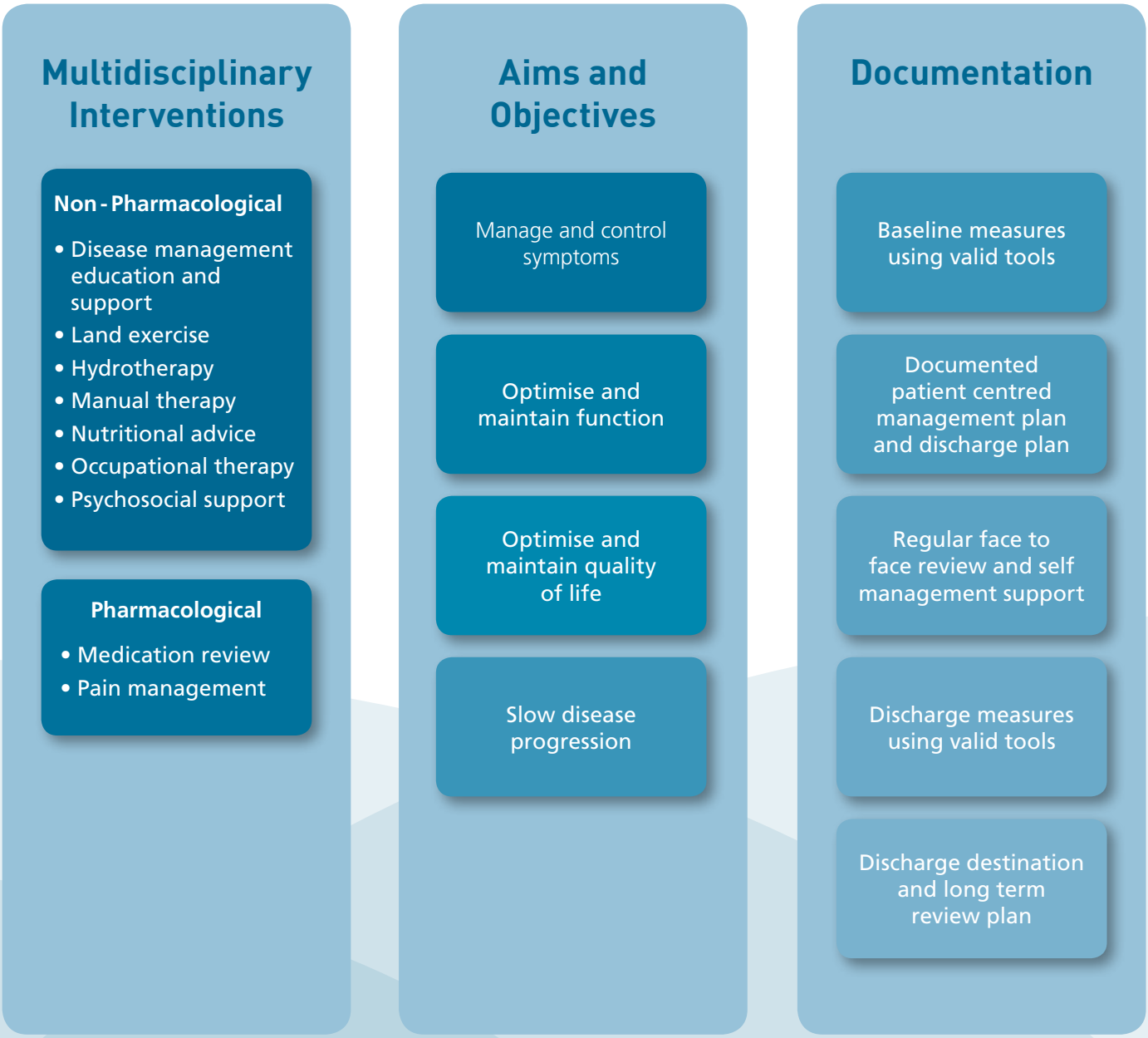
KEY ELEMENTS OF THE NSW MODEL OF CARE FOR THE OACCP

The model of care for the OACCP describes a comprehensive, multidisciplinary management program for OA of the hip and/or knee. It is structured around a quality framework that is person-centred, collaborative and evidence-based, and which targets improvements in pain, function and quality of life for the individual living with this chronic disease. The ideal participant journey through the OACCP will include the use of some, or all, of the following elements.

