHORITATIVE SUPPORTING EVIDENCE

A fifth factor was the publication of trial results in *The Lancet*, giving participating sites confidence that positive results had already arisen from a trial. This meant that those local health districts which had not yet discussed or adopted the relevant protocols could appreciate the protocol’s relevance to their local stroke care practices. Being able to present the results as authoritative and globally accepted was also important. Interviewees made many comments such as: ‘I think it was great. To actually have the research done and transformed into practical on-the-ground stuff that we can be doing’.

The evidence base also helped persuade services’ Chief Executives to allocate adequate (or additional) resources to the project: ‘It was an easy sell, because of the results of the trial, particularly reducing length of stay by two days. That was one of the biggest things when I presented to our clinical quality meeting where all our managers go to. That was one of the biggest things that got me the support that I needed on-site … my manager giving me the time to do auditing, asking for updates regularly so that kept me on track. And I got an item on the clinical quality meeting agenda’.

**Recommendation**

That ACI projects rely as much as possible on local (Australian) research to provide evidence in support of project aims.

**SUPPORTIVE IMPLEMENTATION**

A number of project characteristics were considered important in helping participating sites keep on track with tasks: a constantly available contact person; on-site face-to-face meetings; willingness on the part of QASC staff to help service staff with issues and challenges; regular communication and information about the project’s progress across sites; and problem-solving assistance from sites that had participated in the pilot for new sites coming on board.

**SUSTAINABILITY**

The foregoing may help explain why interviewees considered QASC to be sustainable: the simplicity inscribed into the tasks, the ease of monitoring practice change, the head start on the part of many participating sites, and so forth. Thus interviewees commented that ‘I think on the whole we’re still doing it … in general they get the whole lot routinely’; ‘The fever and the sugars, I’d say that’s now pretty much ingrained and sustained’, and ‘I think it’s been sustained. The ongoing issue with the [swallow tool] is the biggest thing, in the ED [emergency department]’.

**Implementation challenges**

The successes of the QASC project notwithstanding, interviewees were conscious also of some challenges and some limitations.

**PROTOCOL MODIFICATION**

The clarity, simplicity and evidence base of the FeSS protocols notwithstanding, service project staff reported that protocol modifications were not unusual, especially for the sugar and swallow protocols. One interviewee commented that ‘We didn’t use the QASC protocol for sugar management’. Interviewees commented on challenges they faced with implementing the sugar protocol in particular, noting there was considerable push-back: ‘QASC did want us to use insulin infusions far more than we did and our endocrine people would not come on board with that’, and ‘The doctors were not really engaged because it was nurse-led pretty much’ (see Vignette 6.1).
Uptake of the fever protocol was less problematic, yet it too required policy change and staff education:

> Temperature was an issue. I had to go to the Director of Pharmacy and put out an email, because according to [LHD name] policy you can only intervene on temperature if it is above 38. So I had to put a clause into the policy … [and] so that required education.

The implementation of the swallow protocol was also not entirely without challenges. At some sites there was, in the words of one interviewee, ‘really good buy-in from the nurses and the speech pathologist who helped us with the education’. At other sites, its implementation was less well received and was considered dependent on having a full-time speech pathologist, or providing ongoing training for nurses, to compensate for staff turnover:

> I spent my whole time training nurses and couldn’t get the ones I needed, the after-hours ones, and the ridiculous turnover of nursing staff … it doesn’t work for us … the investment and risk meant it was much cheaper just to employ a speech pathologist.

DIFFICULTY IN ENGAGING EMERGENCY DEPARTMENTS

A number of interviewees commented on the importance of bringing the emergency department (ED) on board, and the difficulties associated with promoting new models of stroke care in the ED environment: ‘The ED. The figures aren’t as good. So we actually have two different pathways and one starts in ED, and this is an area-wide thing. So the swallow screen component is supposed to be a part of ED too, but that’s where we don’t see it done’. Staff turnover is particularly a challenge in the emergency department: ‘The [low uptake] figures, a lot of that had to do with ED. We change our doctors every three to six months. After we change the doctors, that first month, [it] always takes a while for them to learn the different protocols. It means they have to come across that protocol with a nursing staff member to know what to do … [but] it’s getting better’. A trial implementing the protocols in emergency departments, known as the ‘T3 trial’, is currently being undertaken in emergency departments and may address this issue.

