Central Coast Integrated Care Program

Formative Evaluation Report

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Prepared for the Central Coast Local Health District

Centre for Rural & Remote Mental Health

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About the CRRMH

The Centre for Rural and Remote Mental Health (CRRMH) is based in Orange NSW and is a major rural initiative of the University of Newcastle and the NSW Ministry of Health. Our staff are located across rural and remote NSW.

The Centre is committed to improving mental health and wellbeing in rural and remote communities. We focus on the following key areas:

- the promotion of good mental health and the prevention of mental illness;
- developing the mental health system to better meet the needs of people living in rural and remote regions; and
- understanding and responding to rural suicide.

As the Australian Collaborating Centre for the International Foundation for Integrated Care, we promote patient-centred rather than provider-focused care that integrates mental and physical health concerns.

As part of the University of Newcastle, all of our activities are underpinned by research evidence and evaluated to ensure appropriateness and effectiveness.

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List of Abbreviations

ACI	Agency for Clinical Innovation
CCAPI	Central Coast Alternate Pathways Initiative
Central Coast LHD	Central Coast Local Health District
CCMARC	Central Coast Multi-Agency Response Centre
CMO	Community Managed Organisation
DET	Department of Education and Training (sometimes referred to as Education)
FACS	Department of Family and Community Services
FRS	Family Referral Service
FRS in Schools	Family Referral Service in Schools (sometimes referred to as FRS, or FRSIS)
GP	General Practice/Practitioner
HETI	Health Education and Training Institute
HNECC PHN	Hunter New England and Central Coast Primary Health Network
LHD	Local Health District
NWPOC	North Wyong Proof of Concept
PC	Primary Care
PHN	Primary Health Network
SES	Socio-Economic Status
WWICCP	Woy Woy Integrated Care Coordination Pilot

Key findings: CCICP Formative Evaluation

This page summarises the most important findings of the Central Coast Integrated Care Program (CCICP) Formative evaluation.

The CCICP was one of three "Demonstrator" programs funded by NSW Health to implement and assess changes that would address individual and population needs, integrate health and social care services regardless of provider, and enable practical learnings that would improve the quality and future sustainability of services.

The program was implemented in a period of change and turbulence within Central Coast LHD, its partners such as general practice, HNECC PHN, FACS and NGOs, and in the wider health system. The CCICP aimed to achieve system-wide change in difficult circumstances.

The CCICP, informed by strong population health analysis and following the Central Coast LHD *Caring for the Coast Strategy*, addressed key Central Coast priorities – vulnerable young people, vulnerable older people, and those with chronic and complex needs along with the commissioning process and system architecture needed to provide best services for these populations. The focus was strategic and central to the core business of Central Coast LHD and its partners.

At the outset, the transformation of Central Coast LHD services from a fragmented and provider focus to an integrated and person and population focussed approach was seen to be a 10-year task. As authors of the formative evaluation, we have reached the following conclusions which are elaborated on in the following executive summary, main report and technical report.

Key findings

- Based on high quality population health and health system analyses, the CCICP introduced, tested and sometimes (appropriately) stopped some 40 interventions to address the population's health and social needs with an emphasis on early intervention, collaboration with partners, and working towards providing seamless services.
- The context for change was difficult due to fragmented and evolving funding and performance systems, caution about change amongst staff and partners, and the size and complexity of the health and social care system in the Central Coast.
- Valuable progress was made in refocussing care to meet the needs of the patient and family, improving health literacy and self-management, increasing interdisciplinary and collaborative care, building change management capabilities, and developing a strong inter-disciplinary and interagency consensus about working together to meet population and client health needs.
- Learnings which should be of interest in the Central Coast and more widely include working with Education and FACs to support vulnerable young people and their families and outcomes based commissioning of care for older people from CMOs. The program built upon existing partnerships with GPs in shared care.
- Less progress was made in functional integration of data held on incompatible IT systems for technical, bureaucratic and legal reasons. This did not stop improvements in communication and care, but it did not help.

The achievements reported below are not spread comprehensively across all services or all departments or disciplines. Such an achievement would be impossible in a relatively short time.

The authors believe that with determination and consistency of leadership and collaboration, the Central Coast LHD and its partners have built a strong foundation for high quality patient centred and integrated care in the Central Coast.

Executive Summary

Introduction

This summary describes key findings from the formative evaluation of the Central Coast Integrated Care Program (CCICP). CCICP received funding from NSW Health as one of three "Demonstrator Programs" intended to enable interventions and learnings and progress local movement towards patient and population focussed care, through integrated care and service partnerships, meeting local needs and contributing to the quality and sustainability of the NSW health and social care system.

The CCICP interventions aligned closely with the values and priorities in the Caring for the Coast Strategy. The three population groups chosen were: vulnerable youth, vulnerable older people, and those with chronic and complex needs. There were 40 sub-projects described in the technical report. Other summative and economic evaluations are also being conducted.

Key findings

- The context for change was difficult due to the impact of multiple agency funding and performance systems, caution about change amongst staff and partners, and the size and complexity of the health and social care system in the Central Coast. Both the Central Coast LHD and its partners are seeking to achieve transformational change. This implies a shift from addressing individual problems through late-stage responses such as hospitalisation or out-of-home care to population-based prevention and early intervention services which focus on improving the ability of individuals and families to care for themselves and obtain help when they need it.
- Valuable progress was made in refocussing care to meet the needs of the patient and family, improving health literacy and self-management, increasing interdisciplinary and collaborative care, building change management capabilities within the partner organisations, and developing a strong inter-disciplinary and interagency consensus about objectives and working together to meet population and client health and social needs.
- Learnings which will be of interest in the Central Coast and more widely include working with Education and FACs to support vulnerable young people and their families and outcomes based commissioning of care for older people from CMOs. Another project built upon existing partnerships with GPs in antenatal shared care resulted in major improvements in participation and capability.
- The identification of vulnerable young people and their families in partnership with FACs and Education/schools has enormous potential to increase future health and welfare, address cycles of disadvantage and possibly reduce future demand for care. The program has created a working model which can now be delivered in neighbouring communities.
- The Commissioning of services from CMOs for vulnerable older people addressed key objectives of reducing expensive hospital care, promoting good health and providing care close to home. It included mechanisms for risk sharing which were not entirely successful due in part to the severity of the flu season and the restrictions of a fixed cohort. Important developments included increased trust between partners and learnings about the nature of commissioning and the process of calibrating and recalibrating agreements.
- The development of GP shared care built upon existing partnerships between health and GPs increasing participation by practices and increasing the scale of patient focussed and integrated services.
- Each of these successes required considerable effort in building inter-agency and professional relationships and trust. Each agency, whether government, health, public, private and voluntary sectors, has much to lose by being diverted from its core business. Short-term commitments based on project funding priorities put those relationships at risk, thus sustainable paths to effective collaborative work is needed to retain trust and momentum.

- Less progress was made in functional integration of data held on incompatible IT systems for technical, bureaucratic and legal reasons. This did not stop improvements in communication and care, but it did not help.

Progress on Integration

It would be unreasonable to expect full integration of health and social care and transformation of services for the three priority groups within the three-year program timespan. The evidence from the survey and interviews is that informants from different disciplines, services and agencies rated progress differently. This may be due to the particular sub-projects in which they were personally involved, with approximately two-thirds of informants (survey and interview) being aligned to particular sub-streams/projects.

Broadly speaking, our informants concluded that most progress had been made in patient-centred care, clinical, professional and organisation integration and that improvements in systemic and functional integration were harder to identify. This is not surprising since changes in the treatment of vulnerable groups and individuals relate closely to the normative and professional values of staff and do not require executive advocacy or investment in technical systems. This system architecture is needed for functional and systemic integration but should follow and enable rather than determine the shape of services.

The CCICP has also demonstrated that it has the capability to address complex and seemingly intractable health and social care challenges through analysis of problems and systems, innovation, design and testing of new solutions, the management of change within and between agencies and most importantly, developing and sustaining a shared commitment in health and social services to care for the community of the Central Coast. The continuing challenge will be to move from sub-system to whole-of-system change and to build the architecture and data systems to support partners and services build on the foundations achieved.

Reflections on implementation of the CCICP

These are the reflections of the evaluation team on the implementation of the CCICP and its contribution to the future of integrated care on the Central Coast as guided by the findings and themes identified in this formative evaluation.

Innovation and new ways of working in integrated care

- Using the Caring for the Coast strategy to embed principles of integrated care represents an opportunity to clearly articulate the shared vision of integrated care within the Central Coast LHD.
- To realise a broader shared vision, the wider health and care system on the Central Coast needs to come together as an alliance or other partnership to jointly produce, lead and guide this.

Policy and funding context

- The NSW policy and Caring for the Coast strategy provided the mandate for Central Coast to address the fragmentation of the system.
- The CCICP requires a long-term commitment and sustainability before moving to a 'business-as usual' phase.
- The CCICP has needed a high level of agility to adapt to changing policy and financial context.

Organisational readiness

- The previous work on integrated care may make it more difficult for the CCICP to demonstrate measurable gains as anticipated short term wins may already have been realised.
- The building of the new relationship with the Primary Health Network has taken some time and the partnership may be perceived as less equal than was originally envisaged.

Leadership

- There is a critical need for distributed leadership model to create a movement for change and mitigate loss of pace from change of senior leadership.

Workforce

- It is important to recognise professional values, team culture and attend to the human dimensions of change.
- Progress has been made on multidisciplinary care, care coordinators, case management and, to some extent, shared care planning. Further workforce development should address care transitions, single point of entry and involving community and volunteers.

Education and Research

- The CCICP is learning by doing and building research capability around a population health approach.

Relationships

- The CCICP has created a safe space to allow innovation that builds relationships, adapts to and manages risks.

Information and Communication Technologies

- Integrating services at different stages of maturity exposes different approaches to sharing of information.
- The CCICP has been able to link hospital and GP data to create usable risk assessment tools but sharing beyond health partners is more challenging.

Tracking outcomes

- The CCICP should improve shared governance and accountability between primary and secondary healthcare professionals and partners and maintain a focus on outcomes for people.

Capacity Gaps

- Building on previous gains but adapting and consolidating to new circumstances and opportunities can be a source of early wins.

Method

The evaluation method is described in detail in the technical report [1]. In short, it included the analysis of a variety of governance, administrative, project documents and "in house" analyses from population health and others. A framework derived from a multi-country European study named Project Integrate was used as a survey instrument, the basis of key informant interviews and a series of review meetings by the project team. Two international experts advised the evaluation and the project team throughout.

1 Introduction

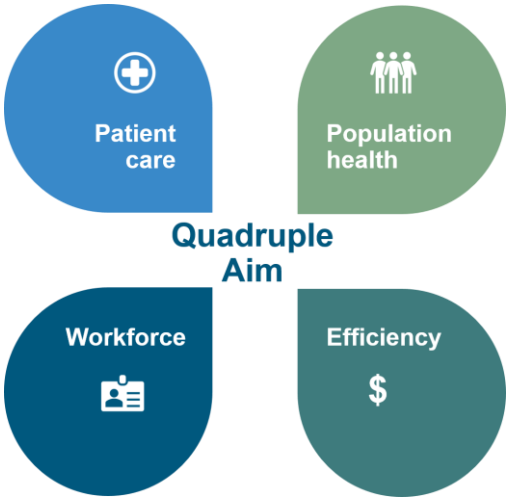
1.1 Integrated care

Integrated care has become a dominant strategy for increasing health system performance [2]. Through the primary care lens it aims to improve access, quality and continuity of treatment, reduce fragmentation of services and improve health outcomes [3, 4]. It has been defined as

> *"a coherent set of methods and models on the funding, administrative, organisational, service delivery and clinical levels designed to create connectivity, alignment and collaboration within and between the cure and care sectors"* [5].

Integrated care has been posited as one important potential strategy for achieving the Triple Aim in optimising health system performance through : improving the experience of care; improving the health of populations; and reducing per capita costs of health care [6, pg.759]. More recently a fourth aim - improving the experience of the health workforce - has been suggested as an addition to create a "Quadruple Aim" (Figure 1). This acknowledges that Triple Aim goals cannot be achieved without, or at the expense of, the workforce [7] and that a motivated and healthy workforce is associated with the delivery of better quality of care to patients.

Figure 1: Quadruple Aim of Healthcare



Integrated care has gained prominence internationally as The WHO Global Framework on Integrated People-Centred Health Services (IPCHS) which describes an ambitious and compelling vision for a future in which ….

> *"All people have equal access to quality health services that are co-produced in a way that meets their life course needs, are coordinated across the continuum of care and are comprehensive, safe, effective, timely, efficient and acceptable; and all carers are motivated, skilled and operate in a supportive environment" [8]*

The Framework on ICPHS calls for a fundamental shift in the way health services are funded, managed and delivered. It supports countries progress towards universal health coverage by shifting away from health systems designed around *diseases* and *health institutions* towards health systems designed for *people*.

Integrated care endeavours are by definition complex, thus we need suitable frameworks that can anchor and aid our understanding of the complex and comprehensive nature of integrated care processes. There are numerous frameworks described in the literature including, but not limited to: the Integrated Care Model for Chronic Conditions [9], which developed from the Chronic Care Model [10, 11]; the Rainbow Model of Integrated Care which has a primary care focus [4, 12]; and the Project INTEGRATE framework, created to facilitate cross-context comparisons and used in this study [13].