Diagram 2: Osteoarthritis Management Plan



Overview of the chronic care model

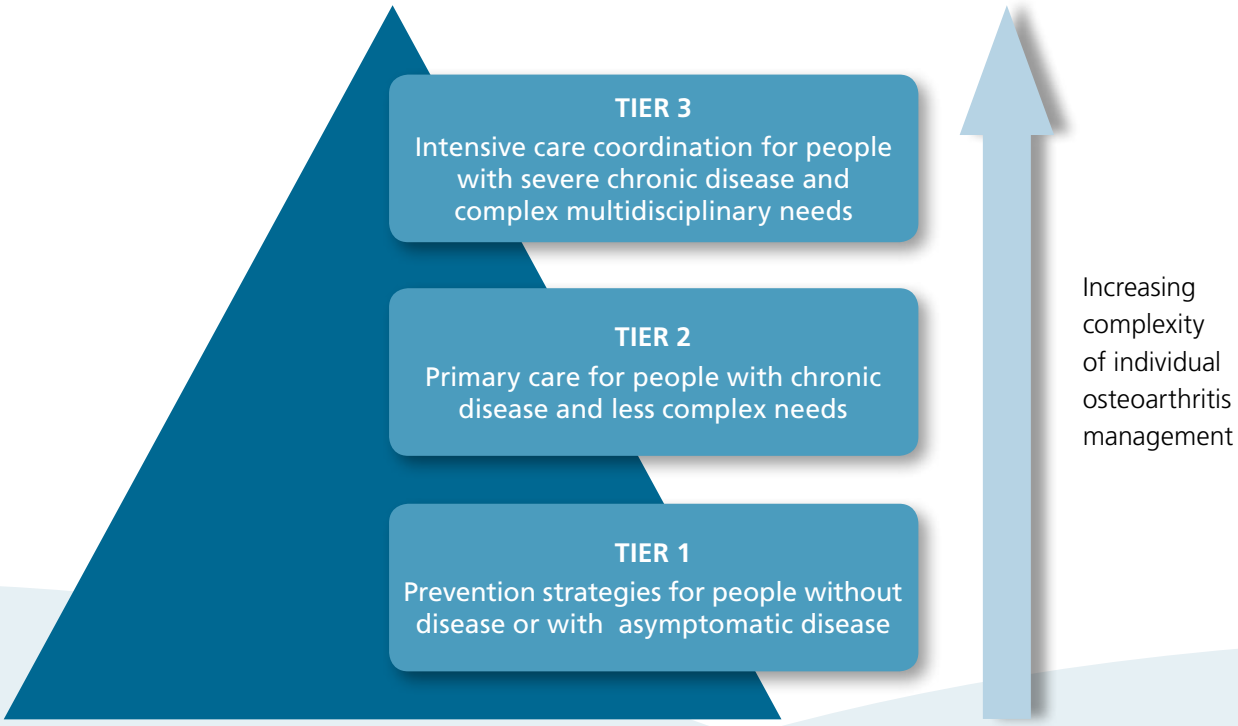
The program must include the key principles of The Chronic Care Model [30, 46]. CDM service models are of proven effectiveness for chronic conditions such as chronic heart failure, chronic obstructive pulmonary disease and diabetes [1, 47-49]. In NSW the model is used effectively for the management and rehabilitation of people with cardiac and pulmonary diseases [50]. These services are guided by the NSW Rehabilitation for Chronic Disease policy directive [10] and guideline [51]. OA management within a chronic care program is an appropriate context to address the disabling features of this disease.

The key principles from the National Chronic Disease Strategy [5] and the NSW policy directives which have been incorporated into this model are:

- prevention across the continuum
- early detection and early treatment
- integration and continuity of prevention and care
- self-management

The Chronic Care Model recognises the need for a variety of interventions depending on the social, psychological and physiological needs of individuals. Diagram 3 is one example of the various levels of care described in The Chronic Care Model [30]. People accessing the OACCP will require care coordination and interventions at Tier 2 and 3.