GENERALIST STAFF AND LOW PROTOCOL ADOPTION AT RURAL SITES

Another challenge commented on by interviewees was that of the absence of a specialist stroke team and reliance on generalist medical staff in rural sites: ‘There is no dedicated stroke team. We have a stroke unit. But we don’t have a stroke medical team. The patient will often be treated by someone who is not a specialist. They’ll just treat them how there’ve always treated them’. The adoption of the protocols was seen to be put at risk by generalist staff unaware of the stroke protocols, however, the protocols were seen as a means of ‘flagging’ improved stroke care in rural sites: ‘Our patients are treated by generalist physicians so it just raised the flag for stroke really’.

DOCTOR BUY-IN AND CONTEXT

Limited doctor buy-in at the front-line was mentioned by a number of interviewees, particularly in relation to implementing the sugar protocol. The sugar protocol was viewed by some participants as ‘having less of an evidence base’ than the other two protocols. Another contextual factor affecting implementation of the sugar protocol was that some services did not have the facilities to infuse patients on the stroke ward.
The more recent roll-out of the ‘T3 trial’ across 26 emergency departments in three states has acknowledged the need for a longer lead time to engage doctors and recognise site-specific barriers, such as some departments’ lack of a guideline on sugar infusions. The T3 trial recognises the need to have all relevant clinicians ‘in the same room’, more than once, to acknowledge and reach consensus on their understanding and implementation of the protocols for the trial. In relation to sugar infusions for the T3 trial, for example, some sites may decide not to infuse, but instead negotiate to administer a subcutaneous injection when sugar goes above 10, as per the sugar protocol. The T3 trial will also collect more data on broader contextual factors, such as organisation culture and leadership, and pre-implementation site readiness. As one participant said:

I think you really have to make sure the doctors are aware of it, and it’s not enough to have one senior doctor, even to have all the senior doctors, because it’s not the senior doctors that you call at three in the morning to write an insulin infusion up.

Recommendation

That ACI-funded projects be required to include in-depth process descriptions and implementation accounts that capture and convey the full complexity of practice improvement and systems change, such that challenges and tensions may be understood and addressed.

Conclusion

The QASC project brought together initiatives, people, resources and sites in a way that increased its chances of successful implementation. Several participating sites had already begun to develop and roll out a stroke pathway congenial to the FeSS protocols.

We conclude, first, that the implementation of clinical practice change on a large scale may be assisted by drawing on existing initiatives, plans, resources and motivated people. Ensuring that practice change is woven seamlessly into existing activities renders it particularly feasible for staff in health services. Bringing project staff on board as research co-investigators helps consolidate the collaborative strength of the initiative, and may invest additional momentum into people’s aims and ambitions for local change.

Second, even with the most favourable starting conditions and the simplest of targets, the implementation of change is never assured. Sites may insist on adapting models of care and protocols, or they may face limiting constraints forcing them to adopt different solutions altogether, or even put a change initiative on the backburner. Thus, even initiatives anchored in much preparation, providing excellent support and requiring only modest practice adaptations cannot guarantee large-scale, significant and lasting transformation.

As with the other projects discussed in this report, some of the recurrent challenges arose from: the time and resources needed to bring champions and sponsors on board (especially doctors); the need to negotiate with local sites how the desired changes could be adapted to suit local circumstances, and from the need how the adaptations affected how project outcomes could be assessed.

However, simple, well prepared and narrowly focused change initiatives do not necessarily guarantee more consistent and predictable kinds of practice change. Any change initiative brought to bear on any organisation has to accept that it will have only limited control over prevailing unacknowledged (historical, contextual) conditions and unpredictable (emergent) circumstances. No change initiative can therefore rule out the possibility of unintended consequences.