The Project INTEGRATE Framework is based on a four-year multi-country study examining best practice for integrated care in Europe [14]. The Framework provides an evidence-based understanding of the key dimensions and items of integrated care that were associated with successful implementation. Moreover, this research determined how all the different Framework dimensions and items were both relevant and important in different country-contexts and across different disease- and condition-specific populations. Thus, the Framework provides a conceptual basis for reflecting on the design and implementation of integrated care programs [13]. These dimensions are outlined in Figure 2, and the sub-elements are outlined in Appendix A - Project Integrate Dimensions & Elements.

Figure 2: Key Dimensions of Integrated Care from the Project INTEGRATE Framework

1.2 The case for integrated care in the Australian health system

The provision of universal healthcare in Australia has achieved many advances in patient care and for providing an excellent public health service, via its public/private system [15]. Australia's great advances in terms of patient care, population health and other areas of healthcare, over the last quarter-century have been noted in international comparisons [16]. Nevertheless, the sustainability of healthcare in Australia is threatened by numerous challenges including the high degree of fragmentation that exists in the delivery of care services. Similar problems have been noted in other healthcare systems across the developed world – particularly in the United Kingdom and United States [16].

However Australia performs much worse than other high-income countries with regard to equity of service provision [16]. The provision of health care in Australia is delivered by multiple public and private providers funded by a mix of federal and state government and private sources with varying goals and responsibilities. This fragmentation and complexity constrains equity and undermines common accountability to foster improvements in outcomes. For example, better outcomes and improved efficiency in state funded hospitals require interventions by GPs and other health service providers in the community. These are mostly federally

funded and do not fall under the jurisdiction of the state health authorities. Moreover, service funding is generally activity-based, using fee-for-service arrangements which reward the quantity of services provided rather than their quality or outcome. As such these funding arrangements tend to overlook population health needs and disincentivises collaboration that focuses on outcomes. For example, efficiencies gained by better primary care may result in reduced hospitalisations which may in turn lead to budget restrictions due to reduced hospital activity. Thus, perverse incentives apply to care integration which may result in unintended penalties for good practice.

These problems highlight several issues with the Australian public healthcare system overall, both at a state level and at a federal level. Specifically these relate to: (1) rising costs; (2) problems with the fragmented structure of the healthcare system; (3) changing demographics and an ageing population leading to greater demand and more complex health and care needs; (4) problems of equity; (5) problems of population health and risks to the health of minorities and other groups; and (6) problems over the efficiency and sustainability of the overall health system and its workforce [15].

1.3 Integrated Care Demonstrators in NSW

The goal of the NSW government is to improve the health of the NSW population in a way that is both sustainable and equitable. This goal is hindered by the significant fragmentation in the healthcare system overall. The subsequent hypothesis is that enabling better integration of healthcare will make the public system more sustainable, more equitable, and better able to pursue the goal of public healthcare in both NSW and Australia overall.

The NSW Government's strategic plan presented in *NSW 2021* [17] outlined two health goals and a related Family and Community Services goal:

- keep people healthy and out of hospital;
- provide world class clinical services with timely access and effective infrastructure; and
- better protect the most vulnerable members of our community and break the cycle of disadvantage.

The NSW State Health Plan supported these goals by advocating a 'whole of government' approach to the integration of health care. The expressed aims of the plan was to enable NSW Health to be: '"person-centred'; "respectful and compassionate"; "integrated and connected'; "providing the right care in the right place at the right time"; "based on local decision making"; "providing a whole of society approach to health promotion and prevention"; "characterised by strong partnerships"; "innovative"; "financially sustainable"; and "fostering a learning organisation" [18].

NSW Health committed $180 million over six years (2014-2019) to an integrated care strategy, a key part of which were three LHD Demonstrator sites in Western NSW, Western Sydney and Central Coast [19]. The Central Coast LHD, and the other Demonstrator sites were funded approximately with $18.5 million over four years (2014-2017; $50.6 million between the three Demonstrator sites).

The NSW Health Demonstrator initiative determined that the selected LHDs would work in partnership with PHNs and other health agencies in the primary care, not-for-profit and private sectors to develop and progress approaches to integrated care to address the coordination and provision of services for patients in full understanding of local factors. Moreover, the three selected Demonstrators would network with each other and with NSW Health's state-wide agencies and "pillars" (including the Ministry of Health, Agency for Clinical Innovation and eHealth NSW) to ensure that lessons learned in one site could be shared and potentially implemented elsewhere. The strategy would adopt a system-wide approach that was informed by local priorities, with the aim to transform local health systems in a way that makes integrated care sustainable into the future.

1.4 The Central Coast Context

The Central Coast LHD served an estimated population of approximately 345,000 in 2017 [20]. The Central Coast of NSW lies just north of Sydney and covers an area of 1681 km^2 [21]. The main health service issues and needs identified for the Central Coast LHD are:

- increasing attendances and admission rates in hospitals that are operating at, or over, capacity;
- increasing burden of chronic disease and obesity; and
- higher proportions of aged, vulnerable youth and people living with chronic and complex conditions[22].

In addition to the political and policy context and impetus for integrated care outlined above the Central Coast was well placed to undertake the Demonstrator site role. Prior to the Demonstrator opportunity, the Central Coast LHD had run several initiatives aimed at better care integration such as the Central Coast GP Collaboration Unit (2004-present run in partnership with the HNECC PHN, and its predecessor organisations), the GP-Hospital Integration Project, and numerous successful partnerships of nurses in General Practice (including diabetes education, shared midwifery, youth health clinics and mental health liaison) [23]. Moreover, the Central Coast LHD has a defined geography and service footprint, with one LHD, one Medicare local (at the inception) which incorporated into the Hunter New England Central Coast Primary Health Network (HNECC PHN), one Aboriginal Health Service (Yerin Aboriginal Health Service Inc.), a well-established GP collaboration unit, and good links with the Department of Family and Community Services (FACS) and the Department of Education (DEC).

Furthermore, a key Central Coast LHD strategy document, *Caring for the Coast,* describes five key priorities highly relevant to the vision of the integration of care and align closely with the quadruple aim of optimising performance in healthcare [24]. They also acknowledge the role of partnerships in meeting health needs into the future. These priorities in *Caring for the Coast* are:

1. Our patients – provide the best practice care to ensure patient safety and satisfaction;
2. Our staff – support and develop our most important resource and provide a safe and rewarding workplace;
3. Our resources – use resources effectively and efficiently;
4. Our community – invest in better health by promoting a healthy lifestyle and available health services; and
5. Our future – develop strong and effective partnerships to meet the community's health needs

1.5 The Central Coast Integrated Care Strategy – Implementation Plan

As part of their bid to be an integrated care Demonstrator, the Central Coast agreed to undertake a number of activities and approaches to better integrate care on the Central Coast. The Central Coast Integrated Care Strategy Implementation Plan 2014 (p.13) suggested the following three core objectives:

1. Developing a **commissioning function** jointly governed between the LHD and the then Central Coast NSW Medicare Local (now HNECC PHN), taking in a whole of system approach to the region's health and social needs, working with stakeholders in prioritising target populations, service design, resource allocation and contracting.
2. **Enabling an integrated care system architecture** that would be person-centred and allow movement towards anticipatory care for people with higher needs (away from system-initiated reactive care).
3. **Changing models of care** for three key **target population groups**:
    - vulnerable young people,
    - vulnerable older people, and
    - people with chronic and complex conditions.

In line with NSW Health's expectations for Demonstrator sites, innovation and learning were adopted as underlying principles. Hence, initiatives were explored and trialled and their ability to augment integrated care outcomes in the Central Coast context was considered. Necessarily, therefore, the CCICP took a flexible implementation approach with lessons learned from initiatives whether or not they were found to make a useful contribution to meeting integrated care goals.

Moreover, this work as a Demonstrator site was conceived in Central Coast LHD as the formative work for a ten-year vision to transform the care system on the Central Coast. This objective is clearly summarised in the Central Coast Integrated Care Strategy Implementation Plan 2014 [22, p.4] and reproduced below (Figure 3).

Figure 3: The Central Coast Integrated Care Strategy Summary 2014

Central Coast Integrated Care Strategy Summary

Program Vision

A ten-year vision to transform the Central Coast system of care so that:

1. Care is person-centred
2. Care is a seamless and comprehensive continuum
3. Care results in an effective outcome that is desired by the person
4. Care is efficient

Expected Benefits

- Improved patient/client/carer satisfaction
- Improved access to care and health outcomes for the Central Coast population
- Reduction in rate of avoidable hospital admissions
- Reduction in rate of Emergency Department presentations
- Improved use of resources
- A stronger, more resilient health system to delivery sustainable and effective care for the Central Coast

Central Coast's Integrated Care Strategy

- A 'whole-of-system' commissioning function to stimulate change across the region's health and social services, and public and private sectors
- An overarching integrated care system architecture to provide the building blocks for the right care, at the right time, in the right place
- Delivering innovative models of care for three key target population groups (Phase 1 – 2014 to 2017):
  - people with complex and chronic conditions
  - vulnerable older people ('aged care')
  - vulnerable young people

Key Program Actions

- Establish 'whole-of-system' commissioning function jointly governed by Central Coast Local Health District and Central Coast NSW Medicare Local
- Proactive and prospective risk stratification
- Streamlined patient intakes
- Standardised social and clinical assessment
- Refined eligibility criteria to avoid gaps in service coverage
- Clear referral pathways to specialised assessment services, clinical services, and social services,
- Defined roles and responsibilities for patient care across the District's services
- Early access to specialist advice for general practice and community providers
- Pooled resources across programs within the District's community services to improve efficiency and effectiveness
- Defined escalation and response protocols for patients being cared for in the community
- Develop and trial new innovative models of care for target populations

Highlights and Innovation

- Building on a longstanding history of collaboration across health and social services, public and private sectors
- Engaging clinicians, service providers & consumers in the development of models of care and services.
- Commissioning which facilitates service change, deeply engaged change management alongside key tools such as contestability
- Established sector interfaces for aged care and vulnerable youth with strong engagement of general practice
- A focus on shifting the region's health and social services towards more anticipatory care for higher need people (from reactive to system-initiated care) and person-centred models of care
- Strengthening the role of general practice as a person's 'health care home' supported by locality based integrated care teams and multidisciplinary ways of working
- Strengthening shared care planning across providers and sectors
- Fostering structured and planned care in primary and community settings
- New funding models to reduce avoidable hospitalisations and Emergency Department attendances

2 Methods – scope, purpose and approach

This formative evaluation of the Central Coast Integrated Care Program (CCICP) was commissioned by the Central Coast LHD via a competitive tender process. A formative evaluation is "a rigorous assessment process designed to identify potential and actual influences on the progress and effectiveness of implementation efforts" [25, pg.S1]. Thus, the aims of this evaluation were to:

- provide a detailed assessment of the implementation of the CCICP in the context of Central Coast strategies and priorities,
- to identify successes and problems, and
- to make short and medium term recommendations regarding how the program interventions can be adapted or improved to better meet the CCICP aims.

The outcomes of the CCICP activities are being assessed by a number of other evaluations.

This evaluation applied co-design principles with dialogue between CCICP partners and researchers throughout the process. This approach sought to achieve a shared understanding of the dynamic context of the program, and the barriers and enablers for the various interventions.

Members of the research team facilitated two initial workshops in February 2017 with key staff from the CCICP to explore data availability and accessibility and to co-design a pragmatic and useful approach to the evaluation. The agreed evaluation methodology was drawn from the case study approach used in the EU Project INTEGRATE Framework [14] including the use of this study's validated international framework of integrated care effectiveness (see Introduction and Figure 2 above). The mapping of the activities of the CCICP to the broadly conceived dimensions of integrated care in Project INTEGRATE [13], enabled a self-assessment by members of the CCICP as to the progress of CCICP activities in comparison to international benchmarks. These were a helpful framework as they account a broad conception of integrated care, based upon analysis of successful integrated care initiatives internationally (see Section 1.1), allowing for the identification of strengths, weaknesses and gaps.

Research questions and a detailed evaluation design are outlined in the supporting technical papers [1]. Briefly we asked questions pertaining to the Central Coast context, the objectives of the CCCICP, the target populations, key components, barriers and enablers to the implementation. Data was drawn from a review of CCICP documents, a survey (based on the Project INTEGRATE Framework) of a broad group of key stakeholders and in-depth semi-structured interviews with a more focused subset of key stakeholders. In August 2017, a workshop with the core CCICP team was held to review and reflect on evaluation outcomes to that date, including interim survey results and enabled a situational analysis of CCICP progress.

This report outlines key activities undertaken by the CCICP team, key stakeholder perceptions of progress towards integrated care to date and a mapping of the CCICP activities against the Project INTEGRATE Framework (see Section 1.1, Figure 2).

3 Overview of the CCICP intervention

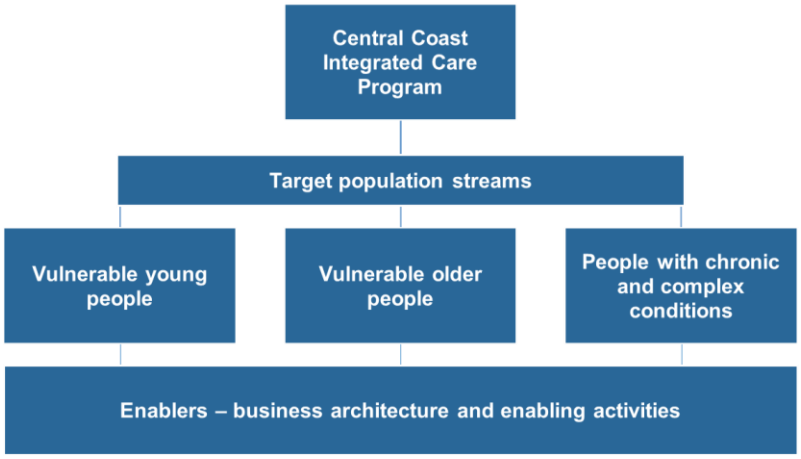
The CCICP is a complex, multifaceted intervention addressing three population streams with more than 40 initiatives. The key activities undertaken by the CCICP so far are examined below.

