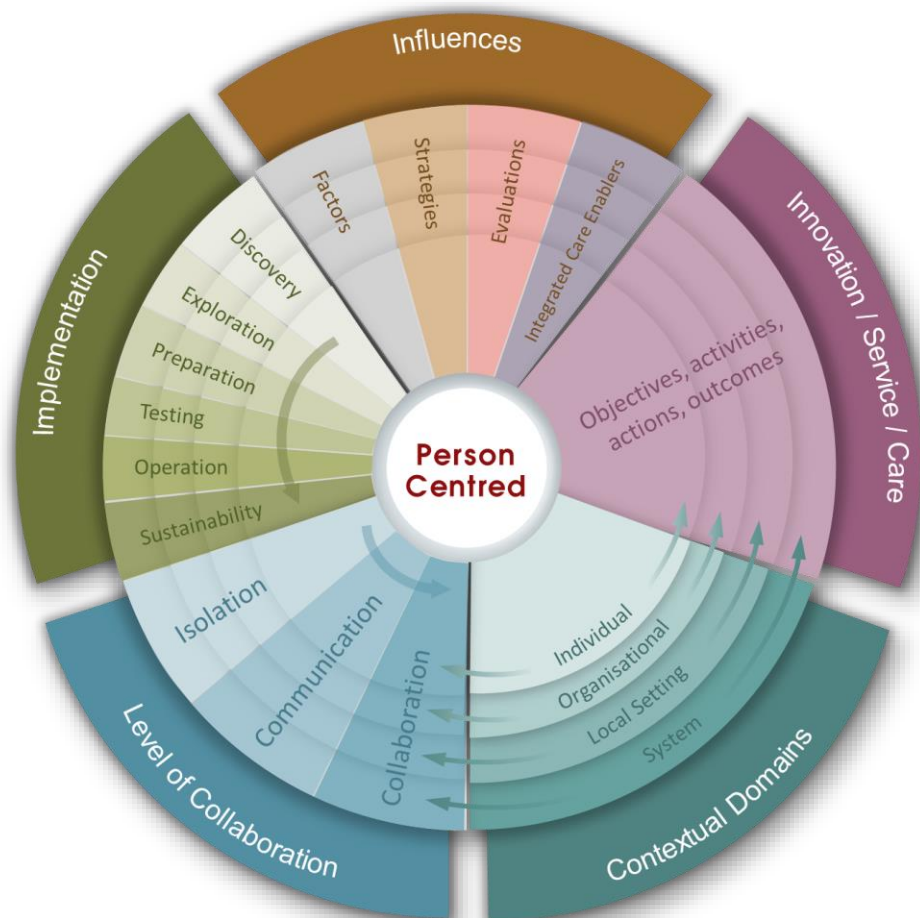
An **Integrated Health Care Framework** for Pharmacists and Doctors



The **Integrated Health Care Framework for Pharmacists and Doctors** is the result of the Pharmaceutical Society of New Zealand and New Zealand Medical Association working in partnership to make their *Vision 2020 Partnership for Care* joint statement a reality.

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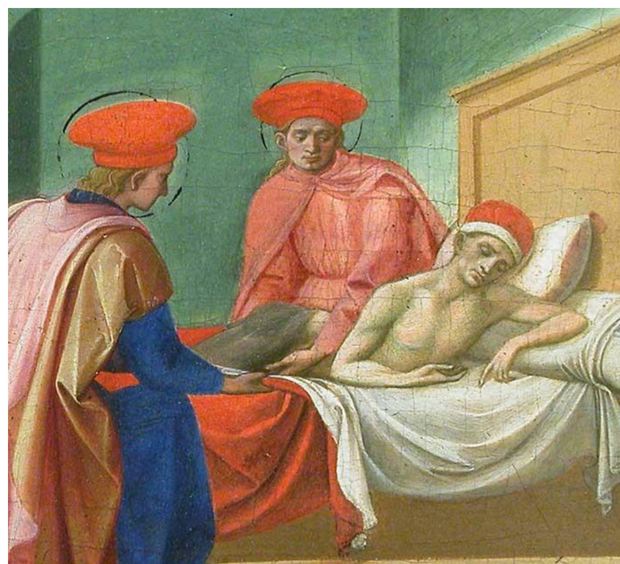


Saints Cosmas and Damian, patron saints of physicians and pharmacists, were Arabic twin brothers from the 3rd Century who trained and practiced together.

Attribution: Saints Cosmas and Damian Healing the Sick by Fransesco Pesellino (Louvre). Image obtained from: http://bit.ly/2eNYrnv

OVERVIEW

The health system must be innovative and adaptable with delivering care to meet the increasing health needs of New Zealanders. Optimising the roles, knowledge and skills of health professionals as one integrated health care team is essential to address these health needs and achieve equitable health outcomes for all.

In response to government and professional policies to better utilise the unique skills and knowledge of pharmacists, the Pharmaceutical Society of New Zealand (PSNZ) and the New Zealand Medical Association (NZMA) sought to develop a framework model that describes what is needed to develop and implement new models of integrated, person-centred practice, in which pharmacists and doctors could work with each other and other MDT members to ensure continuity of patient care.

Developing such an integrated framework needed to consider factors related to:

- the requirements and enablers of person-centred care
- the requirements and enablers of integrated care
- the features and objectives of an innovation, service or programme being considered
- the enablers for enhancing collaboration
- the requirements for successful implementation of health services
- strategies to enable facilitators and address barriers
- the requirements and influences at the various context levels of the health system
- evaluation mechanisms that ensure programmes meet objectives, and support effective implementation

The resulting Integrated Health Care Framework presented in this document, draws upon recognised evidence and best practice to provide the structure for identifying and managing all necessary factors in developing new innovations or models of care so that these are person-centred, integrated, support collaborative practice, and can be successfully implemented to meet the desired outcomes.

PSNZ and the NZMA believe this Framework is the first ever document co-developed by national pan-professional bodies for pharmacy and medicine, to describe not just what is required for integrated, person-centred practice, but also the successful implementation. This Integrated Health Care Framework can be applied to the development of any innovation, health service or model of care, as it allows any local or international sources of information, experience or evidence that may influence a service or innovation to be captured, considered and accommodated in its development and implementation.

The components of the Integrated Health Care Framework model are described in this document below and are brought together in a single colour illustration. A template is provided for using the Framework for the development and implementation of a particular innovation, and examples are also provided to illustrate two approaches to the practical application of the Framework.

This Framework is designed to be used collaboratively by anyone interested in person-centred integrated care, including but not exclusive to pharmacists, doctors, nurses, health providers, practice managers, PHOs, planners and funders.

The Pharmaceutical Society and New Zealand Medical Association are proud to present this Integrated Health Care Framework, and look forward to its use in enabling pharmacists and doctors to work together as part of the wider healthcare team including nurses, in developing and providing an integrated and person-centred solution for patients.

1. Introduction of Principles

A key policy focus for the provision of health care in New Zealand has been a greater approach to integrated care. The Government's recently reviewed New Zealand Health Strategy[1] notes:

> *"To perform to a high standard, the system needs more than a skilled health workforce and resources. It needs a shared view of its overall purpose and the direction it is going, combined with effective ways of working"*

The Strategy describes guiding principles for the health system that includes:

- acknowledging the special relationship between Māori and the Crown
- best health and wellbeing possible for all New Zealanders throughout their lives
- improvement in health status of those currently disadvantaged
- collaborative health promotion, rehabilitation and disease and injury prevention by all sectors
- timely and equitable access to a comprehensive range of health and disability services, regardless of ability to pay
- active partnership with people and communities at all levels
- thinking beyond narrow definitions of health and collaborating with others to achieve wellbeing

Government Support for Enhanced Pharmacist Roles

An enhanced role for pharmacists has been noted as an important facilitator for supporting better, integrated, consumer-centred care by the Ministry of Health in their Implementing Medicines New Zealand 2015-2020 plan.[2] The development of pharmacy services within an integrated health and disability system is also supported by the Ministry in their Pharmacy Action Plan.[3]

Professional Pharmacist Services

The Pharmaceutical Society released a refreshed New Zealand National Pharmacist Services Framework in 2014 which served to comprehensively define a range of professional pharmacist services available for use in primary and/or secondary care.[4]

Integrating Pharmacist and Doctor Care

The Pharmaceutical Society and the New Zealand Medical Association's joint vision statement 'Vision 2020, Partnership for Care' announced in 2015 identifies:

> *"a desired future state of collaboration and partnership that is based on strong and supported clinical relationships, optimised for the benefit of the patient and the health system"*[5]

The professions' strategy for pharmacists and doctors to work together in an integrated and collaborative health practice environment supports the Health Strategy's "One Team" approach in using the health and disability workforce in the most effective and flexible way.[1]

This document presents a framework under which both doctors and pharmacists can work together in a person-centred, integrated manner. It considers the components of a particular innovation or service and the enablers for successful implementation and integration, while set against principles of person-centred care. The Integrated Health Care Framework also recognises varied levels of collaboration and integration existing in current practice across New Zealand, and incorporates mechanisms for enhancing these.