While the contemporary groundswell towards standardising stroke care must have stood QASC in its favour, the over-determined character of in situ practice means that any change must be negotiated with those who are its target and medium. In this context, it may not be realistic to expect strict adherence to protocol (in the present area of care at least); people will find ways of interpreting and enacting rules to suit themselves, and rules rarely accommodate all the constraints that bear on everyday, in situ practice.
Section 6

Concluding discussion

This section of the present report explores in greater detail the issues raised in the previous three empirical sections, and seeks to offer some generalisations about the implementation of systems change. We first compare the three projects, HIPs, CHOPs and QASC, and then deduce learnings from the projects and their comparison for ACI’s approach to implementing large-system transformations.

Comparing the three initiatives

The hip fracture, delirium and dementia, and acute stroke care projects can be compared on a number of dimensions, including their focus and goals, site readiness and staff preparedness, broader context and overall level of implementation complexity (see Table 6.1).

Table 6.1: Comparing the three initiatives

<table>
<thead>
<tr>
<th></th>
<th>HIPs (hip fracture care)</th>
<th>CHOPS (delirium and dementia care)</th>
<th>QASC (acute stroke care)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus</td>
<td>Standards for orthogeriatric-geriatric, allied health and nursing collaboration</td>
<td>Key principles for preventing and managing delirium in everyday practice</td>
<td>‘Fever-sugar-swallow’ protocols</td>
</tr>
<tr>
<td>Actual goal</td>
<td>Multidisciplinary professionalism ensuring continuity of hip fracture care</td>
<td>Sensitivity to patients’ cognitive impairment to enhance their care experience</td>
<td>Staff adherence</td>
</tr>
<tr>
<td>Variability in site</td>
<td>High</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td></td>
<td>readiness and staff preparedness</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Broader context</td>
<td>✅✅ Moderate favourability (CEC, BHI hip fracture evidence, external support)</td>
<td>✅ Somewhat favourable (dispersed activities and resources)</td>
<td>✅✅✅ Highly favourable (stroke pathway; stroke collaborative)</td>
</tr>
<tr>
<td>Complexity</td>
<td>High</td>
<td>Extreme</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Projects’ broader context refers to whether and to what extent policy, organisational, collaborative or other initiatives added to projects’ momentum. HIPs was assisted by parallel overseas developments, by high level publications emphasising the significance of enhancing hip fracture care, and by Ministry, LHD and ACI support for the project. CHOPs gained only limited momentum from the broader context, drawing on limited and dispersed resources (Victoria had published its delirium care principles in 2006) and only a recent alignment in cognitive decline agendas and funding. QASC was greatly sustained by previous efforts to enhance stroke care, by a strong stroke collaborative, and by excellent stroke care resources.

Overall, we conclude that HIPs is highly complex, CHOPs is extremely complex, and QASC is moderately complex.
This comparison emphasises that projects’ inherent complexity cannot be ignored in the context of large systems transformation. As initiatives seeking large changes in systems, the hip fracture, delirium and dementia, and acute stroke care projects presented very different challenges and opportunities. While systems transformation is unlikely to be straightforward, anticipating individual projects’ dynamics and complexity is critical to understanding why and how some projects progress and others do not; why and how projects fail in some respects and not others, and why and how some implementation approaches are in need of additional flexibility and resources and others not.

Analysing initiatives along the lines of the dimensions in Table 6.1 may help identify potential implementation barriers and opportunities. It may also help ACI staff understanding the complexities they face as projects unfold. Lastly, it may assist in identifying appropriate levels of resources (human, financial) required for a project’s implementation, setting appropriate outcome expectations and adjusting goals.