3.1 CCICP framework

The CCICP Demonstrator project was framed as the beginning of a ten-year vision to transform the system of care on the Central Coast. The Strategic plan summary is reproduced above in Figure 3 and described Section 1.5. Key to working towards the objectives of the CCICP (Section 1.5) and to meeting those of the NSW Health Integrated Care Strategy (Section 1.3) was the trialling and testing of new ways of working. The NSW Health Integrated Care Strategy recognised that with innovative ways of working would not always achieve intended outcomes, but that all work would provide lessons and insights that should be drawn from, enabling a 'learning organisation' via engagement, collaboration, feedback and knowledge transfer [19]. Thus setting up an expectation of CCICP to employ a flexible approach to achieving the objectives, testing and piloting change, learning from both what does and doesn't work in integrated care on the Central Coast.

Practical implementation moved some way from the original plan, though original principles and strategies such as commissioning, partnership, anticipatory care for higher needs people and person-centred models have continued to inform the design of interventions. In implementing the program, the target population groups have acted as 'streams' within which a range of approaches and strategies have been tested. Business architecture and enabling activities (Enablers) have supported the overall process of integration (see Figure 4).

Figure 4: Central Coast Integrated Care Program Overview



The CCICP team was assembled to work in collaboration with key partners in and outside the Central Coast LHD including HNECC PHN, the GP Collaboration Unit, FACS, NSW Ambulance, ACI, DEC, the Family Referral Service (run by the Benevolent Society). A governance structure was established which included key stakeholders to guide and oversee the program.

The reporting and governance arrangements for CCICP includes a monthly governance meeting, with membership including: the Chief Executives of both the Central Coast LHD and the HNECC PHN, the district Director of FACS, several senior staff related to the CCICP and a GP representative. Regular governance reports are tabled at these meetings track CCICP milestones, overall program progress. Projects were subject to their own tracking reports and the CCICP also reported on mandatory measures to NSW Health, with 12 predetermined measures and 12 negotiated measures.

3.2 Target population streams

The three CCICP target population streams are: *Vulnerable young people*; *Vulnerable older people*; and *People with complex and chronic conditions*. A population health approach with needs assessment underpinned the value of targeting these groups and the trial sites/areas chosen (see *Population Health* Section 3.3). In implementing the CCICP, each of these target population streams have tested a range of approaches and strategies.

The activities undertaken in each of the population groups by the CCICP are described below.

Vulnerable young people

A detailed diagnostic assessment of the population of children and young people on the Central Coast was undertaken to inform the case for building a risk stratification tool to identify the vulnerable youth cohort. Considerable challenges were faced in the collating data from multiple partners into a person-history dataset, thus this approach was not further developed. It was decided that the narrow focus on the relatively few young people who were attending hospital was not likely to yield as high a benefit as going upstream into the early intervention space, seeking to identify vulnerable youth via other means and connecting them to services earlier, with a particular focus on connecting to general practice and enabling referrals to flow on from that nexus.

Vulnerable young people were identified in cooperation with partner agencies in schools (Family Referral Service in Schools), child protection (Central Coast Multi-Agency Response Centre, CCMARC) and out of home care (Out of Home Care Health Access, OHCA). The key partner agencies included the HNECC PHN, Education and FACS. The families as well as the children and young people were understood to be part of the target population. The target ages for the vulnerable youth and children stream were understood to have expanded. Initially aimed at youth aged 14 to 24 years, as the stream developed, the lower age limit had dropped to include primary school aged children and younger, and those over school age have not been targeted.

Notably, work with FACS in the OHCA was affected by the Their Futures Matter review led by Mr David Tune AO PSM [26]. Announced in November 2015, this review led to the NSW Government committing to the recommended reforms [27], and thus a change process within FACS, with a restructure in September 2016. The second objective of the OHCA, which was to *provide a better, integrated approach to health assessment and treatment of young people in this region*, was dependent on FACS, and has yet to be realised.

For the Family Referral Service in Schools, early outcomes from the first four terms of work had approximately 70 families supported, with over 50% of referrals for educational disengagement, all of whom improved in engagement measures. Moreover, 94% of families maintained engagement with services. Secondary gains noted for this project have included the Department of Education commissioning these services at the school level, the introduction of school holiday programs for at risk children (thus providing support at vulnerable times), collaboration with NGOs and business, a pilot of a low intensity mental health service model and increased resources sharing amongst schools. Formal multiagency partnerships have been established with other learning communities which will enable bringing this project to scale and moving to 'business as usual' on the Central Coast [more details can be found in 28, including a video presentation link.].

Vulnerable older people

The approach for the stream for vulnerable older people focused on testing the use of an outcomes based commissioning approach, see Figure 5.

The process developing and testing the North Wyong Proof of Concept (NWPOC) on care coordination included these elements:

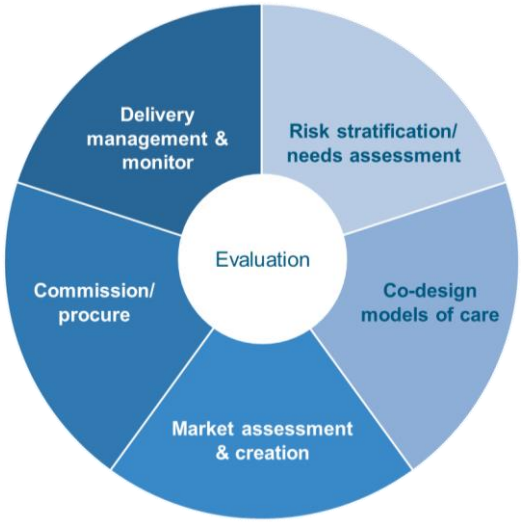
- **Risk stratification/population needs assessment**: a diagnostic assessment of vulnerable older persons was undertaken and substantial testing and modelling around which cohort characteristics could be best used for risk stratification. The key risk factors proposed to target care coordination were hospital

admission or GP consultations in the last 12 months, age and multiple chronic conditions [29]. More details can be found in *Population Health* (Section 3.3).

- **Co-design of models of care**: through extensive consultation with 60 community stakeholders, three workshops, two GP panels and numerous interviews care coordination was prioritised as the most effective option for improving health outcomes for vulnerable older people on the Central Coast,.
- **Market assessment and creation**: to reach a market beyond the LHD, numerous hurdles were overcome. Initial hopes to enable the HNECC PHN to commission the care coordination services were blocked by NSW Health. Significant energy was spent working with LHD contract experts to **overcome contractual difficulties** in pioneering a **novel type of outcomes based commissioning** that was quite distinct from the traditional procurement approach, which funds on activities performed not outcomes achieved. It required considerable negotiation and tenacity to build a tender and contract structure that was likely to deliver the desired outcomes and still fit within the LHD procurement processes. Many cultural issues were addressed and much resistance to change was overcome. **Privacy and ethical issues** were addressed in a discussion paper [30] for this project which has been a catalyst for safe data sharing in CCICP, both within the LHD and with primary care (e.g. GPs).

  After two industry briefings, the response to an Expression of Interest (EOI) was substantial, with 20 submissions, ranging from GPs, NGOs and private providers, indicating a good market appetite to undertake this work on the Central Coast.
- **Commissioning/procurement**: Nine of the interested organisations were invited to tender. A further two industry briefings were held and seven responses were tendered. Notably positive feedback from all responders was received regarding the engagement approach to providers.
- **Delivery management and monitoring**: Two organisations were selected to enrol 440 eligible older persons into the care coordination trials. Contracts were finalised in December 2016 and the trial began in early 2017. Notably in the course of the trial this year, possibly because of a bad flu season, both providers acknowledged that they were unlikely to reach their targets. The contract conditions were renegotiated such that the Central Coast LHD took back some of the risk, setting more modest targets for a more modest reward while providing some secure base-funding to both organisations.
- **Evaluation**: the trial in North Wyong is the subject of a separate summative evaluation including outcomes and health economic analysis.

Figure 5: Outcomes-Based Commission Cycle



It should be noted that this proof of concept has given the CCICP many rich lessons in new ways of working, including risk assessment and stratification of populations, ethics and privacy concerns, and new ways to contract and commission services and the nature of the ongoing relationships with providers.

People with complex and chronic conditions

This stream provided the opportunity to build upon, align and consolidate a number of existing projects that were amenable to development and implementation during the CCICP. Notably these included the **Central Coast Alternative Pathways Initiative** (CCAPI), being developed by HNECC PHN, the Central Coast LHD and NSW Ambulance. The CCICP enabled better LHD involvement and a significant number of paramedics to receive appropriate training around the new care model which introduces low acuity protocols which allow for referral of patients, where appropriate, to general practice etc., rather than default delivery to emergency departments. An initial analysis reported a 20% reduction in hospital presentations in the three months June to September 2016.

The Chronic Disease Management (CDM) Program was redesigned as the **Woy Woy Integrated Care Pilot** (WWICP) as the long running CDM program had drifted in scope. The redesign involved working closely with the existing team to refocus the model of care towards general practice. The existing CDM team were well established and there was resistance to the change, as is typical of change management processes, and thus required intensive relationship management, effective communication and tenacity to achieve the change. This work was undertaken in partnership with LHD services, HNECC PHN and the ACI. Notably, eight new Standard Operating Procedures (SOPs) have been developed to define appointment scheduling routines and standard duration of service. An e-enabled patient education tool is being trialled – Go-Share (see Section *Information sharing and use of data*, Section 3.3). Also, with the ACI, two patient story videos have been created which can be used as a learning resource and clearly demonstrate from a user's perspective the benefit of an integrated care approach and care coordination:

- Kay's Story https://vimeo.com/196507016
- Ian's Story https://vimeo.com/196506978

Comparison of target population stream activities

The key projects of the three streams are outlined and compared in Table 1. By comparing the stream sub-projects that are outlined in Table 1, it is clear that a consistent and structured approach has underpinned them all. The projects clearly define their objectives, scope (size), identified target population, referral mechanism, use of risk stratification, clear inclusion criteria, primary care focus, elements of co-design employed, working with clearly articulated partners who were acknowledged as facilitators of the project work. Moreover, the sub-projects have also been supported to implementation by the projects and work outlined in the Enablers Section (3.3). Standout differences between the streams are the novel upstream and partnered approach (with Education, PHN and FACS) to reaching the vulnerable youth population, the novel test of outcomes-based commissioning of care coordination in the vulnerable older people stream, and the additional support, re-invigoration and re-orienting of existing chronic disease management work towards the community and primary care in the people with chronic and complex conditions stream.

Table 1: Program stream project characteristics

	VULNERABLE YOUTH			VULNERABLE AGED	COMPLEX & CHRONIC CARE	
	FRS in Schools	**CCMARC**	**OHCHA**	**NWPOC**	**CCAPI**	**WWICCP**
Full name	**Family Referral Service in Schools**	**Central Coast Multi-Agency Response Centre**	**Out of Home Care Health Access**	**North Wyong Proof of Concept**	**Central Coast Alternate Pathways Initiative**	**Woy Woy Integrated Care Coordination Pilot**
General description	An opportunity to develop Communities of Care around vulnerable families by creating an early intervention program, working up stream to impact health and social vulnerabilities.	The first NSW co-located multi-agency child protection information exchange and triage service.	Integrated multi-agency responses to assessment and management of the health needs of children and young people in out of home care	North Wyong Care coordination trial, uses NGO employed care coordination of vulnerable older person cohort, under novel outcomes based commissioning contracts, wherein reduction in unplanned hospital bed days are the target outcomes. Service is free to clients, with providers payed on outcomes.	NSW Ambulance Paramedics trained to implement low acuity protocols to manage alternate pathway referrals for appropriate patients.	Testing transition from the Chronic Disease Management Program (CDMP) to a model focused on General Practice
Objectives	To work with families, reduce their barriers to engaging with services and to prioritise actions that will support young people to engage with learning.	To define health's role in interagency responses to child protection. Increase effective information exchange between health and FACs Support multiagency quality initiatives that enable early intervention responses for children at risk of significant harm	To better understand the pathways into out of home care, and identify opportunities for better integrated service delivery To provide a better, integrated approach to health assessment and treatment of young people in this region.	To improve care coordination for enrolled cohort and reduce unplanned hospital bed days. To trial care coordination delivered by non-health providers To trial an outcomes based funding model To keep older people healthy and at home for longer	To reduce unnecessary hospital transports of low acuity patients and to reduce ambulance turnaround time at hospitals.	To transition and improve care coordination for complex clients within the community
Date	October 2016 - present	November 2015 - to present	January - December 2016	January 2017 – present, Commissioning cycle initiated July 2014 (needs assessment)	Proof-of-concept - January 2014. Paramedic training December 2015, June 2016	April 2016 to March 2017