Pharmacists and doctors work with all members of the multidisciplinary health care team (MDT), including nurses and the increasing role with non-medical prescribers. The Integrated Health Care Framework recognises the importance of connecting the pharmacist with ALL members of a person's care team. However, this Framework focuses on the clinical partnership between pharmacists and doctors for achieving an enhanced patient medication journey.[5]

Elements of a Principles-Based Framework of Integrated Care

Many definitions for 'integrated care' exist and a single definition is yet to be universally accepted. Some argue that a narrow definition is not possible and that...

"integrated care should be seen as an overarching term for a broad and multi-component set of ideas and principles that seek to better co-ordinate care around people's needs"[6]

This Framework is informed by published models of integrated care, pharmacist-doctor and pharmacist-multidisciplinary team collaboration.

The Integrated Health Care Framework sets out 6 principles under which pharmacists and doctors, together with the multidisciplinary team (MDT), should work whilst acknowledging and understanding the context of primary and secondary care in the wider health environment:

Principles of Integrated Pharmacist - Doctor Care

All care must be patient-centred: recognising the uniqueness of an individual's health needs, their whānau, life commitments, leisure activities and personal illness experience due to culture, beliefs and previous experiences[5]

Recognise the Influencers of both health care integration and the implementation of services

Acknowledge the different skill sets that each profession brings to the care of every patient (including other members of the MDT)

Acknowledge the sustainability requirements of each profession

Doctors and pharmacists will work together in collaboratively developed models for shared patient care including prescribing

Doctors and pharmacists will work with innovative funding mechanisms that support the collaborative models of care

2. The Integrated Health Care Framework

There are 6 main components of the Integrated Health Care Framework:

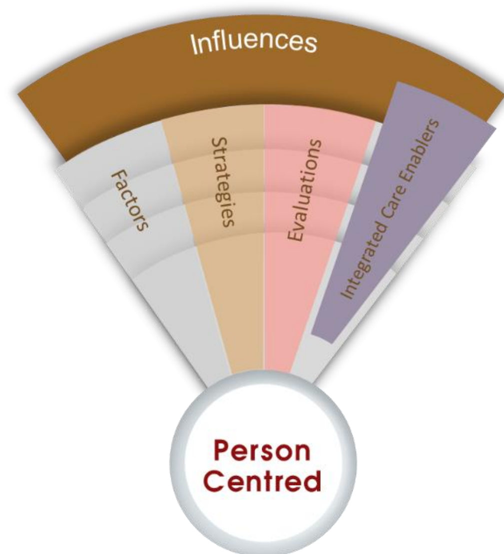
1. **Person-Centred Integrated Care**: the definition and enablers of person-centred care as the primary focus and perspective of any service or innovation.
2. **Pharmacist-Doctor Collaboration**: consideration of the level of pharmacist – doctor collaboration that may exist or may be required, and enablers to enhance this.
3. **The Innovation**: the definition, objectives, actions and outcomes related to the particular health innovation, service or model of care.
4. **Influences**: the *factors* (facilitators or barriers) being considered that influence each component within the Framework, *strategies* for accommodating or addressing these, and mechanisms of *evaluation*.
5. **Contextual Domains**: how 'influences' are defined and apply to the contextual domains of practice or influence i.e. levels of the health care system including individuals, organisations, local setting and the wider health system.
6. **Implementation**: how 'influences' are defined and apply to the stages of implementation from the early discovery and development of an innovation, to testing and sustainable delivery that maintains outcomes and benefits.

Person-Centred Integrated Care

A simple definition of integrated care was developed in the UK by health service users and supported by key national stakeholders, and defines it as "person centred coordinated care".[7] A number of generic "I" statements are used and it focuses on what is important from a user perspective including definition, goals/outcomes, care planning, communication, information, decision making (including budgets) and transitions.

Of relevance to this framework are the statements under 'Care Planning and Communication' which include:

- I work with my team to agree a care and support plan.
- I know what is in my care and support plan. I know what to do if things change or go wrong.
- I have as much control of planning my care, and support as I want.
- I can decide the kind of support I need and how to receive it.
- My care plan is clearly entered on my record.
- I have regular reviews of my care and treatment, and of my care and support plan.
- I have regular, comprehensive reviews of my medicines.
- When something is planned, it happens.
- I can plan ahead and stay in control in emergencies.
- I have systems in place to get help at an early stage to avoid a crisis.



And

- I tell my story once.
- I am listened to about what works for me, in my life. I am always kept informed about what the next steps will be.
- The professionals involved with my care talk to each other. We all work as a team.
- I always know who is coordinating my care.
- I have one first point of contact. They understand both me and my condition(s). I can go to them with questions at any time.

Many publications have evaluated the factors or elements required for integrated and/or person-centred care. **Table 1** presents a number of these arranged in the contextual domains (or levels of influence) described in the Integrated Health Care Framework. These have also been colour-coded against the NZ Health Strategy themes.

'It had never occurred to them (and no one had ever told them) to ask a patient the simple question of "How can I help you? How can we achieve this together?"'[8]

Table 1. Enablers for integrated person-centred care [7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 21]

The Patient *Enablers of person-centred care*	***Individuals*** *Pharmacists, doctors, nurses, MDT*	***Organisational*** *e.g. Pharmacy, Practice/ PHO, hospital, rest home*	***Local Setting*** *e.g. community, town, city, DHB*	***System*** *External (national) health system*
I am actively involved in decisions about my care, including the development and design of care	Have the appropriate knowledge and skills required for patient-centred integrated care	All staff across the organisation(s) are committed to a shared vision of person-centred integrated care	Has active and meaningful support for provision of patient-centred integrated care by local health services	Provides active and meaningful support for provision of patient-centred integrated care across health system
My health needs are identified and addressed	Know each other and have willingness to work together	Have coordinated governance structures and leadership that recognises and supports integrated care	Provides viable and sustainable funding streams that support equitable provision of integrated care for all patients	Offers viable, sustainable funding streams that support equitable provision of integrated care
I can access the care I need, through one first point of contact and this is coordinated around me and across the different providers and settings	Understand, trust, respect and utilise each other's expertise	Have structures and processes that are inclusive of patient and community / patient population	Utilises mechanisms of funding that are non-competitive	Provides and supports the shared health record
I understand who is providing me with health care and their role/purpose	Understand their own role and the roles of others in the MDT, and use this knowledge in planning, establishing and providing patient care to meet patient and community / patient population goals	Have strategies that strengthen the capacity to achieve patient-centred care, including: leadership development and training, internal rewards and incentives, quality improvement training, practical tools	Has shared clinical priorities across region	Specifies regulations, policies and funding that support workforce and capacity of the system for implementation and sustained provision of integrated care
My care providers ask me about and respect my beliefs and values about my health	Have shared clinical priorities and vision of care, including joint planning and decision making related to both services, and the provision of individual patient care	Provides services that are connected and aligned to meet patient needs and preferences	Uses measurement and evaluation for quality improvement focused on improving health outcomes for the individual and population	Uses measurement and evaluation for supporting quality improvements in implementation and provision of care
I have the information, and support to use it, that I need to make decisions about my care, helps me manage my condition(s) and to navigate the system	Have shared accountability for the care provided	Have a diverse workforce reflecting the patient population	Supports shared electronic information systems that facilitates seamless communication and manages clinical information between care providers, breaking down geographical, organisational and professional boundaries	Active support and advocacy for patient-centred integrated care by professional organisations and government
I am supported and empowered to self-manage my health needs through tailored information, advice and resources	Have reciprocal sharing of information regarding patient care and best practice including shared professional development	Provide facilities convenient and appropriate to the community / patient population		The health system is structured to support opportunities for communication and exchange of information across organisational and professional boundaries, including spread of innovation
My requirements for privacy and confidentiality are respected. I understand that relevant information related to my health and care will be shared with those who provide care to me and I can decide who to share that with	Use appropriate practice setting(s) that enables integration and meets patient needs e.g. co-location, or electronically connected	Have an organisational structure that supports opportunities for communication and exchange of information, including across organisational boundaries, e.g. co-location of services, interprofessional meetings, shared CPD and electronic information systems		Provides support for and investment in testing and evaluating innovative processes and practice
I am provided with care in an accessible environment where I feel supported physically and emotionally	Are evidence-informed, using policies and strategies guided by best available evidence, and supported via assessment of measurable objectives for improving quality and outcomes	Use practice systems that support shared care and maintenance of an electronic health record		
I am asked about my experience of care and empowered to provide feedback that will help improve care		Develop, use and maintain pragmatic locally agreed protocols, shared care guidelines or pathways – including post-discharge and review, to help standardise care		
I am given information about any medicines I take, their purpose, how to take them and potential side effects; and they are regularly reviewed		Use measurement and evaluation for quality improvement focused on improving health outcomes for the individual and population		

NZ Health Strategy strategic themes[1]: People-powered *Mā te iwi hei kawe*; Care closer to home *Ka aro mai ki te kāinga*; Value and high performance *Te whāinga hua me te tika o ngā mahi*; One team *Kotahi te tīma*; Smart system *He atamai te whakaraupapa*

PHARMACIST-DOCTOR COLLABORATION

In addition to publications investigating the elements required for integrated health care provision, a number of papers have considered the collaborative relationship between pharmacists and medical practitioners.