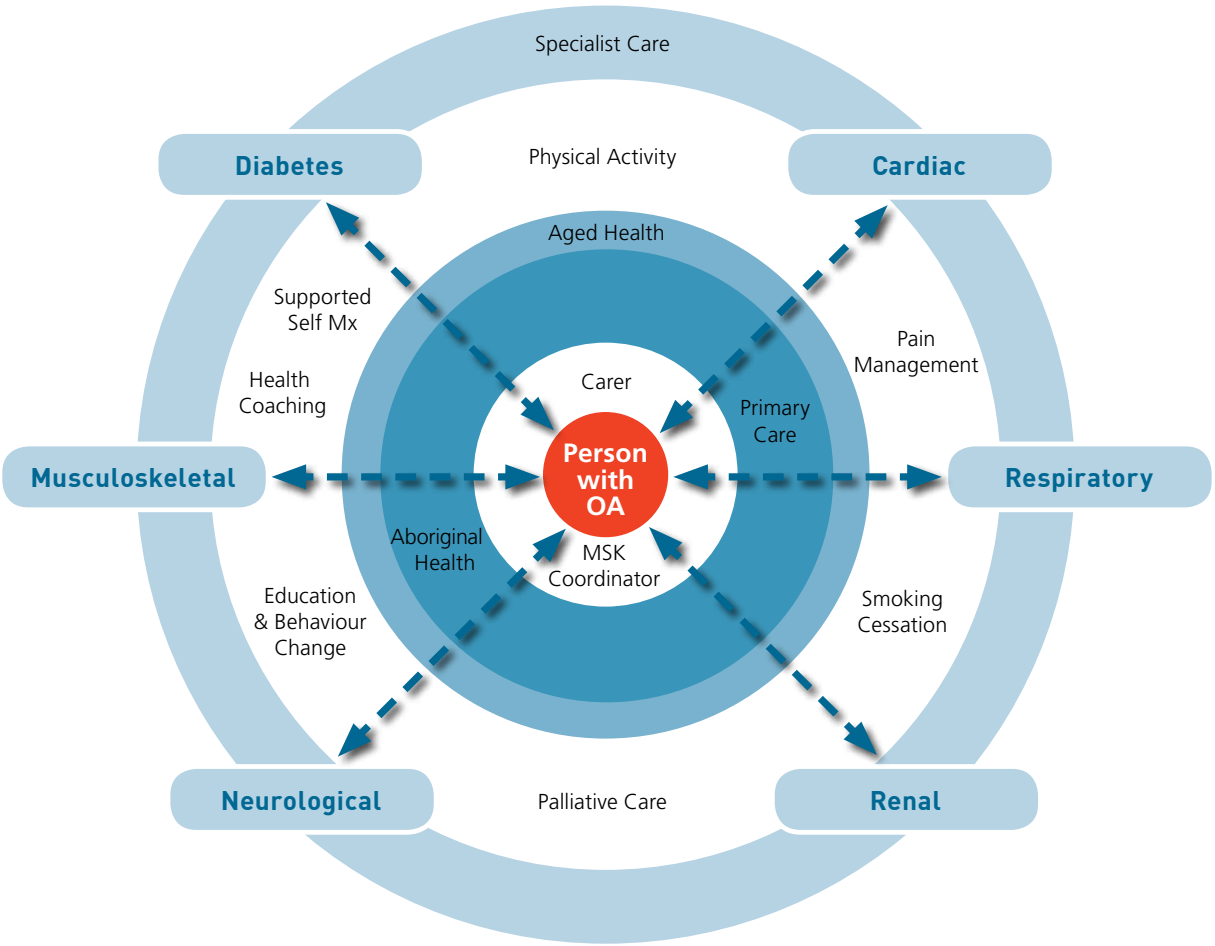
Diagram 3: Intensities of chronic care management across the disease trajectory



Adapted from J Savage, Models of care for chronic disease. Background paper for the Models of Access and Clinical Service Delivery Project [52]

The chronic disease and care networks of ACI have considered how chronic care should be delivered across NSW. Diagram 4 displays the concept of the integration of holistic care and individual needs while giving consideration to the particular requirements of specific diseases. It reveals the extent of the requirements of a program of chronic care for people with OA.

Diagram 4: ACI Model of Care for Chronic Disease – Osteoarthritis Chronic Care Program



A systematic approach to osteoarthritis management

The OACCP recognises the Queensland and Victorian conservative OA care models, but has been developed to better represent the NSW context and the characteristics of a chronic disease management model. This approach takes advantage of existing expertise and systems to re-engineer the approach to OA care. Central to this is a collaborative, comprehensive multidisciplinary approach, a person-oriented and participatory program, and a process of continuous practice improvement for evaluation and adjustment of the program.