**Lessons for the implementation of large-system transformation**

The published literature promotes lists of social, organisational and human factors that are seen as preconditions for success in achieving change in large systems. Pettigrew and colleagues identified social-organisational (contextual) features considered critical in changing systems. Numerous studies comment on the importance of site readiness and staff preparedness. One recent study analyses four sites’ responses to a systems change initiative and elaborates on systems transformation in terms of ‘communities of learning’. The degree to which, and ways in which, initiatives allow for low levels of readiness and preparedness to be addressed before commencing are likely to vary, but establishing and addressing site readiness and staff preparedness have been found to positively influence how initiatives unfold and enhance their chance of success.

Some commentators refine and expand our understanding of social-organisational context, while others take a psychological approach to understanding what helps large-system transformation (‘the theoretical domains framework’). Some scholars take current practice as their point of departure, linking the front-line clinicians’ ability to intervene in practice as a precondition for systems change generally, not just for practice improvement.

What the present study adds to what is known about large systems transformation pertains to the focus, approach, agency and depth of the transformation in question. Each of these is briefly addressed.

The focus of the transformation is the ultimate outcome sought from the systems change. Mindful of the distinctions outlined above, we may frame the outcome as higher levels of protocol compliance, greater multidisciplinary collaboration or enhanced levels of staff sensitivity to identifying and dealing with complex care situations. Each of these aims harbours different challenges and complexities.

A parallel concern for large-system transformations are the assumptions embedded in our own approach to implementation. Do we regard implementation as centring on achieving staff compliance with a rule (protocol), do we see it as depending on staff taking the initiative to devise organisational processes, or do we expect implementation to result in more appropriate, more considerate and more ethical behaviour? At the heart of these distinctions is a far simpler one: that between transformations that instruct practitioners in what is required (that is, adoption and adherence) and those that expect practitioners to adapt how they work using the change initiative as springboard for its redesign (that is, adaptation and learning). Most initiatives are likely to encompass a complex mix of change adoption and change adaptation. Being able to anticipate this mix, or at least make it explicit as the project unfolds, may assist project implementation.

A third concern arises from the practical realisation of the implementation, in particular the degree of collaboration and alignment among change agents. Much has been said about the importance of mobilising champions and harnessing the support of sponsors, but less is known about how change agents structure their work and relationships among themselves. Do change agents share a full understanding of the likely complexity of the initiative and do they see eye to eye about how to tackle obstacles and challenges? Are they able to get stakeholders on the same page about project aims and transformation expectations?
Fourth, resource allocation is an important concern insofar as not all initiatives are likely to require the same investment judged by their inherent complexity. Investment needs may not all be apparent at the outset, as findings may reveal unexpected complexities and challenges. Importantly, however, resource allocation is likely to determine the depth of the initiative, and the extent to which goals are met and expectations satisfied.

Conclusion

This study’s guiding key questions were:

What implementation approaches do the initiatives mobilise and how do they differ?
The study revealed that implementation projects may target the alignment of clinician behaviour to predetermined procedures (protocols); that projects may seek professionals to initiate collaborative planning, and that they may set their target as high as deep-seated behavioural change that ensures that clinicians become better able to manage complex patients and treatments.

What aspects of these approaches are deemed successful by ACI staff and people in the participating health services?
Approaches that were deemed successful involved ensuring ongoing and high-quality communication; giving site project staff and front-line clinicians considerable licence with regard to the implementation change in question; making appropriate use of technological resources and managing their shortcomings; and fully acknowledging both the challenges faced and accomplishments made.

What contextual factors impose implementation constraints and provide implementation opportunities?
Site readiness and staff preparedness, as well as historical and site-specific developments and events, played a prominent role in implementation processes and outcomes.

How might these factors be integrated into ACI’s implementation approach more generally?
This report’s recommendations provide guidance for how to ensure that the above factors are integrated into ACI’s implementation approach more generally.

Recommendation

That ACI analyse proposed initiatives in terms of their focus and purpose (adherence? co-design? learning?), depth of impact (environmental adjustments? process redesign? behavioural change?), resourcing (staffing, money, time) and projected sustainability.