Bradley et al reference Armitage's taxonomy of collaboration which describes 5 stages of collaboration that could aptly describe the levels of collaboration between pharmacists and doctors.[11]

1. **Isolation**: pharmacists and doctors who never meet, talk or write to one another
2. **Encounter**: pharmacists and doctors who encounter or correspond with others but do not interact meaningfully
3. **Communication**: pharmacists and doctors whose encounters or correspondence include the transfer of information
4. **Collaboration between two individuals**: pharmacists and doctors who act on the information communicated sympathetically; participate in patterns of joint working; subscribe to the same general objective as others on a one-to-one basis in the same organisation
5. **Collaboration throughout the organisation(s)**: Organisations in which the work of all members is fully integrated

Bradley et al then present a model that describes three stages of collaboration between pharmacists and general practitioners and how these are characterised by various factors. In the model below [Table 2], we attempt to illustrate the steps in collaboration using the principles on which this Integrated Health Care Framework is based.

Varied levels of collaboration between pharmacists and doctors currently exist in practice; in fact the Pharmacist Prescriber Scope of Practice demands a collaborative health team setting.[22] High levels of collaboration occur with hospital pharmacists integrated into multidisciplinary clinical teams and Practice Pharmacists integrated in general practice teams and PHOs. Lower levels of collaborative communication already occur between many community pharmacists and GPs.

Less commonly, the pharmacist and doctor never connect, or just communicate through prescription correction or regulatory checks.

A pharmacist and doctor with high levels of collaboration may have the necessary levels of trust in knowledge and professional roles to explore and facilitate innovative practices. However, the Integrated Health Care Framework can be used for identifying areas for further development. Where such collaborative working relationships do not exist, the Framework can support identification and development of the enablers for collaboration and integrated care.

The Integrated Health Care Framework sets the direction and intent that **should** be applied to the development of new and innovative practice, but **could** also be applied to chosen existing services to enable or enhance the level of person-centred coordination of care. Applying the Framework to the development of a care innovation should include factors that support and enhance the level of collaboration between pharmacists and doctors.

Table 2. Conceptual model of pharmacist-doctor collaboration

	'Communication' Level of Collaboration *('Partial-collaboration')*	*Full 'Collaboration' of Care*
Patient-Centred care	Identifying patient need and informing the other Willing to work for the good of the patient, both contributing to patient care	Identifying patient needs together, and with patient Willing to work together to contribute to patient care
Influencers of Healthcare Integration	Informing each other when a change to medication or management is made	Sharing a fully integrated health record, e.g. Medtech
Different skill sets	Inform each other of what the other has to offer	Know each other's strengths e.g. pharmacists with medicines management and doctors with diagnosis, and manage patient care accordingly
Sustainability requirements	Using programmes designed for community pharmacy, for hospitals or for primary care	Co-designing programmes that can be implemented in any setting
Models for shared care	Co-location Triage in separate settings and referring patients between settings	Integrated service; working as members of one team Triage, and manage, according to patient convenience
Funding mechanisms	Current funding must be ring-fenced Service programmes that contribute to patient care e.g. MTA, rheumatic fever	Integrated funding will be applied to integrated services Funding programmes that target population groups, e.g. complex, very elderly Funding targeting integrated services, e.g. triage, minor ailments

Practice Innovation / Service / Model of Care

This component of the Integrated Health Care Framework concerns the innovation of practice, new service or model of care.

First and foremost, the objectives and outcomes the innovation is intended to deliver must be clear. While some innovations may support more integrated processes, a person-centred focus requires these to have specific and measureable outcomes that improve health outcomes or the experience of health care for a patient, patient group or population.
Innovation/Service-related factors at the individual level relate to the activities, tasks, competencies and skills for a defined role for the pharmacist, the doctor and any other individuals involved, including the patient.

New models of care for some pharmacists will require defined level of clinical knowledge, skills or activities related to delivery of the service. A pharmacist working in a general practice for example, may require skills in literature review and evaluation, pharmacoeconomics, and cultural competencies for specific populations.

Other factors to be considered include patient preferences for where the innovation will be delivered. This may be a pharmacist clinic within general practice, a clinical hospital ward, a rest home or the patient's home. The level of collaboration and information sharing between the pharmacist and doctor would also need to be agreed.

At the organisational level, factors may include capacity and capability factors that need to be considered, including office space and staffing levels. At the local setting level consideration should be given to the characteristics of the community, including ethnicity and socioeconomic status, that may influence how the innovation may be effectively delivered. Existing and future services that may connect to the innovation also need to be considered, alongside local health priorities,

At a 'System Level', political, financial, regulatory and professional factors may all influence the innovation. This may include contribution to specific health targets, objectives of the Health Strategy and/or other key policies such as Implementing Medicines New Zealand, Health of Older Persons Strategy.

At all contextual levels there is overlap of the factors that relate to any new innovation, and this needs to be considered in its development. This may include information transfer, funding and governance.

INFLUENCES: THE FACTORS INFLUENCING AN INTEGRATED PERSON-CENTRED CARE, INNOVATION OR SERVICE

In addition to the requirements for integrated care, enablers of person-centred care and the aspects and dynamics of pharmacist-doctor collaboration described above, a number of factors influence an innovation or service being successfully implemented and achieving its objectives.

Identifying core facilitators and barriers allows development of strategies to either enact or overcome these respectively. Measurement and evaluation of the impact of these factors and strategies can then support successful delivery and implementation of the innovation or service, and achievement of intended objectives.

Many of the factors and facilitators that influence the implementation of professional services that can be considered in the Integrated Health Care Framework model can be found in peer-reviewed and grey literature. Roberts et al have reported a range of individual and organisational facilitators of practice change in community pharmacy and the need to evaluate and accommodate these into programmes for professional service delivery.[23,24] While a study on the implementation of professional pharmacy services using a framework analysis by Moullin also included a comprehensive overview of implementation factors. [25] A selection of these are described below.

Application of the Integrated Health Care Framework allows consideration of a variety of factors required for integrated or person-centred care, and that influence the level of collaboration between pharmacists and doctors. Some of these are transferable across a range of innovations or models of care, while other factors for a specific service would be researched, identified and evaluated during the exploration phase of implementation. Applicable factors, strategies and evaluations that support Government policy and strategy should also be considered for inclusion, including those related to the NZ Health Strategy, Implementing Medicines New Zealand, and the Pharmacy Action Plan.

Factors

Also referred to as facilitators and barriers. In the Integrated Health Care Framework presented in this document, factors are the variables or elements that may influence or determine implementation, integration, or 'person-centredness' of an innovation or service (see Table 1). Factors can include unique features of the service as defined, and characteristics related to the levels of context (contextual domains).

Examples of Factors that may be considered include:

Individual context (eg. pharmacist, doctor, patient)

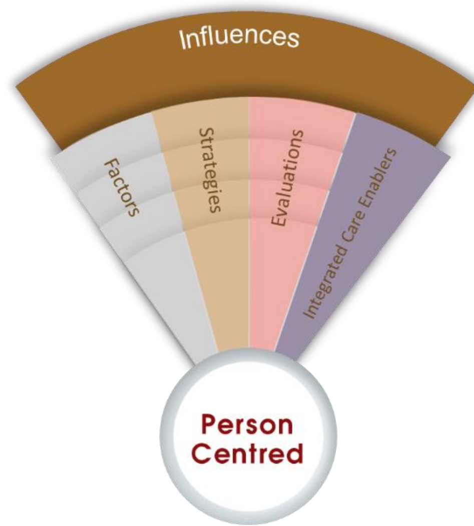
- Readiness, perceptions
- Appropriateness of skills, qualification, knowledge and competencies of the pharmacist and doctor
- Appropriateness of the service
- Attitudes or behaviours

Organisational context (eg. pharmacy, medical practice)

- Readiness and/or perceptions of the service by pharmacy and/or practice/hospital staff
- Competence and/or clear understanding by staff of their role(s) in the service
- Physical environment, workflow

Local Setting context:

- Location and/or accessibility of the service



- Local clinical priorities
- Readiness and perceptions of local community, population(s) and/or patient groups

System context:

- Readiness and/or perceptions of health-system funders and planners, national organisations, policy makers
- Funding mechanism
- Governance

Strategies

Strategies are the targeted methods or activities designed to address or accommodate the identified factors, or to enable progression of implementation or integration of the innovation or service into sustainable, routine practice. In the context of the Integrated Health Care Framework, strategies also serve to facilitate the person-centred development and delivery of care, and enhance pharmacist-doctor collaboration.