Current clinical practice reflects a multitude of factors, including clinician and patient preference and health care system support. Efforts to guide OA management in the future are best directed towards implementing practices with the flexibility to be effective in a variety of contexts. A number of quality indicators have been developed in OA but they have not been widely or systematically used. With the convergence of increasing need, advances in information technology and the future of health care costs being unsustainable in their present form, there is a favourable environment for the funding, development and use of innovation in health care.

Principles of conservative OA management

The main goals of management of OA of the hip and knee, determined from a literature scan, are:

- symptom control of pain and stiffness;
- limitation of disease progression;
- optimisation and maintenance of function;
- optimisation and maintenance of quality of life;
- effective use of health care.

- **Self-management** All participants in the OACCP will be supported to manage their own health and well being for as many of their health needs as possible. This may include self-monitoring of individual health parameters, engagement in healthy activities which are known to produce positive outcomes, or encouragement to be an active partner in their medical and surgical health care decisions [31, 33, 53]. Medium to long term self-management support may be provided by Arthritis NSW through programs such as Challenging Arthritis, Osteoarthritis of the Knee Self Management Program and Moving On (www.arthritisnsw.org.au).
- **Exercise** All eligible participants will be engaged in an appropriate exercise program which will incorporate individually prescribed strength and aerobic exercises consistent with recommended practice [5, 54, 55]. Exercise and physical activity will be delivered via one on one supervision, group sessions or instruction for supported, home-based exercise. OA evidence suggests supervised group or individual treatment are superior to independent home exercise to achieve reductions in pain [56], while all modes of delivery produce similar results for physical function [57, 58]. The frequency, duration and intensity of the exercise program may affect clinical outcomes [59]. A minimalist approach, where individuals are given a pamphlet or audiovisual material outlining a standardised exercise program and discharged to implement the exercises without support, has been shown to be ineffective [60].
- **Weight Loss** All participants who are overweight or obese will be encouraged to lose a minimum of 5% of their body weight through a combination of diet and exercise [61]. Overweight is defined as a BMI of between 25 and 30 (wt [kg] / ht [m]^2). Obesity is defined as a BMI $\geq$ 30 (wt [kg] / ht [m]^2). A recent systematic review and meta-analysis concluded that physical ability improves in obese and overweight people with knee OA after moderate weight reduction [43]. Supporting people to lose weight requires appropriate expertise to address the complex interaction of diet, exercise or activity and behaviour change. Behaviour change underpins successful engagement. OACCP sites will include available local resources to effect this important aspect of OA management.
- **Psychological management** Psychological distress is common in people with OA [62]. The evidence indicates that up to 50% of people with OA will suffer from depression [63]. All OACCP participants will be screened for psychological distress and those found to have moderate or high levels of depression, anxiety or stress will have further investigation to inform an appropriate management plan. The Depression, Anxiety and Stress Scale (DASS) 21-item version, an Australian-developed tool commonly used in chronic care programs across NSW, has been chosen as the screening tool for the OACCP pilot project. The DASS is just one component in determining the need for further intervention and the assessing clinician will seek further assessment if needed. LHDs have pathways to guide clinicians to appropriate local services and in all circumstances, the participant's GP will be included in decisions regarding referrals or interventions recommended from the OACCP.

- **Pharmacologic Assessment** All participants taking analgesic medication, whether over the counter, complementary or prescription, should have a pharmacologic review to exclude unanticipated drug interactions, inappropriate polypharmacy (for example, multiple varieties of NSAIDs) and potential complications to existing comorbidities (for example, poorly controlled hypertension on NSAIDs or constipation associated with opiates) [64, 65]. This review should be done by a pharmacist, medical practitioner or nurse as part of the team review.
- **Disease Management Education** Participants will be provided with an understanding of their OA including the disease process and its evidenced-based management [66]. This information sharing will highlight the importance of following the developed management plans, and the specific lifestyle behaviour necessary to facilitate improvement in quality of life or to slow disease progression. Some of these behaviour modifications include taking medicines as prescribed, appropriate exercise habits, pacing of activity and weight reduction. Advice will also be included on appropriate footwear and other measures to unload damaged joints, and there will be opportunity for question and answer sessions and sharing information with other participants.