	VULNERABLE YOUTH			VULNERABLE AGED	COMPLEX & CHRONIC CARE	
	FRS in Schools	**CCMARC**	**OHCHA**	**NWPOC**	**CCAPI**	**WWICCP**
Size	3 school learning communities – 10,790 – 5 high schools, 13 primary schools, 2 providers	Central Coast, NSW population	>1000 young people (30-50 new to care each month)	440 patients, 4 general practices, 2 NGO providers	108 NSW Ambulance paramedics Central Coast NSW population	109 patients, 2 care coordinators, 8 general practices, 39 GPs
Target Population	Students and their families where there is an identified risk of disengagement from learning and school attendance.	Children and young people at risk of significant harm who live on the Central Coast, NSW	Children and young people in out of home care are a high risk group for health and social care vulnerabilities. 30% Indigenous and 117 in kinship placements	North East Wyong region. People identified as having high health need, low socioeconomic status and ageing– likely to benefit from care coordination.	Patients assessed by qualified paramedics as suitable for alternative referral options do not require transport to the ED via ambulance.	Woy Woy, NSW chronic care population
Single point of referral	Yes (schools)	Yes	Yes	Not applicable, cohort identified by Central Coast LHD and referred to providers	Triage via triple zero	Identified through Central Coast LHD Connecting Care Program
Risk Stratification	Yes	Yes - ROSH screening tool used by FACs	Yes	Yes	Yes	Yes
Inclusion criteria	Primary and high school students and their families Geographically defined	Vulnerable families in the Central Coast region	Young people (0-18 years) in out of home care in the Central Coast region	Aged 65 or over 1 unplanned admission over the last year 2+ chronic conditions Geographically defined	NSW Ambulance patient transportations of triage categories 4/5	Identified through Central Coast LHD Connecting Care Program
Partners	Family Referral Service, Central Coast LHD, DET, Local School Principals, HNECC PHN, FACS	Central Coast LHD, FACS, DEC, The Benevolent Society, Family Referral Service	Central Coast LHD, HNECC PHN, Family and Community Services	HNECC PHN ADSSI Home Living Kincare Health Services	HNECC PHN Central Coast LHD NSW Ambulance	Central Coast LHD GPs
Community & PC focus	Yes	Yes	Yes	Yes	Yes	Yes
Co-design	Yes	Yes	Yes, with respect to establishing three working groups for priority action.	Yes	Yes	No

	VULNERABLE YOUTH			VULNERABLE AGED	COMPLEX & CHRONIC CARE	
	FRS in Schools	**CCMARC**	**OHCHA**	**NWPOC**	**CCAPI**	**WWICCP**
Care-coordination	Yes	Limited to coordination of referrals	Yes	Yes	Limited to coordination of alternative referrals.	Yes
Key enablers	Family Engagement Workers, local school Principals, finding alignments with partner agencies goals and frameworks to progress work (aligned values)	Colocation of multiagency staff with formal structured collaboration meetings for information exchange and quality improvement	Collaboration and strong leadership. Clear common goals defined by FACs and Health Policy objectives	Evidence-informed planning, Outcomes Based Commissioning cycle, strong leadership, NGO market appetite to undertake work	Cooperative patients, usual care providers or available GP practices	Early implementer of the state-wide redesign on CDMP
Key challenges	Adequate needs assessment of families and their cooperation, support from local school Principals, restricted ability to fully partner with HNECCPHN, identification of systemic gaps in services (e.g. under 12s mental health, housing and accommodation, services to support behavioural issues for students)	Rigorous quality improvement framework, consistent approach of adoption and monitoring of changes Unclear goals from outset	Formal and informal partnership agreements, framework design with partners State based review (Their Futures Matter review) and reform overrode the activities, limiting ability to go forward with planned changes at the time.	New ways of working for NSW Health: contracts, procurement procedures (different to commissioning), time pressures, privacy and ethics concerns, sharing the risk between Central Coast LHD and providers, contracts based 100% on outcomes, restricted ability to fully partner with HNECC PHN	New way of working for NSW Ambulance paramedics, collaboration with patients, usual care providers or available GP practice, restricted ability to fully partner with HNECCPHN	Implementing new model of care within existing program and workforce with entrenched ways of working.

3.3 Enablers – business architecture and enabling activities

The work on particular population groups was supported by efforts to build an enabling infrastructure for integrated care via a variety of cross cutting projects, some applied broadly, others in small tests.

The system wide enablers are the tools, processes and capacity building needed to enable new ways of working. These can be grouped as supports for:

- Building capacity to implement integrated care
- Population Health
- Commissioning
- Information sharing and use of data
- Redesign of processes

Building capacity to implement integrated care

From the inception of the CCICP, the team have drawn upon evidence and international experts in integrated care to inform planning, implementation and review of progress. This has included attending and presenting at numerous conferences including the first World Congress in Integrated Care in Sydney in 2014, the second World Congress in Integrated Care in Wellington New Zealand in 2016, the 1st Asia Pacific Conference on Integrated Care in Brisbane, November 2017 [with six abstracts presented pertaining to the CCICP: 28, 31-35] and hosting international experts such as Dr Nick Goodwin, CEO of the International Foundation for Integrated Care in 2014, 2016 (which was a two day conference: *Creating Value in Integrated Care* – allowing for local engagement with international experts, and reflection on progress made by the CCICP and with future direction discussions) and 2017. Furthermore consultants were used to assist with the preparation of several work pieces including Price Waterhouse Coopers for the risk stratification work.

Internally the CCICP team have reflected on the challenges and barriers they have faced and overcome at regular intervals. As a result, numerous thought pieces to share the lessons they have learned in implementing the CCICP have been produced beyond planning documents and annual reports [including but not limited to 29, 30, 36, 37].

The reflections from these meetings and the learning contained in these documents outline a range of difficulties the CCICP have faced in program implementation across the 40 or so projects planned or initiated. A number of key recurrent issues were identified within Central Coast LHD in supporting implementation including: a lack of workforce change management skills; the absence of a shared language between partner organisations (and within Central Coast LHD); and the ability to overcome resistance to change. The development of joint training in the use of a consistent framework, and investing in a pro-active change management approach, subsequently resulted from these self-reflections as a means to better support effective interagency work.

In terms of change management, CCICP embraced the Accelerated Implementation Methodology (AIM). AIM is an internationally recognised change management methodology was supported by the Agency for Clinical Innovation (ACI) and the Health Education and Training Institute (HETI) for NSW Health staff to practically assist with project implementation. Prior to the introduction of AIM training, as part of the AIM process, a commissioned analysis of readiness for change was conducted (an analysis of implementation history assessment by the facilitator Don Harrison). This flagged the likely difficulties for implementation given the Central Coast LHD profile. These included a top-down compliance culture, reinforcements that did not align with behaviour changes (more reward for staying the same), resistance to change, high turf guarding, the absence of common goals across the system. These results were similar to the rest of NSW Health. This analysis also helped prepare the CCICP team regarding their approaches.

The CCICP chose to trial multi-agency AIM training with its partner agencies (beyond NSW Health) to build capacity to deliver collaborative change, with 97 staff trained in 2016. Importantly, the two-day training sessions

were delivered purposefully as cross-sectoral training to groups containing a mix of LHD and partner agency staff, including HNECC PHN, FACS, DEC, NSW Ambulance and the Family Referral Service (the Benevolent Society). Feedback from the training was overwhelmingly positive and further training was delivered in 2017, with more planned for 2018.

Population Health

A population health approach lies at the heart Caring for the Coast and therefore of the CCICP. Vulnerable groups were identified by need, disadvantage, and likelihood to be high users of health services in the future. The hypothesis was that if they could be identified earlier and assisted to access preventative and early interventions, they would experience better health outcomes and acute services demand would be reduced accordingly.

Indeed, the populations being targeted were understood to have high levels of disadvantage and needs (low socio-economic population, older than most populations, high incidence of mental and physical health problems (frail aged), high levels of domestic violence, high alcohol and other drug abuse rates, high numbers of children in out of home care, high intergenerational unemployment, low private health rates, high smoking rates, poor ability to take care of their own health). The populations of North Wyong and Woy Woy were particularly understood to be at risk.

The original implementation plan proposed using risk stratification to select people (and cohorts) most at risk of future hospitalisations and likely to benefit most from a targeted more intensive approach to health care, such as care planning. To do this, the Central Coast undertook work developing and testing risk stratification models informed by a detailed diagnostic assessment of the three target populations.

From the outset, creating a risk assessment tool for vulnerable youth was considered difficult since very few interacted frequently with the health system, thus rendering the likelihood of predicting future adverse events such as hospitalisations difficult. However, the data analysis for youth was used to inform the selection of school learning communities with high social disadvantage and vulnerable families.

The diagnostic assessment for both the vulnerable aged and the complex and chronic streams proved easier and risk assessment tools were generated for both streams in several formats: paper, Excel spreadsheet or embedded into GP clinical management systems.

A full risk assessment modelling was tested using actual patient data (de-identified) from hospital (acute) and GP-held records. This involved specialist data linkage activity and coding at two trial GP practices. This was resource intensive and exposed data variability in both quality and consistency between data sets. There were also time delays, privacy and ethics concerns. Nonetheless, the test was promising and showed clearly that risk stratification profiling was possible using linked GP and hospital/LHD data, however it was not practical nor timely enough for use with the CCICP at the time. Nonetheless, as outlined above simpler risk assessment tools were generated that would be suitable for use.

A full and comprehensive internal report on risk stratification for integrated care was produced by the CCICP team, with others from the Central Coast LHD, HNECC PHN and consultants from Price Waterhouse Coopers [29].

Commissioning

Within the population health work streams, an approach to service model development and implementation was adopted which mirrored quality improvement and outcomes-based commissioning cycles (see *Vulnerable older people* in Section 3.2). Using population health needs assessment in conjunction with risk stratification approaches to select target population groups, care models were developed or adapted in partnership with stakeholders. These stakeholders included health and social service providers, other government departments, patients and carers. This assessment process involved a period of consultation and co-design. Care models were then implemented, with continual monitoring and review.

A key outcome of this work was the description of an outcomes-based commissioning cycle. This was then subject to a full pilot in the North Wyong Proof of Concept project (NWPOC, which began service in February 2017) in which NGO-provided care coordinators were commissioned for a population of vulnerable older people in the North Wyong region (see *Vulnerable older people* in Section 3.2 above).

Information sharing and use of data

The CCICP undertook a number of enabling projects to improve information sharing, in alignment with the NSW Integrated Care Strategy objective: *3. improved information flow across the healthcare system*.

Shared Care Planning: Identifying, selecting and enabling a shared care planning system was a key goal for the CCICP. Extensive consultations with different stakeholders led to a clear understanding of needs from varied perspectives including patients, GPs, health service and NGOs and residential aged care facilities, among others. Notably there was clear demand for timely connectivity to existing general practice IT systems, health services and the NGO sector. This work was resource and time intensive (0.6 FTE equivalent for 8 months). After completing the requirements analysis and sharing these results with other demonstrator sites, the CCICP with the PHN and eHealth NSW chose not to proceed with shared care planning at that time. Two other sites were trialling this model with difficulty and CCICP chose to invest its resources into its commissioning projects instead (North Wyong Proof of Concept trial of outcomes-based commissioning of care coordination), and to observe the other shared care planning test sites. To mitigate risks of delaying other objectives of the CCICP, shared care planning work was halted in order to prioritise other work.

Patchwork trial: In response to the lack of coordinated case management for complex and vulnerable children and families on the Central Coast, a trial of the Patchwork tool was undertaken via the Central Coast Youth Safety and Wellbeing Forum, involving 80 Central Coast LHD staff (from Youth Health Service, Children and Young People's Mental Health and Headspace) and staff from FACS.

Patchwork is a web-based application designed to facilitate communication. Developed in the UK, Patchwork is intended to connect different practitioners from different local services working with common clients in a geographic area. Specifically the trial sought to investigate the need for increased collaboration between agencies and if the Patchwork tool improved that collaboration.

The requirements analysis for *Shared Care Planning* was used by the CCICP team to assess the Patchwork application. It was clear that there was a need for better collaboration across agencies, however the Patchwork tool was not customizable to the needs of the trial cohort. The CCICP acknowledge that it may be more suited to support care coordination where more structured care coordination approaches are needed, such as where named care coordinators/navigators are used.

Moreover, the trial highlighted clear examples where health workers lacked trust in the partner agency methods and policies with respect to privacy and confidentiality. Clinicians lacked confidence in applying concepts of privacy in their everyday practice, thus were likely to be conservative and less likely to share information. Whilst the Privacy Manual for Health Information [38] sets out clear approaches to guide and support clinicians, a new tool such as Patchwork, exposed a varied understanding and readiness to share information. Future trials of Patchwork would therefore also need to consider readiness and trust to share information.

Go-Share: The substantial number of lessons learnt from the Patchwork trial, have informed the implementation of a new customizable tool for information sharing with clients and caregivers called Go Share in an e-Enabled Patient Education Trial (see *People with complex and chronic conditions* in Section 3.2 above).

ComCare: Operationally, the CCICP has been supported by the eHealth application ComCare. This application did not suit shared care planning amongst care professionals (e.g. ComCare did not connect with existing systems in general practice), but the system has helped identify opportunities to improve care processes in integrated care. ComCare is the system used by Community Health services for aged and complex care to manage referrals, clinician schedules and complete electronic clinical documents which are then transmitted to the hospital electronic medical record. Thus clinicians have offline access to a person's record and can update whilst in the

community. Another key use of ComCare is as a tool to support quality improvement / quality assurance reporting. The system is used to produce dashboards of activities to compare activities or examine trends on a monthly basis, which is often used for reporting upwards (e.g. to senior management, or to pull out information at ministerial requests).

The ComCare system may serve as a means to deliver information and data to providers and professionals within Central Coast LHD to support self-reflection on activities, benchmark performance and may help drive clinical behaviours to improve quality of services through data and information. Thus, the role of ComCare, can be seen for facilitation rather than control processes. ComCare as it used currently by the CCICP has the capacity for benchmarking performance and maybe currently underutilised for quality improvement and monitoring purposes.