Strategies may include: joint service development and shared decision making, shared education and training, facilitation of change management, standardisation of care.

Evaluations

Evaluating the implementation of professional services is often overshadowed by the focus on patient outcomes and cost effectiveness in published studies.[26] Evaluations to measure the effect or outcomes of an innovation or service are essential, but these can also determine progress through the stages of implementation, and measure influencing factors and assessment of strategies. Evaluations can then support quality improvements in implementation and the provision of care, but they must be robust and adequately funded as an integral part of the innovation.

Evaluations may measure:

- Patient experience, acceptability, outcomes
- Service processes, impact and outcomes
- Measures of influencing factors and change over time
- Assessment of strategies and their effect
- Level of implementation eg. service awareness, demand, staff workflow/capacity

CONTEXTUAL DOMAINS OF PRACTICE OR INFLUENCE

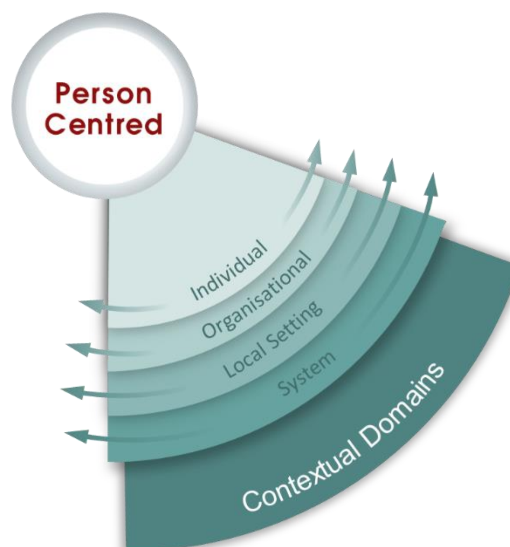
This section of the Integrated Health Care Framework describes the contexts in which the innovation or service is implemented, or by which it is influenced.

These contextual domains describe levels of influence or practice which enables factors to be categorised and strategies targeted.

The delivery of innovations or models of care can be described in the context of the domains, and factors compared to guide strategies that support principles of integrated care.

A factor of 'shared clinical priorities and alignment of care' for instance, can be illustrated by clinical pathways that cross primary and secondary care. Conversely, a shared electronic health record can assist communication of patient goals and care plans across all levels of care.

The four contextual domains described in the Integrated Health Care Framework are:



Individuals

The individual people with a role in the innovation or service, particularly the pharmacist and doctor, but also nurses, the wider MDT and the patients themselves.

Organisational

The organisational context includes the setting conditions and characteristics in which the innovation or service is to operate, as well as the collective team members. This may include the pharmacy, general practice, medical clinic, Primary Health Organisation (PHO), aged-care facility or hospital.

Local Setting

The environment and characteristics in which individuals and organisations are set and practice, and may include a number of pharmacies and practices, the community, suburb, town, city or District Health Board (DHB).

System

The broader professional, political and economic domain including the New Zealand health system and others, for example Welfare, Education and Justice.

Implementation of New Innovations / Services / Models of Care

Moullin's framework for the Implementation of Services in Pharmacy (FISpH)[26] provides a valuable description of the key concepts to consider when implementing professional pharmacy services; and also aligns well with a number of published models of integrated and collaborative care.

The Integrated Health Care Framework presented in this document adapts the FISpH model to draw together the factors that influence sustainable implementation of professional services, with those that influence collaboration and person-centred care. The resulting Integrated Health Care Framework guides planning for the development AND delivery of new integrated models of care or services (or revised existing service), and to enable these to become effective and sustainable practice.

Through each stage of implementation, and for each contextual domain, there are factors (enablers, barriers) that influence the implementation and/or integration of a service/innovation. Strategies to incorporate enablers and minimise or resolve barriers can then support the implementation process. Incorporating evaluation measures of both the service objectives and implementation processes, provides quality improvement and supports sustainable implementation.

Measuring the implementation of a service demonstrates 'how much and how well' a service is being provided, and is determined by 'reach' and 'fidelity'.[26] Reach refers to the number of 'services' performed, or patients participating, as a proportion of the eligible population group. While 'fidelity' refers to the extent to which the service, innovation or programme is being delivered in practice as it was intended and designed. Evaluating these factors allows review and adaptation of the innovation or service.

Six stages of implementation are described in this Integrated Health Care Framework, adapted from the FISpH model. These are:

1. Discovery and development

A pre-implementation stage where a trigger for innovation / service or care development is identified.

2. Exploration and assessment

Defining the innovation/service, assessing the characteristics and requirements, and delivery processes. Leads to a final decision whether to adopt or reject the innovation.

3. Preparation and planning

Planning the procedures and preparing individuals, organization(s), local setting and external health system prior to delivery of the innovation.

4. Testing

Initial trialing of the innovation or service, usually for a defined time period and/or limited number of participants.

Allows familiarisation and refinement of processes and roles, and to test patient perceptions, acceptability and demand.

5. Operation

Full provision of the innovation or service. Further refinements to improve integration into routine activities, maintain demand, and adapt to unforeseen factors. Ongoing measurement and evaluation as quality improvement and to ensure objectives being met.

6. Sustainability

Continued provision of the service or innovation while maintaining capacity and support for maintaining outcomes and benefits over an extended period of time.

Applying the Integrated Health Care Framework to a practice innovation or new service includes identifying, exploring and defining the factors that relate to the individuals and organisations involved in delivery, the local setting priorities and considerations, and the elements relating to the over health system. Each stage of implementation includes strategies and evaluations to inform adaptation and progression to ensure the innovation or service can achieve it's goals.

3. Implementation

With the components of the Integrated Health Care Framework described, the template below can be used to structure how the various factors and elements required can be identified and considered, as a potential new innovation or service is developed, evaluated and implemented.

Integrated Health Care Framework Template

Innovation / Service / Model of Care	
Define the innovation / service /model of care. Identify the trigger(s) for considering an innovation, service, or model of care. This can influence the aim of the innovation. What are the potential characteristics of the innovation or service that will define the objectives, methods, activities and outcomes of the service?	Initial definition of the aims and objectives of the innovation /service /model of care that may be refined during the exploration phase of implementation. Who is the target population? What are the objectives? Why does the patient need this? How will they benefit? Who will do what? What are the roles and responsibilities? Consider how existing standards of practice, clinical evidence, local and international experience influences how the innovation /service /model of care can be developed and implemented. Consider and incorporate enablers for integrated person-centred care for the patient at all context levels and stages of development, implementation and evaluation (Table 1).

Influences				
Factors	**Individual**	**Organisational**	**Local Setting**	**System**
Begin to consider some of the factors of the innovation /service /model of care. What are the enablers, facilitators, and other variables that may influence: • the innovation or service or model of care • degree of integration & 'person-centredness' • implementation process (as some factors are identified they may become a strategy itself)	Enablers for integrated person-centred care in the individual context (Table 1) What barriers and facilitators relate to the individuals that will be involved? Who are the individuals involved and what factors relate to them? What are the person-centred factors to consider? How will information be communicated between individuals? How will relevant information be	Enablers for integrated person-centred care in the organisational context (Table 1) What are the barriers and facilitators within the organisation(s)? Which organisations will be involved, what are the characteristics of the organisation that must be considered? How will information be communicated? What funding mechanism is required? What organisational governance is required?	Enablers for integrated person-centred care in the Local Setting context (Table 1) What are the barriers or facilitators in the local setting? What are the characteristics, needs, influences that relate to the local setting? What is the target population and how do local health priorities influence? Are a number of organisations delivering the innovation /service /model of care? How can development and implementation be	Enablers for integrated person-centred care in the System context (Table 1) What are the barriers or facilitators at the system level? What will be needed from the health system? Is there a supportive funding mechanism? What is the influence of legislation, regulations and/or codes? Are there regulatory barriers to overcome? Does the innovation / service /model of care align with Govt strategy and/or health targets?

	shared across the wider patient-care team?		supported and experience be shared across organisations? Is a governance mechanism required at the local level across a number of organisations?	Is the innovation /service / model of care being developed across a number of localities? How will development and implementation be supported and experience shared? What system-level governance mechanism is required?