OACCP multidisciplinary team

The OACCP team will be led by a dedicated Musculoskeletal (MSK) Coordinator (Appendix 1). The coordinator at funded pilot sites will be a physiotherapist who has extensive experience in the provision of care to people with MSK conditions, and an understanding of their clinical, social and psychological care needs. The key role of the coordinator is to lead and coordinate the development, implementation and ongoing evaluation of the OACCP by participating in expert musculoskeletal assessment and interventions. They will be a collaborative leader of the multidisciplinary team. The team could be drawn from, depending on local resources, the following practitioners:

- GP as leader of the individual's healthcare and their practice staff
- Specialist doctors from the fields of medicine and surgery
- Physiotherapists (in addition to the Coordinator)
- Nurses
- Occupational Therapists
- Dietitians
- Psychologists
- Social Workers
- Pharmacists
- Exercise Physiologists
- Podiatrists
- Others as identified as necessary.

Each site will draw from these disciplines as available and as needed for their participants. All team members must demonstrate an understanding of the substantial benefit to be found in an interdisciplinary approach to chronic care. Team members will have a deep understanding of behaviour change theories, which are essential to support behaviour change in the targeted population. The team members will have knowledge of how and where individuals can gain access to their day-to-day needs to maintain or enhance their musculoskeletal health. They will have a goal of providing the most appropriate care in the most appropriate place for each individual to help them to self-manage their OA with conservative treatments. Participants will have the opportunity to maximise these benefits with a view to avoiding or delaying joint replacement surgery, if appropriate.

Case identification and access to the program

People with OA may be referred to the OACCP by any health professional, or by self-referral, once a determination has been agreed that the philosophies of a chronic care management program are appropriate for an individual's OA. Referring health professionals may include GPs, surgeons, specialist physicians, training doctors, allied health professionals, nurses, or hospital administration from surgical wait lists. Individuals may self-refer and support will be provided to gain the necessary medical referral as a part of assessment for eligibility.

People with OA of the knee or hip are eligible if they meet two clinical criteria determined with participants using their usual pain relief strategies:

- Pain associated with their knee and/or hip on most days of the last month
- Visual Analogue Scale (VAS) pain score of at least four out of ten at the initial assessment (confirmed either over the phone or at the initial visit).

For participants whose reported pain level falls below the VAS threshold, alternatives to OA management will be offered including the Arthritis NSW Self-Management programs and community exercise programs such as Heart Moves and Fit and Fabulous over Fifty.