Redesign of processes

The Central Coast LHD recognised the need for enabling platforms for integrated care and thus identified and supported existing initiatives in development. For example, the CCICP provided support, particularly in the design process, to the establishment of the centralised intake and triage service, which offers a single point of entry into community health services, including pathways for assessment across health and social care, such as *My Aged Care*, and to streamline Central Coast LHD administrative and clinical processes. This is being embedded into shared protocols and new patient pathways, becoming "business as usual" on the Central Coast.

Early efforts sought a 'physical' solution by attempting to co-locate community based services, but this was difficult to achieve and did not necessarily improve care co-ordination as it was insufficient alone to produce a centralised intake, thus process change was also required. The e-service for central intake has built on the early work and has been far more tractable.

Other redesign processes are evident in the streams such as the solid work in redesigning the Chronic Disease Management (CDM) Program and trialling in the Woy Woy Integrated Care Pilot, which generated eight new Standard Operating Procedures (SOPs) (see Section 3.2).

A key enabler that predated the CCICP demonstrator, is the Central Coast GP Collaboration Unit which has been running for more than ten years, with joint funding from the Central Coast LHD and the HNECC PHN. The unit has been party to many innovations and work in primary care on the coast, including those of the CCICP. Notably the GP Collaboration Unit as part of the CCICP undertook a redesign and reinvigoration of the GP-Ante-Natal Shared Care (GPANSC) project, in response to dwindling participation by women and poor knowledge regarding referrals by local GPs. In 2016, 18 new GPs took on offering GPANSC and the participants more than doubled, from less than 2% women as January 2016, to 5.2% by January 2017 [34].

Summary – Enablers

In summary, the enablers work stream is a package of responsive tools, processes and capacity building activities to support the new ways of working required to integrate care on the Central Coast as tested in the population streams (Section 3.2). Capacity building efforts focused on building the skills for implementation in partnered multi-agency collaborative settings and building knowledge, skills and up to date evidence in integrated care through engagement with experts, participation at conferences and keeping up with the literature. The population health approach undertaken was informed by data, health and population needs analysis and developed useful tools for the purpose of risk stratification, whilst highlighting the limitations of data-linked approaches at this time. The work on outcomes-based commissioning has led to a significant test of this work in the North Wyong Proof of Concept trial and a rich series of lessons around novel ways of working inside the Central Coast LHD and beyond. Information sharing and data use work in the enablers has yielded insights into the data/information sharing needs of clinicians and other professionals, enabling a clear set of criteria to assess future tools for such purposes. ComCare has been taken up by clinicians in the community and its use in the domains of quality improvement and monitoring may be improved upon.

4 Findings

This Section brings together and summarises the findings from the different sources for each of the research questions. More detailed findings for the survey and interviews can be found in the technical paper [1]. Of note, an overlapping set of key stakeholders participated in a survey (27 respondents out of 61 invited) and interviews (24 people out of 50 contacted), they came from Central Coast LHD staff (62% for survey, 66% for interview), and partner organisations (38% for survey, 34% for interview) as well as representing those covering across the CCICP program (37% for survey, 29% for interview) and those working on specific streams and sub-projects (63% for survey, 71% for interview).

4.1 Timeline and Changing Context for the Central Coast Integrated Care Program

It should be noted that the context of CCICPs implementation changed considerably over time as a range of events and changes impacted on the trajectory and tempo of implementation (see Figure 6). Thus to fully consider the implementation journey thus far for the CCICP, major events and contextual changes are outlined in this section. Funding for the CCICP arrived in October 2014, wherein CCICP leader Anthony Critchley was appointed. The rest of the CCICP team was appointed in April 2015 at which point the business of implementing the CCICP plan began in earnest. Thus, it is best considered that the implementation period began in April 2015 leading to the observation that time is needed to support the effective preparation of integrated care programmes, including the bringing together of a management team.

The major partner in the originally planned work was the Central Coast Medicare Local, whom then underwent a transition to the Hunter New England Central Coast Primary Health Network (HNECC PHN) from January to June 2015. This involved a change in focus, broadening scope from primary care and general practice support to a commissioning function and work in low and moderate intensity mental health services and suicide prevention. For the CCICP it also meant that its new partner organisation had a responsibility far beyond the boundaries of the Central Coast. The Central Coast Medicare Local had a footprint concurrent with Central Coast LHD, of 330, 000 people spread across 1681km^2 and the new HNECC PHN serviced three times as many people (1.2 million) over an area more than 78 times as large (133,812km^2) [39]. For the implementation of the CCICP, it meant time spent relationship building with the newly formed HNECC PHN, renegotiating participation, which came to be viewed as less of a joint partnership (as originally conceived) and further thought given to interactions with primary care. Notably a connection between the Medicare Local to PHN transition was the retention of CEO Richard Nankervis and thus good historic knowledge of the intention of the CCICP and support of integrated care on the Central Coast.

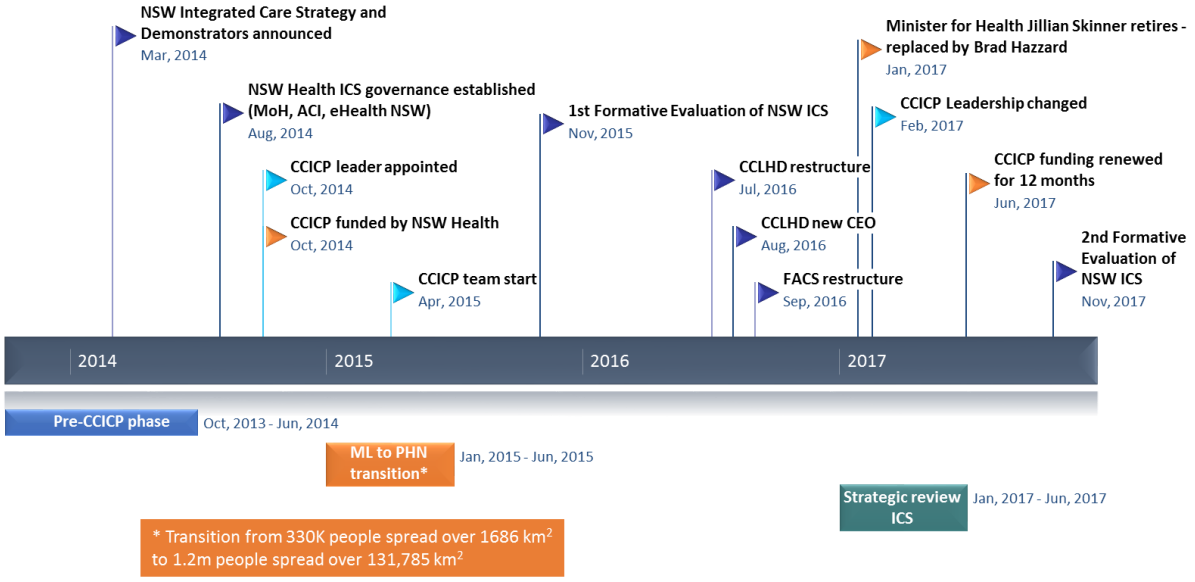
Another key partner in the CCICP, the Department of Family and Community Services (FACS) underwent a restructure in September 2016, which resulted in some staffing changes and the loss of key contacts and historical knowledge, thus a slowing of momentum of work with this partner.

Within Central Coast LHD itself, internal restructuring has led to numerous changes in the way the CCICP has been led and managed. For example, the appointment of a new CEO (Andrew Montague) in July 2016 provided new leadership whilst, in February 2017, CCICP's leader Anthony Critchley was seconded to the role of Mental Health Director in the Central Coast LHD. At this point, Michael Bishop stepped into the acting CCICP leadership role from his previous role as Business Integration Manager, a function that was then backfilled by Sarah Wilcox.

At the State-level, Minister Jillian Skinner - who had instigated and overseen the integrated care Demonstrator initiative retired in February 2017 and was replaced by the Hon Brad Hazzard, who notably was previously the Minister for FACS. Also, the original Demonstrator funding window that ended on 30th June 2017, with a further extension to 30th June 2018. Furthermore, internally the CCICP focussed on moving successful integrated care projects to "business as usual", without the certainty of further dedicated funding beyond that window. There was concern expressed by stakeholders that the Ministry of Health was assessing integrated care in a more

narrowly constrained light (enhanced chronic disease management for example) and as such, the focus of work on the Central Coast could be undervalued by omission.

Figure 6: Timeline – Major contextual changes during CCICP



Contextual changes including changes both within the CCICP and externally over time including staffing changes and restructures which will have affected the trajectory and slowed the tempo of the implementation. Most notably the delay in key appointments, coupled with the transition from Medicare Local to Primary Health Network greatly impacted plans and momentum at a key early stage of implementation. Further, given the uncertainty past the funding window (June 30, 2017), coupled changes in key people in early 2017 just prior to the review period for the demonstrators, momentum, confidence, innovation and partnered work are likely to have been negatively impacted.

4.2 Assessing the key components of the intervention

Whilst Section 3 provided a detailed description of the CCICP, and therefore represents an overview of the key components of the intervention, here we focus on how the CCICP intervention maps to the Project INTEGRATE Framework dimensions, and the progress achieved towards sub-elements of those dimensions. As described above, the Framework provides an evidence-based understanding of the key elements of integrated care that international evidence demonstrates are associated with successful implementation of projects and programs. The use of the Framework acts as a conceptual basis for reflecting on the design and implementation of integrated care, so to promote understanding and generate discussion [13].

Our approach in using the Project INTEGRATE Framework was intended to map the breadth of the current programme intervention (the CCICP) against its validated framework. To support this, data was generated through stakeholder surveys and interviews, with reflection and commentary from the research team and external experts. Assessing progress in CCICP towards these key components of integrated care supported a situational analysis wherein forward plans might be made to extend successful approaches, address deficiencies, and identify gaps and opportunities for future work. Below we summarise our findings with attention drawn to **sub-elements** of each dimension in **bold** (see Appendix A for dimensions and sub-elements in detail).

1 Person-centred care – service user engagement and empowerment

This dimension of integrated care refers to the ability to empower and engage people in improving their health and wellbeing and to become actively involved as partners in care.

In general we found that stakeholders' perceived progress in this dimension was more aspirational than actual. Nonetheless, the majority view of informants (>80%) was that the CCICP was effecting a move towards person-centred care (particularly in the areas of **health literacy** promotion (70% agreement) and **user decision making** (59% agreement). However, on average only half of survey respondents agreed that sub-elements of person-centred care were being achieved, with uncertainty regarding progress prevalent.

Interview findings highlighted specific progress on the promotion of health literacy in the vulnerable aged stream; **user empowerment/self-management** in the complex and chronic stream; and involving the consumer in **shared care planning** and **decision-making** in both vulnerable youth and children and the vulnerable aged streams. Only for the vulnerable youth and children stream was it suggested that these person-centred initiatives had been achieved as a direct result of the CCICP. Our stakeholder interview findings suggest care planning was about what was best for the consumer, though the voice of carers and consumers involved appeared to be missing from conversations. No illustrative clear examples of **carer support** under the CCICP was forthcoming in the interviews; a process suggesting consumers were able to provide **feedback** on what would enhance their own individual experience and improve their quality of care was not mentioned; and neither was consumers having **access to their own health care records**.

Thus in this ***person-centred care*** dimension, gains have been made in improving **health literacy** and **user decision making**. Opportunities for investment lie with enabling spread of activities already underway pertaining to **self-management**, **consumer involvement in shared care planning**, and **shared decision making**. Gaps, which represent opportunities for future focus, include **carer support** and **enabling patient feedback**. **Access for service users to their own records** lies outside of the scope of CCICP, but Australian Government initiatives such as My Health Record may enable this in the future.

2 Clinical integration – care coordination around people's needs

This dimension of integrated care refers to how care services are coordinated and/or organised around the needs of service users.

Most survey informants (>80%) agreed that the CCICP had contributed positively to clinical integration, although fewer than half agreed that clinical integration was being achieved. The majority (78%) agreed that **professionals working together** was being achieved and referred to **shared care planning** in the context of **multidisciplinary care teams** or working with other service providers to plan and provide care. There was also good agreement that care coordinators were ensuring better **continuity of care** (59%) and professionals were proactively manage the needs of service users (**case management**, 59%) was apparent in all three streams. Furthermore, the vulnerable aged stream and the complex and chronic stream were described as having been set up to have clearly defined **care coordinators**. On the other hand, the vulnerable youth and children stream reported a more flexible arrangement that utilised the most appropriate person for the case.

Stakeholders mostly spoke about **transition of care** in relation to discharge from hospital. A new model of discharge planning had been trialled and found to work well. However, it appeared that service providers in the vulnerable aged stream were not necessarily being included in the planning of their clients entering hospital. This limited application of transition planning may go some way to explain why only a minority of survey informants (37%) agreed that this was being achieved.

A **single point of entry** was the most contested clinical integration sub-element with 59% agreeing and 26% disagreeing it had been achieved. A **central intake system** for aged care – health and social needs, was discussed with reflection that there were still improvements to be made in this area.

The survey and the interview findings concerning whether partners in care were following defined **care pathways** to help understand and direct the process of care integration were unclear. Most survey informants (>50%) were unable to agree or disagree. In interviews, some informants talked about following referral pathways and clear guidelines for how providers should operate but did not discuss this further understanding and directing the process of integrated care. Notably, a prior project of the Central Coast LHD, developed with GPs, HealthPathways created 200 clinical pathways and local referral options, how these are used was not elucidated from the evaluation [23].

In interviews, there was no mention of volunteers nor the **community** in relation to their involvement of coordinating people's care needs. However, it should be noted that interview questions did not cover these areas. The majority of survey informants were unable to agree or disagree that this sub-element was being achieved and the document review did not identify use of **volunteers** either.