Strategies	**Individual**	**Organisational**	**Local Setting**	**System**
What strategies can be put in place to accommodate enablers and overcome barriers?	What are the strategies that could address barriers and accommodate facilitators/enablers for individuals? Are there any knowledge, skills, and competencies to be achieved?	What are the strategies that could address barriers and accommodate facilitators/enablers for the organisation(s)	What are the strategies that could address barriers and accommodate facilitators/enablers for the local setting?	What are the strategies that could address barriers and accommodate facilitators/enablers at the system level? How can the system provide active and meaningful support? Are temporary measures required to accommodate aspects of the innovation / service /model of care during development / testing? What could be a longer-term solution if the innovation is successful? E.g. regulatory changes, unique funding mechanism,

Evaluations	**Individual**	**Organisational**	**Local Setting**	**System**
What evaluations will best measure the factors and strategies, implementation progress and patient/service outcomes? What does a 'successful outcome' look like for each contextual level – how would we measure/evaluate this?	Evaluations of strategies, change in factors, implementation progress for individuals	Evaluations of strategies, change in factors, implementation progress for organisation(s)	Evaluations of strategies, change in factors, implementation progress for local needs, or that a local level monitor may require.	Evaluations of strategies, change in factors, implementation progress for the system level, or that a system level may want to monitor e.g. Ministry may require measurement and evaluation of specific factors.

Level of Collaboration		
	Communication Level of Collaboration	**Full Collaboration of Care**
How well would different levels of pharmacist-doctor collaboration support the principles of integrated person-centred care, and successful development and implementation of the innovation /service /model of care? Consider the identified collaboration factors, and incorporate as **influences** (barriers/facilitators), **strategies** and **evaluations**, in the development and implementation of the innovation /service / model of care.	Would a communication level of collaboration between a pharmacist and doctor be adequate and appropriate for the delivery and/or implementation of the innovation /service /model of care? Can strategies and evaluations further enhance collaboration? Identify the pros and cons of delivery with this level of collaboration – is this acceptable, can gaps be addressed, is a higher level of collaboration mandatory?	What would be the characteristics of a fully collaborative practice between a pharmacist and doctor in the delivery and/or implementation of the innovation /service / model of care? Can strategies and evaluations further enhance collaboration?

Implementation				
Exploration	**Individual**	**Organisational**	**Local Setting**	**System**
Research and evaluate existing information that may influence the development and/or implementation of the innovation/service, e.g. clinical evidence, published studies, standards of practice, guidelines and statements, including practices / mechanisms that support integrated person-centred care. The end of the **exploration** phase will be the decision to adopt or reject the innovation or service. Adoption may be subject to a 'trial' evaluation process.	Identify, assess and appraise ALL applicable **factors**, **strategies** and **evaluations** required for the development and implementation of the integrated person-centred innovation /service /model of care **across each contextual domain**. Consider feasibility and support across each of the contextual domains.			
Preparation	**Individual**	**Organisational**	**Local Setting**	**System**
Following adoption of the innovation/service, prepare to implement the service and strategies. Plan and implement the strategies required at each contextual level before the testing phase begins. Use evaluations to adapt and refine service processes and implementation.				

Testing	Individual	Organisational	Local Setting	System
Conduct initial trial of the service for a defined period or limited number of participants. Define the measures or objectives at each contextual level that will determine whether the innovation/service is achieving the desired/expected outcomes. Use evaluations to adapt and refine service processes and implementation.				
Operation	**Individual**	**Organisational**	**Local Setting**	**System**
Full provision of the innovation/service is implemented. Evaluation and monitoring refines service provision and ensures principles of integrated person-centred care are maintained. Evaluation measures to determine the requirements for sustainable service provision including sustainable resourcing, funding, staffing, patient-centred factors are being achieved, outcomes maintained.				
Sustainability	**Individual**	**Organisational**	**Local Setting**	**System**
Continued delivery of the innovation/service, maintaining capacity and support for provision and benefits being demonstrated over an extended period of time. Service has become routine Maintain processes of evaluation as quality improvement measures				

Example Application of The Integrated Health Care Framework: 'General Practice Pharmacist'

To illustrate application of the Integrated Health Care Framework, an example innovation is partially described below.

Please Note this should be considered for demonstration purposes only as not all elements have been fully investigated OR incorporated. This would be performed in detail as part of a collaborative development process involving all potential stakeholders.

Innovation / Service / Model of Care	
Identify the trigger(s) for considering an innovation, service, or model of care. This can influence the aim of the innovation. Define the innovation /service / model of care. What are the potential characteristics of the innovation or service or model of care that will define the objectives, methods, activities and outcomes of the service?	**General Practice Pharmacists (GPP)** A pharmacist with advanced clinical knowledge fully integrated into the general practice team can improve quality of care related to the use of medicines. General practice pharmacist (GPP) is an integrated member of the patient's medical care team which has full oversight of care. Aspects of role focus on patient care and optimising health, supporting practice staff through medicine information and education, and monitoring, and practice-directed quality improvement activities related to medicines use, prescribing practices, adverse event management. For the patient: Enablers for integrated person-centred care + at one point of contact, the patient can access their general practitioner (GP), general practice pharmacist (GPP), practice nurse (PN) and any other members of the MDT. Role of the GPP to review use and effect of medications, educate and advise on use of medications to obtain optimal effect, to identify and address any medication-related problems. Activities can include: patient medication review, medicines information, medicines reconciliation, therapeutic drug monitoring, medication use evaluation (usage and prescribing audit and feedback), medicines management – assessment/evaluation and optimisation, adverse drug reaction management, patient education/advice, prescribing as role requires. The GPP will maintain patient-care connections with hospital pharmacist(s), community pharmacist(s), aged and residential care providers, and others involved in the delivery of care to the patient to ensure seamless access and transition of care. The GPP will maintain patient-care connections with other members of the interprofessional team delivering care to the patient and will liaise with and refer to other members for the benefit of the patient.

Influences				
Factors	**Individual**	**Organisational**	**Local Setting**	**System**
Begin to consider some of the factors of the innovation/service. What are the enablers, facilitators, and other variables that may influence: • the innovation or service • degree of integration & 'person-centredness' • implementation process (as some factors are identified they may become a strategy itself)	**Patient** Enablers for integrated person-centred care Understanding of role / purpose of the GPP Accessibility incl. any cost, setting preferences (may change depending on task). eg. home, practice,	**Practice**: Enablers for integrated person-centred care How does the funding mechanism influence the GPP role/function within the organisation? Eg. internal vs external funding, GPP hours funded.	**Funder**: Enablers for integrated person-centred care Funding mechanism that supports integrated practice and does not compete with existing services	Enablers for integrated person-centred care Recognised professional standards of GPP with respect to role, activities, competencies, knowledge, and skills.

	off-site clinic eg. marae, event, Informed and empowered to enable decision making particularly with respect to medicines **Pharmacist** Clinically and culturally competent practitioner Role definition: activities / tasks, boundaries, +/- prescribing, competencies, skills, experience, level of advanced clinical knowledge (eg. PG diploma / Masters), written and oral communication skills, hours of work, salary / wage commensurate with clinical expertise and responsibilities. Role does not compete with, but is complementary to other services that may exist both within the practice and in wider health system. Training requirements for GPP role and/or the specific practice employed in. What oversight, if any, may be required? Shared clinical care protocols / pathways **GP** Recognition and utilisation of pharmacist knowledge and role. Shared goal / purpose for role **PN (and others in MDT)** - Understanding of role and expertise of GPP	How will the funding and delivery of GPP role be structured, so it doesn't compete with or duplicate existing services? Advertising/promotion of role, tasks, function within the organisation and as part of the organisation's communications. What are the practice targets/goals the GPP could contribute to? Physical environment – where will the pharmacist be, what resources are required, How will appointments be made, how will referrals work Standard and practice of documentation & reporting Recording of interventions/activities. Contribution to / participation in MDT meetings: patient, CME etc Organisation understands AND supports role / purpose of the GPP. IT requirements. Common infrastructure for collecting and exchanging information.	**Other practices, community pharmacies, hospital(s):** What existing services / roles may/will the GPP connect with? e.g. local community pharmacist delivered services such as dispensing / supply, adherence support, medicines use review, dose administration aids (eg. blister packaging), Identification of local health needs to inform targeting of GPP role. Shared electronic information / communication systems across providers and geographical / professional / organisational boundaries.	Recognition within scope of practice and existing indemnity cover is appropriate. Recognition and promotion / advocacy of GPP role by professional organisations.

Strategies	Individual	Organisational	Local Setting	System
What strategies can be put in place to accommodate enablers and overcome barriers?	Person-centred practice. Promotion and explanation of GPP role Co-development of role between pharmacist, GP and patient.	Orientation process for GPP, including sitting alongside other MDT members in their roles(as appropriate) Shared CPD and learning activities, including active involvement of GPP. Practice system(s) supports shared care and accommodates GPP role and activities. Local protocols, shared care guidelines and/or pathways are identified and used.	Supported network of local GPPs. GPP involvement / representation at governance levels.	Proactive representation and advocacy by professional organisations. Mechanisms in place to support non-competitive funding. Support for review and development of standards of practice as relates to GPP role.