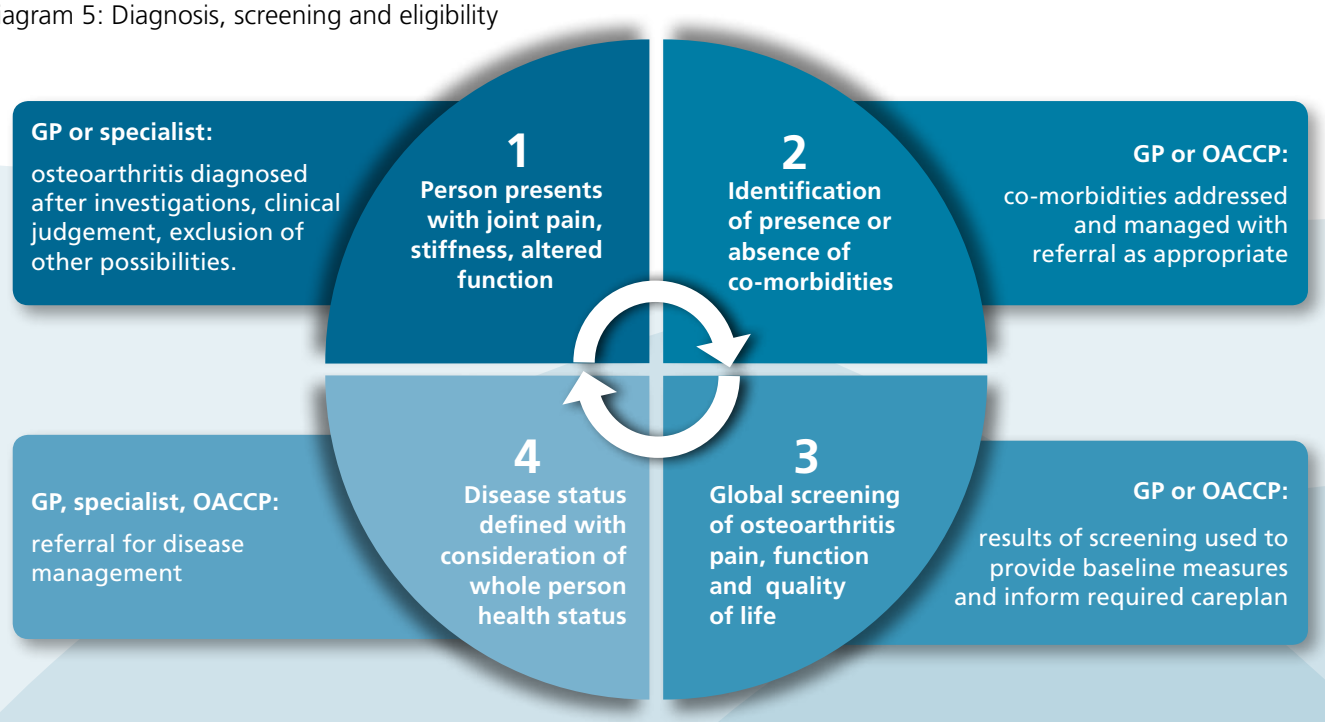
Care coordination and case management

Elements of care coordination and case management are required for all participants in the OACCP. The level of coordination required depends on the individual's needs, which may be purely musculoskeletal, related to existing co-morbidities or to their psychosocial needs. All participants undergo an initial face-to-face assessment where their physical health, disease status, co-morbidities, quality of life and psychological status are evaluated. From this assessment various options for the delivery of care may be chosen.

GPs are central to the coordination of care for people with OA, as outlined in the RACGP Guidelines for care of patients with OA. They are key members of the team and provide access to important elements of chronic disease management, especially within the primary care or community sectors. GPs have a key role in providing coordination of care as a member of the multi-disciplinary team. While chronic illnesses are increasingly impacting their roles and workload, there are opportunities for the OACCP to support GPs in the management of people with OA.

It may be beneficial to develop a Memorandum of Understanding between the Medicare Local or Division of GPs and the relevant LHD to define aims, roles and responsibilities, resource commitments, communication and performance indicators. This may be essential if a site's sustainability plan includes the use of CDM items with GP case conferencing as a component of service provision.

Diagram 5: Diagnosis, screening and eligibility



Options for care

People entering the OACCP may elect any of the following methods as options for care. The decision on which option to undertake will be made by each individual in conjunction with the OACCP team members at the time of initial assessment, goal setting and management plan development. The decision will be made with consideration of the person's preference, their individual care needs and the availability of services in the local area. The option chosen may be a mix of the following available methods of service delivery:

- **Health service site.** Interventions with multidisciplinary team input to address care needs. Ideally, participants will attend the health service site at least twice a week for as many weeks as is required to support the person to self-management of their needs. On-site locations may include the physiotherapy department, other outpatient areas, or community health sites. Links with the Connecting Care chronic disease programs may provide synergies for both services to the benefit of participants.
- **Community accessed services.** Commonly, these will be partly funded by a GP Management Plan (GPMP; Medicare item 721). Access to a multidisciplinary team will incorporate local private health practitioner settings. While the GPMP will supplement some of the required health practitioner visits, the participant will privately fund other required services or could access the health service site for the necessary interventions. Examples of private practitioner care settings include: GP clinics e.g. practice nurses to explain disease management including medication management, dietitians in private practice, Heart Moves programs, over 50's programs, and Stepping On programs. A phone counselling service may be included by the OACCP team to coach the person towards attaining levels of intensity with their interventions which will gain positive change. These partnerships will require open, transparent communication, capacity building and leadership to successfully support individual participants.
- **Self-directed interventions** may be an option for some participants, however, regular weekly (or more often) phone counselling by the OACCP team will be necessary to coach the person towards attaining levels of intensity that will gain positive change.
- **Face to face assessment.** These are a 'must do' component of the OACCP at entry and at 12, 26 and 52 weeks after entry to the program. These assessment points are not flexible, but rather, are an integral part of supported chronic disease management and of the program evaluation process, along with being an opportunity for health care interventions for those who require or opt for this mode of service delivery.