In the dimension of ***clinical integration***, much progress has been made in the development of multidisciplinary **care teams**, use of **care coordinators**, **case management**, and to some extent with **shared care planning**. Areas for future investment and development include **care transitions**, from discharge planning and beyond, developing a **single point of entry** (such as further work on the central intake for older persons), and seeking/investigating the involvement of **community and volunteers**.

Professional integration – existence and support of teams/networks

This dimension of integrated care refers to the existence and promotion of partnerships between care professionals that enable them to work together (e.g., in teams or networks) and so promote better care co-ordination around the needs of the service user.

More survey informants agreed that the sub-elements of professional integration were being achieved – a positive response higher than any other dimension which suggests there has been a core focus on the development of care teams. In addition, 74% agreed that the CCICP had directly contributed to this progress. Evidence from interviews of progress towards professional integration was less clear and to some extent contradictory.

There was good agreement amongst survey informants that care professionals **shared accountability** and responsibility for care outcomes (70%), work in **inter- or multi-disciplinary teams** (67%), and have a **long term commitment** to integrated care (63%). On the other hand, in interviews, while working in multiple agency and multi-disciplinary teams was an established part of all three streams there was no evidence at the project management nor the front-line care level that these teams shared accountability and responsibility for care outcomes. Interview informants discussed sharing of information, shared care planning, coordination and consultation but their narratives suggested that individual care professionals took either overall responsibility or responsibility for their part of the care plan. Thus progress appears to be evident, but has not fully spread nor yet realised into formal shared accountability frameworks.

Most survey informants (56%) agreed that there were **formal agreements** in place that supported **collaboration**. On the other hand, a large proportion (40%) were uncertain of whether or not they existed. It is understood that some formal agreements had been put in place outlining the roles and responsibilities for care and the collaborations of different organisations' staff and that service providers were working under agreed protocols or guidelines. How supportive these protocols or guidelines were of collaboration among the professionals was not discussed as no informants commented on the effect on the collaborative process. However, **commitment to integrated care partnerships** were apparent in nearly all interview informants' narratives. Interview informants expressed not only their own personal commitment but referred to the commitment of those they were working with and leaders within the LHD.

A great deal of uncertainty was expressed in surveys in regards to **ongoing multi- and inter-professional training and education** with over half of informants neither agreeing nor disagreeing with the statement (just 37% agreed). The uncertainty might have been whether the training was of a continuous nature or conflated with

the broader issue of access to continuous professional development and training in the Central Coast LHD and for GPs. It is clear that training and education opportunities have been given for change management skills (multi-agency AIM training) and in integrated care (see Section 3.3). Thus, further opportunities remain for supporting continuous multi-disciplinary training.

In the dimension of ***professional integration***, clear progress has been made with **inter- and multi-disciplinary teamwork** and stakeholders conveyed a long-term commitment to leading, developing and delivering integrated care in partnership with others (**collaborative attitudes**). With respect to **shared accountability**, professionals took responsibility for their part of a shared care plan, but this did not yet seem to translate to a genuine shared accountability. It is understood that numerous **collaborative agreements** exist, but may not be as well understood and/or used to full effect. Whilst training for implementation and understanding of integrated care has been delivered, more opportunities exist to foster **continuous multi- and inter-professional training** and education.

Organisational integration – joined up service delivery

This dimension of integrated care refers to the ability of different providers to come together to enable joined-up service delivery (that helps to then support professional and clinical integration).

There was a good level of agreement among survey informants that the CCICP had contributed to organisational integration. Even so, only half agreed, on average, that sub-elements of organisational integration were being achieved. Similarly in interviews there was some evidence of progress towards organisational integration.

Over half of survey informants (56%) agreed that there were shared set measures to monitor outcomes. In interviews, the most referred to performance measures for the vulnerable aged and the chronic and complex streams was reduction of unplanned hospitalisations and bed days. For the outcomes-based commissioning of the vulnerable aged stream the outcome that was of interest was reduced unplanned hospitalisations. Hence, this was a **shared measure** between the LHD and the service providers involved. In regard to the vulnerable youth and children stream, it was common for interview informants to comment how difficult it was to measure performance of this stream (but that shared performance measures were being sought).

The existence of **collective incentives** to support integration was also agreed upon by most (56%) of survey informants. One example was in the outcomes-based commissioning of the vulnerable aged stream in which there was a clear monetary incentive negotiated to reduce unplanned hospitalisations. Another informant reflected on the lack of incentive in the vulnerable youth and children stream to work with families. Even so, it was apparent from narratives that the collective incentive for most informants to work in the integrated care space was to improve care and consumer experience and outcomes.

Only just over half (52%) of survey informants agreed that care organisations had **shared strategic objectives and written/policies and procedures**. The narratives of interview informants suggested that any shared objectives were found by mutual dialogue and the identification of pre-existing objectives that aligned with those of the CCICP. Memorandum of Understanding and partnership agreements had been signed for the CCICP and subprojects, however not all informants were aware of this. Moreover, it was clear that the Central Coast LHD perceived that the formal agreements they had with other organisations had not been sufficient. Seven interview informants mentioned a proposed '**alliance**' between the LHD, the PHN and possibly other organisations.

Survey informants were, overall least certain about whether there was **shared governance** as over half (56%) neither agreed nor disagreed with the statement. The CCICP Governance Committee oversees the program and its activities and has representation from partner organisations (see Section 3.1). The ambiguity of informants on shared governance may indicate a lack of awareness of the existing arrangements or the perception that these do not yet have sufficient shared buy-in by all stakeholders. This is echoed in the proposed 'alliance'

references which may extend integrated care on the Central Coast from a program of the Central Coast LHD to a Central Coast-wide broadly owned health and social care alliance.

In the dimension of ***organisational integration***, the discussed **shared measures** were hospital and health centric and opportunities exist for those that relate to the experience and outcomes for individuals. Indeed it is clear from the assessment of **collective incentives**, that whilst one test of change had financial incentives attached, the predominant incentive was that of the collective desire to improve the experience and outcomes for service users. The understanding of **shared strategic goals and policies** and the **shared governance** arrangements were identified, but not all stakeholders understood this and there was sentiment that these were insufficient at this point. Some informants discussed the prospect of an 'alliance' between the LHD, PHN and other partners that would cement commitment to integrated care ideologically, financially and from a governance point of view.

Systemic integration – enabling platform

This dimension of integrated care refers to the ability of the care system in providing an enabling platform for integrated care at an organizational, professional and clinical level (e.g. through the alignment of key systemic factors such as regulation, financing mechanisms, workforce development and training).

Most survey informants (67%) agreed that the CCICP had contributed to systemic integration. However, no sub-element of systemic integration received the agreement of at least half of survey informants that it had been achieved. This translated to the overall perception of progress towards systemic integration being supported by only about one third of survey informants, with open-text survey responses overall reflected lack of progress.

The **use of a common set of measures and outcomes to monitor and assess performance** is related to the sharing of measures discussed under organisational integration. Most survey informants (around 50%) were non-committal about a common set of measures being implemented and only about one third agreed with the statement. Interview narratives indicated the reduction in hospitalisations measure of performance was imposed by the NSW Ministry of Health as were other measures that needed to be reported on regularly (some mandated, some negotiated, some measures were perceived as a poor fit for the work undertaken within the CCICP). Further local milestones and performance goals for individual projects and the CCICP overall were tracked and reported to the Governance Committee

Most survey informants (around 50%) also did not agree or disagree with the statement that the care system has **financing and incentive arrangements** directly promoting integrated care; only about one third agreed with the statement. In interviews, the NSW Ministry of Health was recognised as supporting integrated care through funding and thereby providing a mandate. Nevertheless, regulations that the Ministry imposed appeared to restrict what the CCICP was able to do. It was reported that initiatives had been blocked and the services and care it was possible to provide was restricted by rules. Indeed it had been envisaged that the HNECC PHN could commission the services for the North Wyong Proof of Concept (test of outcomes-based commissioning, see *Vulnerable older people* in Section 3.2), but the Ministry restrictions meant that the commissioning/procurement had to come from the Central Coast LHD, which was perceived as slowing down that project.

The short term project funding of the CCICP was perceived as a problem, particularly when considering the expectation of moving to embed integrated care as business as usual too quickly. Several interview informants perceived that the project was not far enough developed to continue without designated funding and perceived there was a danger that the gains made would be lost and learnings forgotten. These concerns carried across to perception regarding adequate investment in the **workforce** to support the goals of integrated care, with survey informants disagreeing (48%) more than agreeing (19%). The short-term funding was also perceived to have exacerbated recruitment difficulties. In the longer term, it was also perceived that the LHD could be investing more in getting the workforce ready to undertake integrated care work. Indeed interview informants referred to the planned Central Coast Medical School and Research Institute with a focus on integrated care. This represents a significant opportunity to shape the future workforce skills including knowledge of integrated care,

population health and skills in collaboration, research, information and communications, data handling and analysis.

Similar numbers of survey informants agreed (just under 40%) with the statement that **national/regional policies** support and promote multi-sectorial partnerships and person-centred care, as who were able to offer no opinion. Furthermore, some interviewees perceived that the Ministry itself was lacking integration, with different departments not working effectively with each other, making it more difficult for the CCICP to operate across portfolios. Conversely, the NSW Premier's Priorities were considered to have allowed the CCICP to work with organisations falling into other portfolios (particularly Education and FACS); although a state strategy was seen as expensive and difficult to address. The different legislation for the different government departments was understood by interview informants as challenging, particularly, the issues around privacy legislation and sharing of information.

The **involvement of all stakeholders** was agreed on by nearly half (44%) of survey informants, but about a third disagreed with this statement. Stakeholder involvement is apparent throughout the interview findings and co-design of the approach for the vulnerable youth and children stream and the shared care planning process. On the other hand, there was no evidence from the interviews that service users had been involved in the design, implementation and evaluation of the programs and policies. However, the document review findings suggest some young people have been involved in relation to the vulnerable youth and children stream.

In the dimension of ***systemic integration***, there was considerable reflection on progress. Whilst **performance assessment measures** exist, they are health and hospital-centric with a loss of focus on the personal outcomes and experiences. Indeed the **regulatory framework** and **financial arrangements** (such as activity-based funding) act as perverse incentives, with the dedicated financial support to the CCICP and the cross-agency work to support the Premier's priorities both acting as small levers to overcome these barriers to integrated care. There is recognition of the importance of investment in the **workforce** to support integrated care both now and into the future. Furthermore, whilst **stakeholder involvement** is clearly evident with the CCICP, more can be done in this area, particularly that of the service users and across the continuum of design, implementation and evaluation of integrated care initiatives.

Functional integration – effective data and information communication

This dimension to integrated care refers to the capacity to communicate data and information effectively within an integrated care system.

In surveys, functional integration was the dimension where there was the least agreement that the CCICP had contributed to its improvement (just 44% of informants agreed). More survey informants disagreed than agreed about all the sub-elements except for one where agreement and disagreement was equal. Survey open-text responses were particularly critical of progress in this dimension. Hence overall the average scores suggested more disagreement (around 40%) that there had been progress made towards functional integration than agreement (<30%). These survey results were reflected in interviews where progress towards functional integration appeared limited. This reflects a dimension that the CCICP has had the least ability to influence, with many of the sub-elements lying beyond the control of the program.

The same percentage of informants agreed that a **uniform patient/user identifier** was shared among care organisations as disagreed (37% for both). In interviews there was no evidence in the informants' narratives that a single patient/user identifier was being used between different care organisations. However, a direct question was not asked.

More survey informants (29%) disagreed that **communication of data and information** between care professionals and service users is effective (just 19% agreed). Similarly, most survey informants (52%) disagreed that **shared care records enabled information sharing** (>20% agreed). In interviews lack of compatibility of IT systems among service providers was considered a major barrier to communication of data and information and sharing care records among organisations (see also Section 4.6). Interview informants explained local decisions

meant that the Central Coast LHD and the CCICP were not using IT systems adopted by others. For example, it was reported that initially there had been an intention to commission a digital 'shared care planning' platform but with poor progress from the other two demonstrators at the time, the CCICP chose to put resources to building and testing the outcomes-based commissioning trial in North Wyong. Other interview data suggested that the CCICP similarly found the *Patchwork* platform used by FACS was unsuitable for the needs of the project. Moreover, the CCICP work linking hospital data to that of general practice whilst achievable highlighted the difficulties in doing this, and the current real world impracticality of this – with system incompatibility, data quality issues and a lack of incentive and support for general practice to be ready for such connectivity [29, 32]. This disconnectivity is an issue not only for information sharing on patient care, but for effective evaluation and ongoing assessment of progress for the health and care system.

Only about a quarter of survey informants (26%) agreed that **decision-support systems** were available to assist decision-making between professionals and service users; whereas a third (33%) disagreed. In interviews, there was little evidence to support progress towards this sub-element. Further, as noted under person-centred care and clinical integration above, decision-making tended to be among service providers and often did not include service users.

In the dimension of ***functional integration***, the CCICP not surprisingly has had the least impact. Despite considerable efforts, they have faced many barriers to progress. Whilst a **user identifier** is common in health, this may not carry across to non-health partners. The systems for **stakeholder communications** and **shared decision making** are fragmented within health, and beyond health are troubled by incompatibility and privacy concerns. Beyond connectivity, data quality and consistency will also need to be addressed in the future and this will require support and resources. The systems tested for shared care planning failed to suit the needs of the teams involved, however a keener understanding of what is needed has been gleaned – thus the CCICP is better prepared to test future tools. Substantial opportunities exist for improvement in ICT, but require substantial investment and cooperation across Health, primary care, PHNs and other government agencies.