Evaluations	Individual	Organisational	Local Setting	System
What evaluations will best measure the factors and strategies, implementation progress and patient/service outcomes? What does a 'successful outcome' look like for each contextual level – how would we measure/evaluate this?	Patient: Clinical outcomes/ measures Patient experience survey/questionnaire Number of patients seen Adherence scores Patient satisfaction Practice related outputs such as bulletins written, drug utilisation reviews, contribution to CME &/or MDT meetings MTA / MUR reviews conducted Prescribing / treatment recommendations accepted (usefulness)	Costs of service, costs saved/avoided. Numbers of patients seen, medication reviews performed, extent of deprescribing. Activities delivered for target groups, evaluation of benefit/effectiveness. Numbers of referrals to GP, PN, community pharmacist. GP/Practice Nurse time saved Evaluation of: - Education contribution / activity / participation - Gaps in knowledge / skills to fully enable role	Community health needs identified and address by GPP.	Local evaluations collated and compared at a National level. - Patient outcomes - Service outcomes - Health Strategy goals

	Prescribing / treatment recommendations declined Time taken per review / consultation Domiciliary/care facility visits Medicines information queries answered Frequency of interaction with MDT members Adaptability of role, to ensure it is complementing other roles/services in the practice.	- Contribution to / participation in MDT meetings: patient, CME etc Evaluation of testing phase of implementation – service objectives being met, service implementation strategies achieved.		
Level of Collaboration				
	Communication Level of Collaboration		**Full Collaboration of Care**	
How would different levels of pharmacist-doctor collaboration support the principles of integrated person-centred care, and successful development and implementation of the innovation/service? Consider the identified collaboration factors, and incorporate as **influences** (barriers/facilitators), **strategies** and **evaluations**, in the development and implementation of the innovation / service.	This role specifically relates to a pharmacist integrated in the general practice. In a newly established role in a practice, the pharmacist may not be accepted as a fully recognised integrated team member – therefore strategies to enhance this should be used, for example: - Orientation process including where appropriate sitting in alongside other members of the practice team. - Active participation in education meetings - Regular opportunity to communicate, interact and contribute to patient care - Opportunity to demonstrate knowledge and pharmaceutical care		General Practice pharmacist is fully integrated into the practice team. GP, PN and MDT trust the pharmacist and their recommendations/advice MDT understands and recognises role, unique knowledge and skills of the pharmacist – AND actively utilises these Pharmacist and GP, MDT regularly communicate formally and informally Professional interaction	
Implementation				
Exploration	**Individual**	**Organisational**	**Local Setting**	**System**
Research and evaluate existing information that may influence the development and/or implementation of the innovation/service, e.g. clinical evidence, published studies, standards of practice, guidelines and	Local and international studies and experience (especially Australian, UK experience) informs	Practice is considering employing a General Practice Pharmacist.	Local demographic analysis: determine target population, patient groups or those with high health	Development of GPP career pathway and practice standards by professional bodies.

statements, including practices / mechanisms that support integrated person-centred care. The end of the **exploration** phase will be the decision to adopt or reject the innovation or service. Adoption may be subject to a 'trial' evaluation process.	development and implementation of general practice pharmacist. Characteristics of the pharmacist include: team fit, required knowledge and skills, How will the GPP time be structured? How will sick / annual / parental leave be covered? Will the GPP role be actively supported by all members of the practice team? How will patients access the GPP? Direct appointment or referrals? What funding for the GPP role is available? Does this influence FTE allocation?	Exploring and defining purpose of role: via published articles, job descriptions, conversations with other practices/clinical pharmacists/GPs, professional organisations, Estimation of target population for GP Pharmacist: GP feedback re prevalence of polypharmacy, adverse drug effect management, number of patients on specific target medicine(s) / medicine groups, high cost medicines use, "frequent flyer patients", frequent hospital admissions, Funding: of position, resources?, potential for job-sharing across practices, primary care funding stream/targets, What is the existing level of collaboration across the organisation – what processes would need to be put in place to improve level of collaboration Will the GPP provide care to and aged or residential care facilities? Is the GPP shared across different practice sites? (e.g. if several sites as part of a PHO or health alliance) Physical location for GPP within practice.	needs with actual or suspected medication related problems, polypharmacy, and/or complex medication regimes. Are there a number of practice pharmacists in an area that could be supported through a peer-network?	

Preparation	Individual	Organisational	Local Setting	System
Following adoption of the innovation/service, prepare to implement the service and strategies. Plan and implement the strategies required at each contextual level before the testing phase begins. Use evaluations to adapt and refine service processes and implementation.	Knowledge and training requirements are addressed. GPP recruitment. Orientation to practice and team members. GPP becomes familiar with use and maintenance of patient records, appointment scheduling and other applicable administrative aspects. Needs and priorities of the practice team and its patients are identified. GPP develops professional relationships with practice team members +/- local community pharmacies.	How to promote the 'service'/role, Education for the practice team on GPP role, and for GPP about other team members' roles. Practice infrastructure in place to support GPP role. Target individual patients or patient groups identified.	Peer-network for GPPs in place. Funding mechanism in place. Local health needs identified.	Funding mechanism in place. Are there claiming processes to consider?

Testing	Individual	Organisational	Local Setting	System
Conduct initial trial of the service for a defined period or limited number of participants. Define the measures or objectives at each contextual level that will determine whether the innovation/service is achieving the desired/expected outcomes. Use evaluations to adapt and refine service processes and implementation.	Any knowledge gaps need addressing: pharmacist, doctor, patients Testing phase may consider shortened hours, less frequent GPP clinics, or may be commenced with the intention of adapting role and activities as experience is gained. Evaluation of processes, service delivery to inform adaptation and improvements. Measurement of patient experience / acceptance.	Organisational outcome(s) that determine successful testing may vary depending on practice, funding, specific role. Testing of communication mechanisms and networks.		

Operation	Individual	Organisational	Local Setting	System
Full provision of the innovation/service is implemented. Evaluation and monitoring refines service provision and ensures principles of integrated person-centred care are maintained. Evaluation measures to determine the requirements for sustainable service provision including sustainable resourcing, funding, staffing, patient-centred factors are being achieved, outcomes maintained.	Consider ongoing professional development requirements. As experience is gained and benefits demonstrated, consideration of additional activities or role expansion eg. prescribing, external clinics			

Sustainability	Individual	Organisational	Local Setting	System
Continued delivery of the innovation/service, maintaining capacity and support for provision and benefits being demonstrated over an extended period of time. Service has become routine Maintain processes of evaluation as quality improvement measures		Ongoing active contribution of the GPP to delivery of care to the practice.		

EXAMPLE APPLICATION OF THE INTEGRATED HEALTH CARE FRAMEWORK: TRIMETHOPRIM RECLASSIFICATION

This example for applying the Integrated Health Care Framework considers the 2012 reclassification of trimethoprim to permit pharmacist supply without a prescription, had the application for reclassifying been informed by this Integrated Health Care Framework.

Innovation / Service / Model of Care	
Define the innovation / service. Identify the trigger(s) for considering an innovation, service, or model of care. This can influence the aim of the innovation. What are the potential characteristics of the innovation or service that will define the objectives, methods, activities and outcomes of the service?	Pharmacist supply (without prescription) of a single 3-day course of trimethoprim 300mg, once daily for women with an uncomplicated urinary tract infection. Rationale: community pharmacists assess symptoms of simple UTIs in their pharmacies on a daily basis. Current over the counter management options restricted to urinary alkalinisers for symptomatic relief. Current best practice for uncomplicated UTIs is empirical treatment based on assessment of symptoms which a pharmacist could determine. **Benefits for service:** Improved accessibility to effective treatment of a UTI. Reduced patient demand for practice appointment time for a low-risk patient.

Influences				
Factors	**Individual**	**Organisational**	**Local Setting**	**System**
Begin to consider some of the factors of the innovation/service. What are the enablers, facilitators, and other variables that may influence: • the innovation or service • degree of integration & 'person-centredness' • implementation process (as some factors are identified they may become a strategy itself)	Enablers for integrated person-centred care in the individual context (Table 1) **Patient:** Asked about requirements for privacy and these are met. Will be provided within information required to support self-management following the treatment, OR for supporting need to see GP to access medical assessment and management. **Pharmacist:** Education / credentialing requirements for assessment and management of simple UTI, referral criteria for contraindications and	Enablers for integrated person-centred care in the organisational context (Table 1) **Pharmacy:** A counselling room is available for women choosing to use this, or a quiet area in the pharmacy allowing an appropriate level of privacy. Staff education and awareness. What is the risk of financial incentives/disincentives associated with the service? Is it more appropriate to focus funding on the consultation and not determined by supply? **General Practice:**	Enablers for integrated person-centred care in the Local Setting context (Table 1) Consideration of microbiological profile of likely organisms, antimicrobial resistance patterns, appropriateness of trimethoprim. DHB support for mechanisms that permit the ideal/desired funding process.	Enablers for integrated person-centred care in the System context (Table 1) What regulatory controls would best permit pharmacist supply of trimethoprim? - Reclassification via MCC - Supply under a standing order Is the service/programme recognised as a funded scheme as it reduces general practice demand? What factors / strategies / evaluations would be required to obtain support for public funding? Consider requirements for Pharmac general rules to permit funding of pharmacist-provision of medicines over the counter