Care pathways

Local Health Districts (LHD) will develop clinical pathways for the health management of individuals requiring chronic care of their OA. These will include all aspects of chronic care as described in the Chronic Care Model [30] as well as the requirements for pre-surgical interventions as will be described in the ACI Musculoskeletal Network Guideline for the Pre, Peri and Post-operative Care of People Requiring Elective Hip and Knee Replacement Surgery, which is currently under development.

Service directories

MSK Coordinators will be responsible for creating and maintaining local service directories for OA care. Service directories will be living documents which include appropriate opportunities in local communities for the participants of the OACCP to utilise their new skills to self-manage their chronic condition. The overall service directory will be maintained centrally by the ACI, with sites able to update their local content.

Acceleration to surgical intervention

Participants who have either knee dysfunction and a Knee Osteoarthritis Outcome Score (KOOS), or hip dysfunction and Hip Osteoarthritis Outcome Score (HOOS), of less than or equal to 30 out of 100 should be considered for accelerated surgery [67]. While this score provides a good indication of disease specific impact, a thorough investigation of other outcome measures should be undertaken in conjunction with this score when determining escalation for orthopaedic assessment.

On confirmation of the participant's deterioration to a point which requires escalation to surgery in the short term, discussion with the individual's medical team should occur as soon as possible. This is to be followed with formal correspondence to the medical or surgical referrer, documenting the results of the OACCP assessment and the reasons for suggested escalation. A copy will be forwarded to the participant's GP if he/she is not the referrer. The OACCP participant should remain in the program in the interim for optimisation of their co-morbidities, management of pain and interventions aimed at alleviating psychosocial issues. Early surgical assessment should be prioritised.

OACCP re-entry

For participants who complete the OACCP and are discharged, re-entry is possible if their referrer believes this is necessary, as long as they fulfil the original inclusion criteria.

Key performance indicators (KPIs)

Individual service sites will report key performance indicators (KPI) through the OACCP specific data system developed by the ACI for the overall recordings of OACCP assessments, goal setting and care planning.

Assessment of the OACCP will be consistent with other chronic disease management programs in NSW.

During the pilot testing of this model of care, the ACI will provide quarterly reporting to the NSW Ministry of Health, LHDs and the participating sites. These reports will also be available on the ACI Musculoskeletal Network web pages. As new sites implement the OACCP, they will be required to collect data at the same time points and follow the same reporting mechanisms. The KPIs to be collected from each site will be:

1. Number of people assessed and who have a management plan developed measured as a percentage of the total referred for assessment.
2. Number of people commencing their recommended management plan within three months of assessment measured as a proportion of KPI 1. Objective success will be 80%.
3. Number of people completing* their recommended management plan as a proportion of KPI 1. Objective success will be 80%.

* completion is defined as implementation of 80% of the recommended management plan measured at 12 months from assessment

Clinical Indicators

The following validated tools will be used by sites participating in the pilot project to monitor outcomes. Permission for use of these tools has been arranged where necessary. Other critical clinical indicators will be measured and recorded at the specified timeframes. All outcome measures are described in the OACCP Manual and recorded in the Musculoskeletal Network database that relates specifically to the OACCP. Participant goals are set collaboratively between the individual participant and the OACCP team.

1. Disease Specific Measures
   - Hip Dysfunction and Osteoarthritis Outcome Score (HOOS)
   - Knee Injury and Osteoarthritis Outcome Score (KOOS)
   - Multi-attribute Prioritisation Tool (MAPT)
   - Willingness to undertake surgical intervention
2. Pain and Function Measures
   - Visual Analogue Scale (VAS) for index joint pain
   - Timed Up and Go (TUG)
   - Six Minute Walk Test (6MWT)
3. Quality of Life Measure
   - EuroQoL (EQ-5D-5L)
4. Psychological Measure
   - Depression, Anxiety and Stress Scale 21 item version (DASS 21)
5. Demographic, Referral and Co-morbidity Data.

The ACI Musculoskeletal Network, in consultation with local sites, will review and modify on an ongoing basis the clinical indicators, mindful of the need to demonstrate key outcomes – reduced pain and increased functional capacity and quality of life of participants.

It is anticipated that at the end of the pilot period, some OACCP clinical indicators will be removed to streamline clinical practice while still monitoring outcomes to assist with evaluation of, and alteration to, the model of care.

Diagram 6: Ideal participant journey through the OACCP