Normative integration – common frame of reference

This dimension of integrated care relates to cultural elements – the extent to which different partners in care have developed a common frame of reference (i.e., of vision, norms, and values) in support of the aims and objectives of care integration.

The program vision and Central Coast Integrated Care Strategy outlines integrated care as having an emphasis on working in partnership other stakeholders to provide person-centred care that is efficient and effective. Importantly, it was intended that a whole-of-system approach was to be taken towards commissioning to meet the needs of the region's health and *social* care needs (see Section 1.5). Stakeholder interviews generally supported this view of integrated care. For most interview informants integrated care meant multi-disciplinary and multi-organisational team work and provision of person-centred care. Provision of integrated care was also expected to improve the experience of patients and their care outcomes and empower the patient by improving their health literacy. Integrated care was also interpreted as effective and efficient care that met the needs of all individuals in the population. Practicing integrated care also meant for some informants a better work experience for the health workers. Integrated care was also understood to be the usual way and the way consumers expected the provision of care to be conducted. Two informants, on the other hand, interpreted integrated care only as a Central Coast LHD organisational unit. It should also be noted that a few informants perceived that there was a lack of a shared definition amongst the key stakeholders (i.e. amongst LHD staff, other service providers and the Ministry of Health). However, for one informant what should be ultimately important is what the patient understands as integrated care.

Thus, for the CCICP, there is a collective vision for person-centred care, and was found to be a major defining feature of approximately two-thirds of informants. Indeed given the population health approach adopted and the choice of the three streams, this represents a collective vision of holistic care. It was reflected with the core CCICP team that **vision** for integrated care was stronger with those closest to the program but that this was not

clearly or strongly articulated, but that **shared vision** and spread was lacking, indeed important for future sustainability. Moreover whilst some shared vision exists with partners outside health, it may be conceived with the different jargon/language of that outside partner (e.g. with FACS and Education). It was reflected that leadership clearly supported principles for integrated care, which was seen to sit comfortably with the Caring for the Coast Strategy [24].

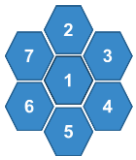
Population health management as a cornerstone of the CCICP was evident from all data collected. Interview narratives' support this, with the aim of improving care for the specific population groups described by the three streams (see Section 3.3). Moreover, the interview data show that geographical areas were targeted where the greatest need was perceived (and backed up by needs analyses early in the CCICP process as outlined in *Population Health* in Section 3.2). Interview informants spoke of risk stratification to identify which populations should be targeted in all three streams. Importantly, it was noted that a population approach rather than a disease approach was taken to care provision.

Reflection with the CCICP team indicated uncertainty LHD-wide, but that within streams **trust** had been built with the relevant stakeholders and much work had been done building relationships, the biggest gains were perceived in the mid- and operational levels, uncertainty existed with leadership. There was some reflection on the efforts required to build trust due to prior poor experiences. With respect to **social capital**, interviewee' narratives suggested that no efforts had been made to build awareness and trust in integrated care services with local communities.

It was perceived that at times **leaders** within the CCICP and Central Coast LHD had failed to communicate clear vision and goals. The lack of a consistently strong vision for the project was associated with changes in leadership in the LHD, the PHN and the Ministry. On the other hand more generally, it was perceived that the members of the integrated care team had provided a clear vision for service providers to work towards. Notably a few stakeholders struggled to articulate what integrated care was. Therefore, there appears to be some way to go in regards to all stakeholders sharing a clear vision of integrated care. Further, service users appear largely to have been left out of making decisions about their own care (see person-centred care); have not been engaged in design, implementation and evaluation of integrated care programs and policies (see systemic integration); and kept unaware of the moves towards integrated care.

Moreover since the common frame of reference defines this dimension, stakeholder perception of what integrated care means in the context of the Central Coast is critical.

In summary, in the dimension of ***normative integration***, there is a collective **vision** for person-centred holistic care, however the sharing of this vision has been limited and at times the communication of this vision by **leadership** has been unclear. Thus there are opportunities to **share the vision** more widely, especially to build **social capital**, trust and awareness in the local communities of the Central Coast. There has been significant relationship and **trust**-building evident, but with further opportunity to develop this, particularly within the Central Coast LHD. There has been a sustained and significant emphasis on **population health management** which is a key strength of the CCICP.

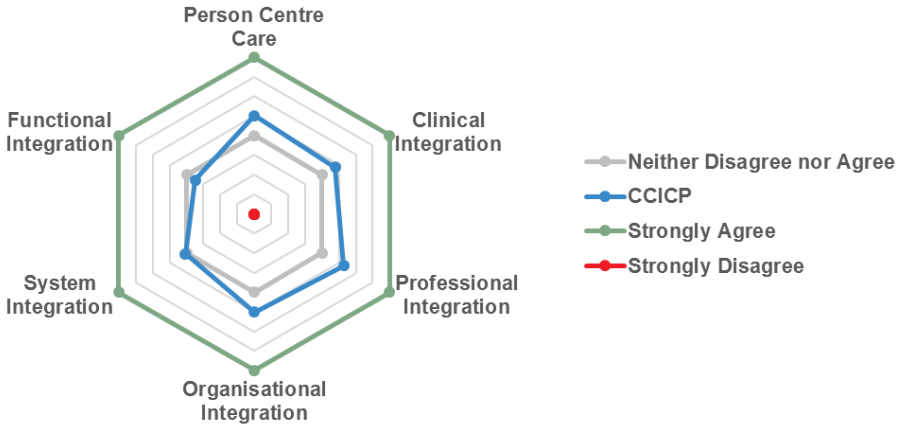


Overall perceptions of progress towards integrated care

The weight of opinion expressed in surveys is that there has been some progress towards integrated care. Most respondents agreed that there has been some progress in the areas of patient-centred care, clinical, professional and organisational integration. Informants were, overall, uncertain that there has been progress towards systemic integration and generally perceived that functional integration has not been progressed. Figure 6 visualises this progress. The green line represents unanimous strong agreement that all sub-elements of

integration have been achieved. Therefore the green line could be considered as aligning with a perception of full integration, at least in regard to these measures. The red line represents unanimous strong disagreement that all the sub-elements have been achieved. Hence the red line represents a perception of complete failure to integrate. The bold grey line represents overall uncertainty or neutrality in regard to the dimensions. The survey findings are represented by the blue line (mean scores of sub-elements for each dimension). Progress was perceived to be most advanced with professional, organisational and clinical integration as well as person centred care. System integration was uncertain, with a lack of integration perceived for functional integration.

Figure 7: Perceptions of state of integrated care within the CCICP (August-September 2017)



However it should be noted that there was considerable uncertainty (neither agree nor disagree) among survey informants regarding progress towards the dimensions of integrated care overall, ranging from 35-40% (see the level of agreement according to the mean scores of sub-elements for each dimension Figure 8). However, positive perceptions regarding the CCICP contribution towards the integrated care dimensions are evident (see Figure 9), perhaps indicating the stakeholders understand that progress and contributions have been made, but that maturity has not yet been achieved or spread sufficiently, reflecting the uncertainty represented in Figure 8.

Figure 8: Perceptions of current state of integrated care in CCICP (August-September 2017)

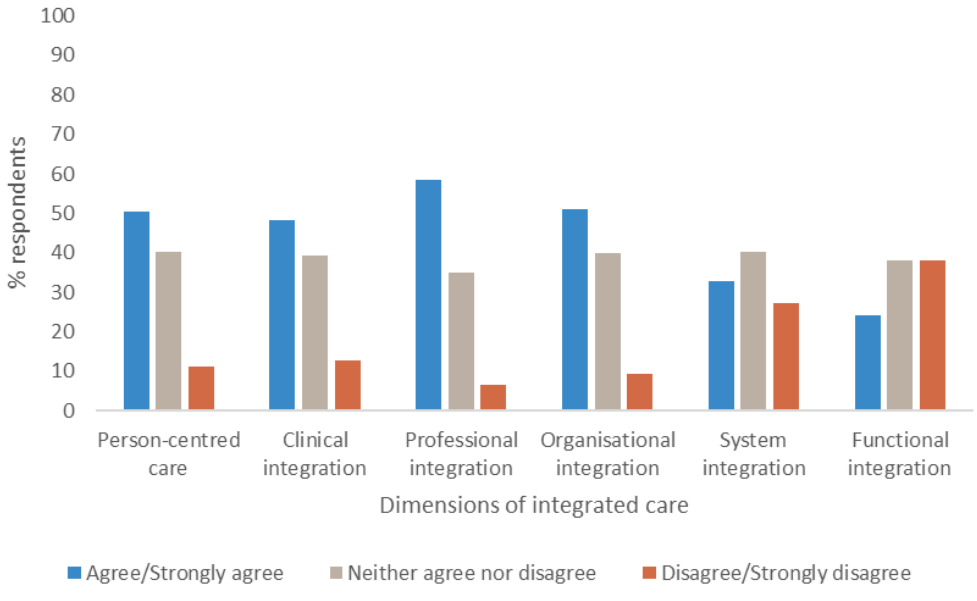
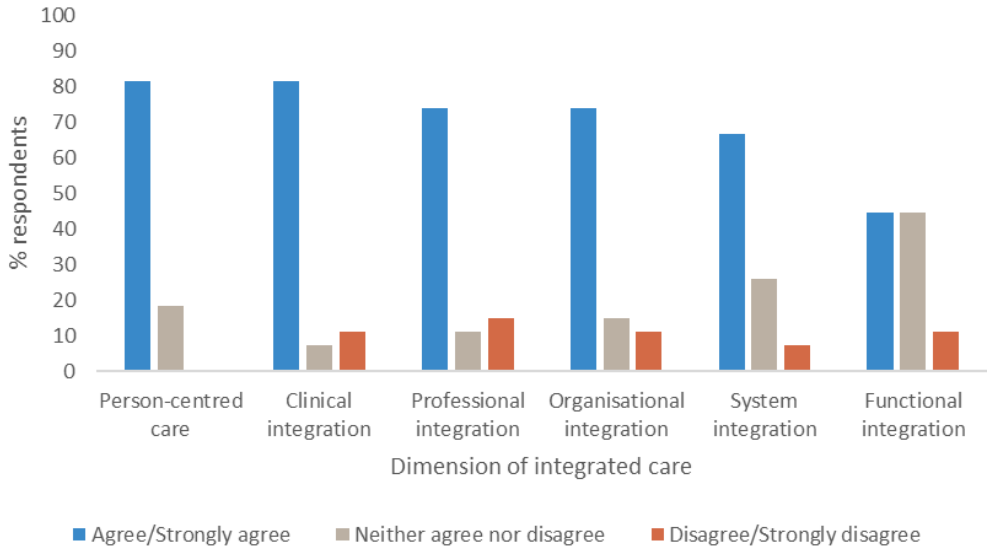


Figure 9: Perceptions of CCICP contribution to integrated care dimensions



In interpreting this data it should also be pointed out that the Project INTEGATE Framework contains within it an explicit understanding of causation between the different dimensions and sub-elements [13]. Briefly put, the Framework predicts that success in delivering person-centred care is closely associated with achieving success in clinical and professional integration. Success in achieving clinical and professional integration, however, is positively linked to factors related to functional integration (information, communication and technology) and normative integration (the degree of shared vision and values that are held across key stakeholders).

The results outlined above, although they carry only indicative weight, do suggest that the CCICP has no 'critical gaps' across the Project INTEGRATE dimensions suggesting that the Program is maturing having addressed (directly or in part) most of the key variables. This emerging picture suggests that a stronger focus on supporting communication and information flows, together with the continued reinforcement of common values and a shared understanding of the future vision and direction for integrated care on the Central Coast, will continue to provide the basis for developing stronger organisational and professional partnerships to the ultimate benefit of patients, families and staff..

5 Reflections on implementation of CCICP – key messages

The document review and interviews described how partners had overcome these contextual challenges and other barriers to CCICP implementation. The main barriers, facilitators and lessons learned are grouped as ten thematic areas, with reflections by the evaluators highlighted in blue:

5.1 Innovation and new ways of working in integrated care

The Central Coast Integrated Care Strategy takes a whole-of-system approach towards commissioning to meet the needs of the region's health and *social* care needs. The goals of the CCICP were to innovate and test new ways of working in three identified population groups (based on need and equitable access) to enable a shift towards person-centred integrated care that is efficient and effective.

> *"The Central Coast is doing different things, not the same things differently"*
>
> Matt Hanrahan, Chief Executive Central Coast LHD 2015

The mandate for innovation was described in the First Formative Evaluation [19], prepared for NSW Health by Carrie Schulman November 2015.

> *"The NSW Integrated Care Strategy is about transformation and innovation, not simply improvement – it is about change at the system level. It is not about the extension of existing programs – it is about sustainably doing things differently."*

Additionally, the First Formative Evaluation acknowledged that not all tests would produce the intended outcomes, but rather should enable Central Coast to be a learning organisation that reflects on feedback and applies new knowledge to design a more sustainable model of care.

Thus in considering the approaches undertaken by the CCICP, it is clear that the higher order goals have been worked towards, even though the granular objectives may have changed in response to contextual changes, reflective review, lessons learned and iterative improvement and planning. Moreover the approach was consistent with the Caring for the Coast strategy.

The stakeholder informants' general conception of integrated care and of the CCICP, was that integrated care meant multi-disciplinary and multi-organisational team work and patient-centred care to improve the care experience and outcomes. Integrated care was also interpreted as effective and efficient care that met the needs of all individuals in the population. However the interviews highlighted a lack of clarity about the CCICP objectives. This lack of clarity may reflect the ambitious scope and complexity of the program as well as the challenges of a frequently changing context in terms of structures, funding and key personnel.