	precautions, understanding of signs/symptoms of serious illness requiring more urgent medical attention, professional practice standards and obligations. **GP:** Medical factors to consider in programme, what should pharmacist be aware of, what can pharmacist assess/address	Communication and requirements for information sharing between pharmacy and general practice Awareness and support from GPs Is the reduction of demand for appointment times for a (defined) low-risk patient a benefit for the practice? Will the practice be financially disadvantaged by a pharmacist-delivered service? If so, can a funding mechanism be found that does not disadvantage the practice?		when part of an approved scheme.
Strategies	**Individual**	**Organisational**	**Local Setting**	**System**
What strategies can be put in place to accommodate enablers and overcome barriers?	Education and training Shared guideline development Is a protocol required	Education and training Meetings between practices and pharmacies to demonstrate objectives of service and agree to communication and information sharing mechanisms.	DHB to support required funding mechanism (if publically funded service). If required, strategy to monitor microbiological susceptibilities before and after the service commences.	Obtain regulatory permissions. Revise Pharmac general rules to permit pharmacist-supply of medicines when part of an approved scheme (where dishonest incentives to supply to obtain funding are removed).
Evaluations	**Individual**	**Organisational**	**Local Setting**	**System**
What evaluations will best measure the factors and strategies, implementation progress and patient/service outcomes? What does a 'successful outcome' look like for each contextual level – how would we measure/evaluate this?	Patient experience/ evaluation Numbers of patients assessed vs treated by pharmacist vs referred to GP Pharmacist assessment processes Communication processes.		Microbiological resistance patterns.	

	Uptake and utility of education. Effectiveness of practice guidance and resources, and patient information,			

Level of Collaboration		
	Communication Level of Collaboration	**Full Collaboration of Care**
How would different levels of pharmacist-doctor collaboration support the principles of integrated person-centred care, and successful development and implementation of the innovation/service? Consider the identified collaboration factors, and incorporate as **influences** (barriers/facilitators), **strategies** and **evaluations**, in the development and implementation of the innovation / service.	Trimethoprim would be supplied by a community pharmacist from a licensed community pharmacy. Service predominantly requires a "communication" level of collaboration for delivery, but agreed collaborative process for design and development. To reduce the risk of fragmented care, GPs and microbiologist (as relevant specialist) to be involved in service and guidelines development. Information sharing mechanism to be in place to inform GP of their patient's assessment/management for a simple UTI – to inform ongoing management should they present to GP after receiving trimethoprim from pharmacist. Full access and utility of an electronic shared care record by the pharmacist for timely and accurate documentation of care. Mechanisms in place to permit collaborative discussion of an individual patient's condition, and that permits variation to management guidance when pharmacist has received recommendation from GP.	A fuller integrated person-centred care approach could be given to the development of a more comprehensive UTI assessment and management care programme that may involve (as appropriate) a greater degree of investigation and assessment such as urine dipstick analysis, urine cultures, and access to a greater range of treatment options. Agreed, co-developed and detailed clinical and practice guidelines would define roles, responsibilities and the clinical pathway of pharmacist-assessment and management, through to GP and potentially secondary care.

Implementation				
Exploration	**Individual**	**Organisational**	**Local Setting**	**System**
Research and evaluate existing information that may influence the development and/or implementation of the innovation/service, e.g. clinical evidence, published studies, standards of practice, guidelines and statements, including practices / mechanisms that support integrated person-centred care. The end of the **exploration** phase will be the decision to adopt or reject the innovation or service. Adoption may be subject to a 'trial' evaluation process. Identify, assess and appraise ALL applicable **factors**, **strategies** and **evaluations** required for the development and implementation of the integrated person-centred innovation/service/model of care **across each contextual domain**.	Collaboratively define or determine: - Target group of women and symptom history appropriate for pharmacist supply of trimethoprim - Contraindications/precautions in symptoms or patient history that would prohibit pharmacist supply - Agreed referral pathway for women and men identified by pharmacist who require medical assessment/management - Clinical management of simple UTI, required investigations, - What are the education and/or credentialing requirements (if any) for the pharmacist to deliver this service - What medical advice would a GP want a pharmacist to convey to the patient if the pharmacist provided trimethoprim for UTI - What is the view of microbiologists regarding the assessment/treatment guidance - How is the service / programme to be funded? - What monitoring or evaluation is required – and at each contextual domain?			

Consider feasibility and support across each of the contextual domains	- What strategies would assist a collaborative delivery of care, so GP remains aware of assessment and provision (or refusal) of trimethoprim for a UTI. eg. communication and sharing of information. - If the focus of the service is specifically supply of trimethoprim or provision of a UTI assessment and management service that may accommodate a range of assessment/investigation mechanisms and treatment options. - Process for development of service would identify influences from representatives of each contextual level eg. pharmacists, GPs, DHBs, professional organisations, Ministry of Health, Medsafe

Preparation	**Individual**	**Organisational**	**Local Setting**	**System**
Following adoption of the innovation/service, prepare to implement the service and strategies. Plan and implement the strategies required at each contextual level before the testing phase begins. Use evaluations to adapt and refine service processes and implementation.	Pharmacist undertake any education / training. Have practice guidance and support resources in place. Aware of funding mechanism. How is the new service to be promoted? (Consider regulatory controls around advertising and promotion).	Pharmacy has consultation room as an option for patients to choose their counselling privacy requirements.	Necessary resources and procedures for microbiological surveillance in place, as required. Any required measures or evaluations required at local level have been identified.	Regulatory changes made, as required. Any funding mechanisms agreed and in place, as required. What factors or evaluations are needed at the system level? Who requires these and what purpose will they have?

Testing	**Individual**	**Organisational**	**Local Setting**	**System**
Conduct initial trial of the service for a defined period or limited number of participants. Define the measures or objectives at each contextual level that will determine whether the innovation/service is achieving the desired/expected outcomes. Use evaluations to adapt and refine service processes and implementation.	Pharmacist commences service with first few patients. Evaluates ability to assess, revisits guidance / education material as required. Identify any needs for ongoing service delivery, adapt processes to meet these. Communication with general practice is evaluated and adapted as required.	Pharmacy staff made aware of new service, aware of questions or procedures to identify potential patients for pharmacist. If more than one pharmacist in a pharmacy is delivering the service, schedule consultations so everyone can participate and evaluate during testing phase.	Is a trial period required to determine if service is meeting objectives? What would determine a successful service at a local setting level?	Reporting of required indicators to obtain national picture, if this was required.

Operation	Individual	Organisational	Local Setting	System
Full provision of the innovation/service is implemented. Evaluation and monitoring refines service provision and ensures principles of integrated person-centred care are maintained. Evaluation measures to determine the requirements for sustainable service provision including sustainable resourcing, funding, staffing, patient-centred factors are being achieved, outcomes maintained.	Service is being fully delivered. Ongoing evaluation, particularly of patient-experience / evaluation, for purpose of quality improvement. Evaluation of adherence to treatment guidelines and collaborative communication for appropriate joint-decision making between pharmacist and GP when outside of guidelines.	Pharmacies and practices maintain ongoing communication with respect to service for quality improvement and practice improvement.		Reporting of required indicators to obtain national picture, if this was required.
Sustainability	**Individual**	**Organisational**	**Local Setting**	**System**
Continued delivery of the innovation/service, maintaining capacity and support for provision and benefits being demonstrated over an extended period of time. Service has become routine Maintain processes of evaluation as quality improvement measures	As above	As above		

An illustration of Medicines Management In A Collaborative Integrated Care Environment - A Patient Journey

Further information on the medicines management services discussed can be found in the National Framework of Pharmacist Services.[4]

Patient

When picking up her latest dispensed repeats, Mrs Smith mentions to Nicky her community pharmacist that she wishes she wasn't on so many medicines and doesn't really know what they're all for anyway.

Community Pharmacist

Nicky explores this further with Mrs Smith and begins to learn Mrs Smith struggles to remember when to take her medicines, and doesn't understand the purpose of some. Nicky contacts Mrs Smith's general practitioner and chats about the concerns that Mrs Smith has. She learns that the doctor has discussed with Mrs Smith many times what her medications are for, and in fact has a yellow medication card made for her but Mrs Smith keeps misplacing it. This has been more of a problem since Mrs Smith's husband died the previous year. Nicky and the doctor agree it would be great for Nicky to spend more time with Mrs Smith to determine what advice or support she might need, so schedules to meet at Mrs Smith's house the next day for a Medicines Use Review (MUR).

Mrs Smith's car was in the garage being serviced the next day, so she was very happy that Nicky was able to visit her at home for the MUR as she had known Nicky for many years and often took baking into the pharmacy for her and her team. Nicky was also pleased with the opportunity to visit Mrs Smith at home and check how she was managing since her husband had passed away.

The Medicines Use Review (MUR) is a comprehensive and systematic evaluation of a patient's concerns with, understanding of, and adherence to prescribed medication treatment. It is useful for any eligible patient who receives personalised education and support to improve self-management, and an agreed action plan to address adherence issues.

During the MUR Nicky identifies and addresses some concerns Mrs Smith had with her medicines, and reinforces her knowledge about their purpose. However Mrs Smith raised some issues that may relate to adverse effects of the medicines or treatment of her conditions. Nicky also knows that Mrs Smith is taking a complex regimen and interactions may be contributing to these problems. Nicky thinks Mrs Smith would benefit from an MTA. During the MUR Nicky reconciled the medications Mrs Smith takes and compiles a list of all known medicines prescribed and taken over the counter, along with purchased health supplements. Nicky documents what was identified in the MUR and the care plan she has suggested Mrs Smith would benefit from having in the electronic shared care record, along with logging a referral for a Medicines Therapy Assessment (MTA) and the reasons for this. At the same time she links the doctor into the referral for the MTA so that the doctor understands why Nicky has referred her.

An MTA is a systematic, patient-centred clinical assessment of all medicines currently taken by a patient, identifying, resolving and preventing medication-related problems as well as optimising the effectiveness of medication treatment. Patients concerned about the effectiveness of treatment, or may be experiencing adverse effects will be reviewed by a clinically experienced pharmacist. Medication-related problems are identified and managed either directly by the pharmacist or collaboratively with the prescriber in consideration of treatment goals.

MTA reviews may be conducted by any accredited pharmacist with the required knowledge and skills. MTA pharmacists may be community pharmacists or contracting consulting pharmacists who work collaboratively with a local general practice, hospital clinical pharmacists conducting outpatient clinics or provide a primary-secondary care liaison, by general practice pharmacists who are integrated members of the general practice

team, or clinical advisory pharmacists/pharmacist facilitators who are similarly based within the general practice or a PHO.

Practice Pharmacist

Nicky refers Mrs Smith to Angela who is the Practice Pharmacist working with Mrs Smith's GP practice. Angela arranges for Mrs Smith to come into the medical centre and see her GP and then will see her directly afterwards.

During the short delay in the waiting room, prior to the consultation with Mrs Smith, the doctor, Carol, has briefly checked the medical record, and looked at the recent investigations.

General Practitioner

Carol, the GP, walks Mrs Smith down to her office after a short delay in the waiting room, and during the course of the consultation clarifies her concerns and issues with her medication, her medical problems and her life in general. She ensures that she reads and discusses with Mrs Smith the recommendations of the pharmacist that are in the medical record. She then examines Mrs Smith and discusses ongoing management of a number of issues, including that she would benefit from a thorough discussion with the pharmacist regarding her medicines in general.

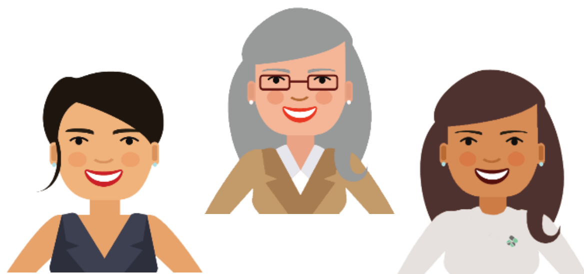
When Mrs Smith leaves the office she is taken directly through to Angela who goes through all of Mrs Smith's medication in light of the most recent consultation, noting the comments made by the doctor and suggests stopping one of the medicines for her blood pressure that might be contributing to her dizziness. An alert is sent through to Carol who sees the suggestion and agrees to the plan outlined by Angela. Mrs Smith then leaves having been given both verbal and written information about the changes to her medication that she is going to trial over the next two weeks, when she will return for review with the pharmacist.

Integrated Multidisciplinary Team

GP(s), Community Pharmacist(s), Practice Pharmacist(s), Practice Nurse(s), other MDT members

Mrs Smith's care plan is discussed in the weekly multidisciplinary team meeting. The team review and discuss ongoing management and monitoring of treatment which is documented in the shared care record.

In the meantime, Angela has now completed her postgraduate training and has been registered in the Pharmacist Prescriber Scope of Practice.



Practice Pharmacist (Pharmacist Prescriber)

Mrs Smith returns two weeks later for her follow-up appointment with Angela. Angela is comfortable that Mrs Smith is progressing well under the new plan, her dizziness has resolved and her blood pressure remains well controlled. As a newly qualified prescribing pharmacist, Angela writes a prescription for the next 3 months treatment, at which time she will make an appointment with her doctor for the next review. Mrs Smith takes her prescription to Nicky for dispensing, who is pleased to see she is doing much better.

Images by Katemangostar / Freepik

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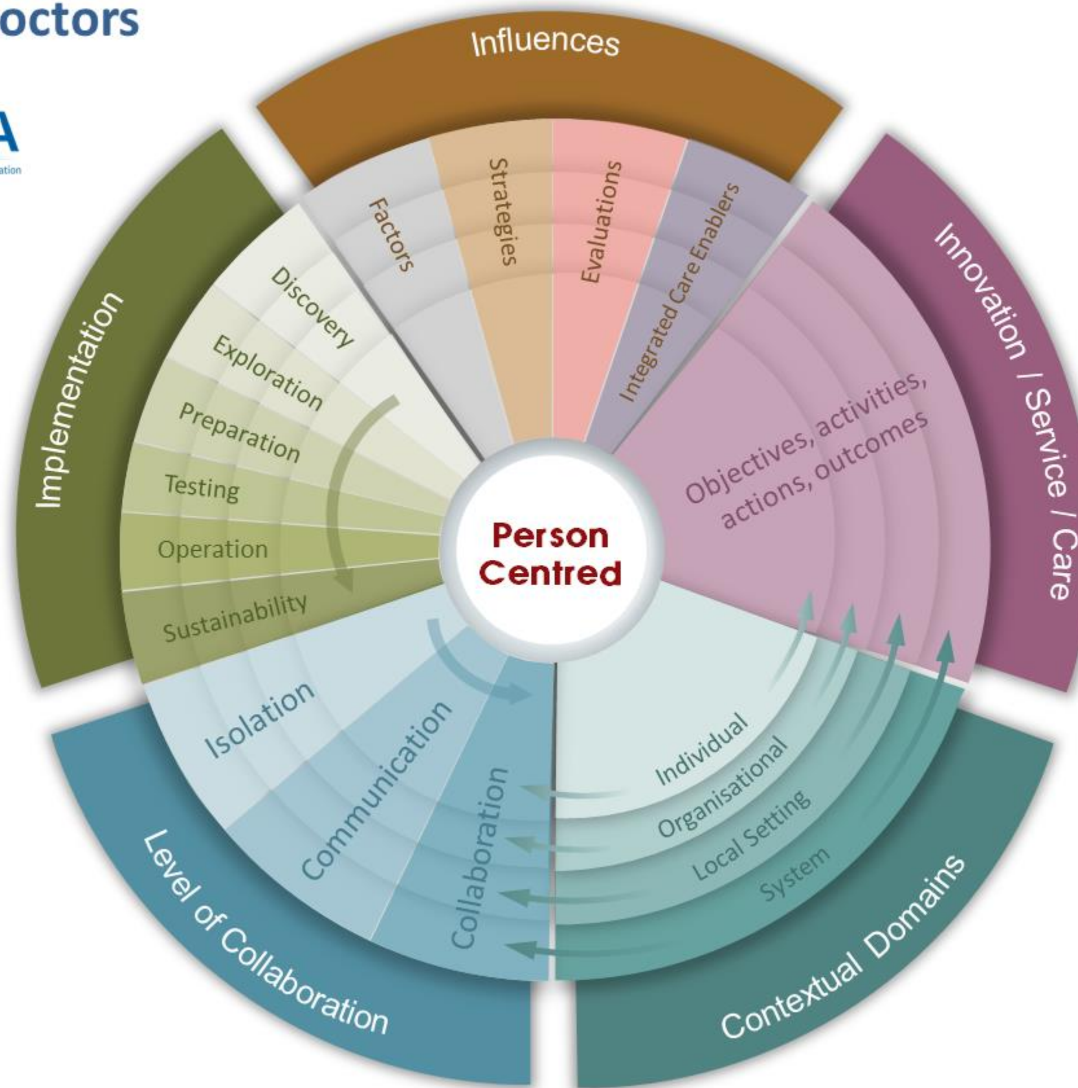
Integrated Health Care Framework for Pharmacists and Doctors



Adapted from:

1. Moullin JC et al, Model for the evaluation of implementation programs and professional pharmacy services. RSAP2016;12(3):515–22
2. Bradley F et al, Integration and differentiation: A conceptual model of general practitioner and community pharmacist collaboration. RSAP2012;8(1):36–46