Using the Caring for the Coast strategy to embed principles of integrated care represents an opportunity to clearly articulate the shared vision of integrated care within the Central Coast LHD

To realise a broader shared vision, the wider health and care system on the Central Coast needs to come together as an alliance or other partnership to jointly produce, lead and guide this

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5.2 Policy and funding context

The context of a fragmented health system and corresponding fragmentation of funding was generally seen as a barrier. The complexity of State and Commonwealth jurisdictions, myriad organisations (government and non-government), specialist areas (e.g. mental health, drug and alcohol, domestic violence) was considered as making it difficult to deliver integrated care.

The NSW policy and Caring for the Coast strategy provided the mandate for Central Coast to address the fragmentation of the system.

CCICP funding was, of course, considered an enabler but there was concern about the short-term nature of the funding. It was understood that implementation of the project had been delayed due to the lead time required to recruit and train a CCICP team. The short-term contracts offered were seen as a barrier to effective planning, engagement and retention of staff who had key roles in maintaining the continuing progress of their work streams. Loss of staff resulted in unproductive periods as recruitment to fixed term posts proved to be difficult.

The CCICP requires a long-term commitment and sustainability before moving to a 'business-as usual' phase

However the change in Ministry since Central Coast was invited to undertake the CCICP has brought a change in focus and expectations. The current integrated care division is perceived to be more risk averse and more focused on performance than on innovation. These perceived shifting expectations have been viewed as a challenge. Commonwealth reforms similar to the National Disability Insurance Scheme have resulted in My Aged Care block funding being replaced by individual funding. It was considered that the shift to an individual funding model has discouraged social care providers from engaging with integrated care initiatives.

The CCICP has needed a high level of agility to adapt to changing policy and financial context

5.3 Organisational readiness

The integrated care agenda was initially seen as a 10-year strategy for transformational change. Thus the Central Coast is still in the early stages of implementation, albeit it had a different starting point from other LHDs in that work had already been undertaken to co-locate state health services and general practice. This foundation was an important facilitator of organisational readiness for integrated care but makes it difficult to compare progress directly with other demonstrator sites.

The previous work on integrated care may make it more difficult for the CCICP to demonstrate measurable gains as anticipated short term wins may already have been realised.

The health and social system operating in the Central Coast is seen as relatively distinct from those from those in Sydney and Newcastle, thus enabling a discrete trial outside of a major city. However the CCICP had to

adapt to significant structural reorganisation. Most notable was the conclusion of Medicare Locals and the emergence of Primary Health Networks requiring the LHD to renegotiate working with the primary care sector.

The building of the new relationship with the Primary Health Network has taken some time and the partnership may be perceived as less equal than was originally envisaged.

5.4 Leadership

Leadership was the most commonly identified facilitator and the initial project leaders were often commented upon in an extremely favourable light. That the LHD leaders had established and well-functioning relationships with key senior personnel in other organisations was considered a great asset to the project. These early leaders were also seen as having a vision for and commitment to the project and for being supportive of an innovative approach. However such strong relationships and tacit understanding between leaders meant they did not always formalise their vision and objectives.

When, just over half a year out from the Demonstrator project end date, senior management changed, informants perceived some loss of leadership and momentum. Ministry and management were considered to have a more "constrained view of integrated care", lack a strong vision for the project, to be m**o**re risk averse and less able to negotiate a frontier pushing agenda. On the other hand, it was also noted that the new leadership had not been in place long enough to rebuild relationships. Overall the Central Coast LHD leadership was viewed as facilitating rather than impeding deployment. In addition to the most senior members of staff in key organisations, several other individuals were seen as providing leadership that had facilitated operations at other levels.

There is a critical need for distributed leadership model to create a movement for change and mitigate loss of pace from change of senior leadership

5.5 Workforce

The resistance of staff to the changes required for integrated care was the most commonly identified barrier. Frontline staff and middle management were found to be resistant to new procedures and new technology. It was suggested that resistance was, in part, due to staff feeling that their work was being invalidated, or being taken over, or that integrated care may increase their work burden. There was also a view that people were resistant because of change fatigue or a perception that integrated may be considered the 'latest fad'. Furthermore, high staff turnover at all levels in several organisations was considered to have posed problems for creating teams well versed and committed to integrated care. The CCICP project had considerable impact on the staff involved in implementation, with positive reflections on professional development and growth opportunities, combined with a stressful experience, which was mostly buffered by good support from the team and management.

It is important to recognise professional values, team culture and attend to the human dimensions of change

Progress has been made on multidisciplinary care, care coordinators, case management and, to some extent, shared care planning. Further workforce development should address care transitions, single point of entry and involving community and volunteers

5.6 Education and Research

The effectiveness and competency of those working in the CCICP suggests adequate initial investment. It was not clear if ongoing training and education on integrated care is supported as informants mainly reported training related to their early involvement in the CCICP. Initial training and education opportunities mentioned included multi-agency AIM, outcomes-based commissioning training, training for paramedics in triaging and managing low acuity call-outs and work area information being supplied. Some informants also mentioned attending a two day conference: *Creating Value in Integrated Care* held in November 2016 to allow for local engagement with international experts, reflect on progress made by the CCICP and discuss the future direction. The CCICP went on to contribute six abstracts to the 1st Asia Pacific Integrated Care Conference in late 2017, with numerous members attending. It is anticipated that the Medical School and Research Institute at Gosford will promote integrated care through influencing graduate workers and by providing training and a research and innovation ethos to support integrated care.

CCICP is learning by doing and building research capability around a population health approach

5.7 Relationships

Positive relationships were thought of as a key facilitator of and poor communications a key barrier to implementing integrated care. Good relationships were fundamental for overcoming resistance to change and prompting an attitude of readiness for change. Relationships were understood to be built on open communication and clear strategies. The main relational issues identified were: lack of common understanding, and different workplace cultures of the various agencies involved. Interviewees described two initiatives to address these issues and to build common understanding: the 'day-in-the-life-of theory' and multi-agency AIM training alongside work to improve communication with the PHN and other agencies.

The CCICP has created a safe space to allow innovation that builds relationships, adapts to and manages risks

5.8 Information and Communication Technologies

Lack of compatibility of IT systems was acknowledged as a barrier to communication. There was a reported fear of sharing information due to privacy concerns amongst service providers and consumers. The identification of legislation (referred to as 16A) was noted to facilitate sharing of patient information. However, it was acknowledged that service providers could still be reluctant to do so. The My Health Record https://myhealthrecord.gov.au initiative of the Commonwealth Government was anticipated to alleviate some of these problems within the Health system.

Integrating services at different stages of maturity exposes different approaches to sharing of information

The CCICP has been able to link hospital and GP data to create usable risk assessment tools but sharing beyond health partners is more challenging

5.9 Tracking outcomes

It is apparent that the local performance measures are not systemically shared and that some performance measures appear to be largely activity-based and lack relevance to an outcomes-based approach. The testing of risk stratification with two general practices highlighted the data system fragmentation, resource-intensive requirements for extraction and connection between LHD and primary care systems. In a difficult flu season and in a cohort which included frail people with palliative care needs, service agreements were renegotiated to share the risk of not achieving the desired outcomes.

The CCICP should improve shared governance and accountability between primary and secondary healthcare professionals and partners and maintain a focus on outcomes for people

5.10 Capacity Gaps

The current gaps in the system was also identified as a key barrier. For example, the deficit in the numbers of GPs in Woy Woy and the availability of social care providers more generally. Associated with this was a failure to develop a good understanding of work already underway and the opportunities for spread and scaling up by enhancing and connecting established initiatives – for example, activities pertaining to self-management and consumer involvement in shared care planning and shared decision making. Gaps in person centred care for future focus are carer support and feedback.

Building on previous gains but adapting and consolidating to new circumstances and opportunities can be a source of early wins

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Appendix A - Project Integrate Dimensions & Elements

These tables elaborate on the integrated care dimensions and sub-elements [13].

1	Person-Centred Care	*Service user engagement and empowerment*
1.1	Health literacy	*Service users and care professionals work together to obtain and understand basic health information to make appropriate health decisions.*
1.2	Supported self-care	*Service users are empowered to self-manage the symptoms, treatments, physical, social, emotional, and behavioural consequences of living with long-term health*
1.3	Carer support	*Caregivers are supported in a way that builds their capacity of caring and managing the burden of their care relationship.*
1.4	Shared decision-making	*Service users are actively involved in decisions about their care and treatment options.*
1.5	Shared care planning	*Service users are actively involved in establishing a holistic care plan, which encompasses health and social care aspects of treatment.*
1.6	Feedback	*Service users are supported to give regular feedback on quality and continuity of care received.*
1.7	Health data access	*Service users have access to their own care records.*

This dimension of integrated care refers to the ability to empower and engage people in the improvement of their health and wellbeing. The approach supports a wide range of 'service users' (e.g. patients, people living with frailty or physical disabilities, carers, etc.) to become actively involved as partners in care.

2	Clinical integration	*Care coordination around people's needs*
2.1	Multidisciplinary assessment and plan	*Professionals and providers work together to undertake care assessments and planning.*
2.2	Care coordinator	*Named care coordinators ensure continuity of care to service users over time.*
2.3	Care transitions management	*Co-ordination between professionals and providers enables seamless care transitions for service users across settings.*
2.4	Case management	*Professionals work together to proactively manage the needs of defined service user groups (e.g. case management with precise inclusion criteria).*
2.5	Single point of entry	*There is a single point of entry for service users when accessing multiple services from different professionals/providers (centralization of referrals).*
2.6	Community involvement	*Volunteers and the community are actively involved in coordinating care around service users' needs.*
2.7	Integrated care pathways	*Partners in care follow defined pathways to help understand and direct the process of care integration.*

This dimension of integrated care refers to how care services are coordinated and/or organised around the needs of service users.

3	Professional integration	*Existence and support of teams/networks*
3.1	Shared accountability	*Professionals recognise and enact shared accountability and responsibility for care outcomes.*
3.2	Collaborative agreements	*Formal agreements exist to support collaborative working between care professionals.*
3.3	Inter- and Multi-disciplinary teamwork	*Care professionals work in inter-disciplinary or multi-disciplinary teams with agreed roles and responsibilities.*
3.4	Continuous training	*Multi-and inter-professional training and education is continuously supported.*
3.5	Collaborative attitude	*Care professionals have a long-term commitment to leading, developing and delivering integrated care in partnership with others.*

This dimension of integrated care refers to the existence and promotion of partnerships between care professionals that enable them to work together (e.g., in teams or networks) and so promote better care co-ordination around the needs of the service user.

4	Organisational integration	*Joined up service delivery*
4.1	Performance assessment	*Care organisations participating in integrated care use a shared set of measures and indicators to monitor outcomes and performance.*
4.2	Incentive schemes	*Collective incentives (shared gain) exist between care organisations to support care integration.*
4.3	shared strategic goals and policies	*Care organisations have shared strategic objectives and written policies and/or procedures to promote integrated care, including Service-Level Agreements and Memorandums of Understanding (inter-organisational strategy).*
4.4	learning and quality improvement	*Care organisations regularly engage staff in a process of joint learning and continuous quality improvement*
4.5	Shared governance	*Care organisations have shared governance and accountability mechanisms to ensure that they are formally interdependent to deliver integrated care.*

This dimension of integrated care refers to the ability of different providers to come together to enable joined-up service delivery (that helps to then support professional and clinical integration).

5	Systemic integration	*Enabling platform*
5.1	performance assessment	*The care system uses a set of common measures and outcomes to monitor and access performance.*
5.2	regulatory framework	*The care system aligns its regulatory framework with the goals of integrated care.*
5.3	Financing and incentive arrangements	*The care system has financing and incentive arrangements that directly promote the provision of integrated care.*
5.4	Proactive policies	*National/regional policies pro-actively support and promote multi-sectoral partnerships and person-centred care.*
5.5	workforce	*The care system has invested in an adequate workforce in terms of the numbers, competences, and distribution of key staff to support the goals of integrated care.*
5.6	stakeholders involvement	*All stakeholders (e.g. service users, professionals, managers) are actively involved in the design, implementation and evaluation of integrated care programs and policies.*

This dimension of integrated care refers to the ability of the care system in providing an enabling platform for integrated care at an organizational, professional and clinical level (e.g. through the alignment of key systemic factors such as regulation, financing mechanisms, workforce development and training).

6	Functional integration	*Effective data and information communication*
6.1	single common identifier	*A uniform patient/user identifier is shared between the different care organisations.*
6.2	stakeholder communication	*The communication of data and information between care professionals and service users is effective.*
6.3	shared decision making	*Decision-support systems are available and foster shared decision making between care professionals and service users.*
6.4	shared care records	*Shared care records (e.g. single electronic health record) enable data information to be shared for multiple purposes (e.g. needs assessment, performance management and evaluation).*

This dimension to integrated care refers to the capacity to communicate data and information effectively within an integrated care system

7	Normative integration	*Common frame of reference*
7.1	vision	*Existence of a collective vision on person-centred holistic care (i.e., not disease-centred)*
7.2	population health management	*Collective practice puts emphasis on population health management aiming to improve access and care experiences as well as outcomes of specified populations*
7.3	social capital	*Building awareness and trust in integrated care services with local communities*
7.4	leadership	*Presence of leaders with a clear and common vision of integrated care*
7.5	shared vision	*All stakeholders (e.g. professionals, managers of organisations, services users) share a clear vision of integrated care*
7.6	trust	*Partners in care have a high degree of trust in each other's reputation and their ability to deliver effective care through collaboration*

This dimension of integrated care relates to the extent to which different partners in care have developed a common frame of reference (i.e., of vision, norms, and values) in support of the aims and objectives of care integration.

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