

From ideal to actual practice: Tailoring a clinical pathway to address anxiety or depression in patients with cancer and planning its implementation across individual clinical services

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Abstract

Introduction: Clinical pathways (CPs) can improve health outcomes, but evidence of their impact is mixed, perhaps due to variations in CP delivery. Identifying why variations occur, and their intended purpose is important, to guide CP development and implementation. We developed a CP for screening, assessment and management of anxiety and depression in cancer patients (the ADAPT CP). The CP was implemented in 12 Oncology services in Australia that were participating in the ADAPT Cluster randomized controlled trial (CRCT), allowing some tailoring of the CP for local conditions. The aim of this article is to describe what and why decisions were made to tailor the ADAPT CP in these services. **Method:** Twelve oncology services were purposively selected for diversity in setting. At each service, a multi-disciplinary lead team was formed to make decisions about local tailoring and to plan, champion and enact the CP implementation. Detailed notes taken during engagement meetings, and service-specific workflow diagrams, form the data for this analysis. Notes were content-analyzed, and workflows reviewed, to identify decision-making themes. **Results:** Twelve cancer services (7 urban and 5 regional) participated in CRCT. Ten were publicly funded, one was privately funded and the other was a mixed public and private service. Diverse decisions were made regarding the selection of eligible patient cohorts, how to introduce screening to patients, and screening and triage processes. Rationales for decisions included aligning with existing workflows, utilizing staff with required skills, minimizing staff burden, ensuring no patient was missed, and minimizing patient distress. **Discussion:** Practical issues and staff attitudes and skills often guided CP decisions, highlighting the need to work collaboratively with health services to determine the optimal workflow for each setting. In some settings, considerable discussion and problem-solving was required before processes could be agreed upon that overcame perceived barriers and allowed the CP implementation to proceed. Although it is yet to be determined whether some decisions were optimal in terms of patient outcomes, local tailoring ensured the CP became operational at all services. Allowing time and ensuring the right people are involved are essential when tailoring new CPs before their introduction into clinical care.

Keywords: Anxiety and depression, Cancer, Clinical pathway, Implementation, Routine care

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1. Background

Clinical pathways (CPs) are standardized, evidence-based multidisciplinary management plans, which identify an appropriate sequence of clinical interventions, timeframes, milestones and expected outcomes for ≥ 1 patient groups.^[1] By their operational nature, CPs provide a level of detail over and above that provided in clinical guidelines. CPs are increasingly being used in health care to achieve optimal, evidence-based and cost-effective outcomes, although the data regarding these benefits is mixed. CPs have been shown to improve patient outcomes and care,^[2,3] increase hospital efficiency,^[4,5] decrease operations costs,^[6,7] reduce length of stay,^[8] and decrease mortality rates.^[9] However, other studies have not demonstrated these benefits,^[10] possibly due to local variations in CPs.^[11]

Intervention fidelity (including of CPs), or the degree to which the intervention maintains its original form, is a critical issue to consider in implementation studies, but is complex to monitor and rarely assessed.^[12] There is still considerable debate regarding the degree of adaptation (if any) that should be allowed during implementation. Some consider strict adherence to intervention protocol is necessary under all circumstances^[13,14]; others argue adaptation is necessary to accommodate local constraints, resources and preferences, but must be done carefully to avoid compromising validity and outcomes.^[15] In the latter approach, key elements may be defined as unchangeable, whereas others may be presented as negotiable and adaptable. It has also been argued that adaptations should involve stakeholder input within a planned, systematic process.^[16,17] However, little is known about the kinds of changes made to CPs as they are translated into routine clinical care, or the factors that influence those changes. The few studies that have addressed analysis of CP and intervention variation commonly report that environmental, system, practitioner and researcher factors influence variation.^[12,18,19]

A clinical pathway for screening, assessment and management of anxiety and depression in adult cancer patients (ADAPT CP) was developed to guide best practice in Australia.^[20] The ADAPT CP is based on an evidence review and was refined through comprehensive stakeholder engagement and a Delphi consensus process.^[21] The ADAPT CP follows a stepped care model incorporating iterative screening at recommended intervals, with triage to one of 5 steps (from universal care and self-management for those with minimal or mild levels of anxiety and/or depression), to specialist care for those with severe anxiety and/or depression), with review and change in step where necessary. Evidence-based recommendations on staff responsibilities, and content and timing of interventions, are provided for each step.^[20] To facilitate CP implementation, we developed an online portal^[22] to operationalize and standardize as many processes as possible, increase efficiency, and minimize staff time and burden. We also developed staff and patient education materials to support the CP, accessible via the portal.

Before finalizing the ADAPT CP we conducted a barrier analysis^[23] to implementing the ADAPT CP which, similar to studies outside the cancer setting,^[24,25] identified key barriers including lack of ownership by staff, poor fit with local resources and culture of the service, and lack of integration within the current workflow. Therefore, an important implementation strategy incorporated into the ADAPT CP design was to allow proactive, local tailoring of the CP with extensive staff consultation. We implemented the ADAPT CP in a cluster randomized controlled trial (CRCT) in 12 oncology services in

NSW Australia.^[26] The ADAPT CRCT is evaluating the difference between 2 levels of implementation strategy intensity; however, all services engaged in the local tailoring process.^[26]

In this article we identify the decisions made to tailor the ADAPT CP components and implementation strategies to meet local service needs, and the factors that prompted those changes, at participating services. In doing so, we sought to transparently explicate what was deemed unchangeable and what adaptable in the ADAPT CP, how the local tailoring of the ADAPT CP occurred, and how allowing flexibility in the ADAPT CP and implementation strategies may have impacted service's enactment of the ADAPT CP.

2. Methods

2.1. Study design and setting

The ADAPT CRCT was undertaken in the state of New South Wales (NSW), Australia. Eligible services were public or private health services providing cancer care for at least 100 patients per year.^[26] Potential CRCT sites were purposively selected to provide diversity in urban versus regional settings, and size of patient load. The data presented were collected within the ADAPT CRCT, a study of the ADAPT Program, funded by the CINSW (14/TPG/1-02). The study was approved by the Sydney Local Health District Human Research Ethics Committee, Protocol X16-0378 HREC/16/RPAH/522.

2.2. ADAPT CP tailoring process

To guide the CP tailoring process, we followed similar steps to those outlined by Escoffery et al^[27] in their summary of adaptation frameworks, including: assess the community, understand the intervention, select intervention, consult with experts, consult with stakeholders, decide what needs adaptation, adapt the original program, train staff, test the adapted materials, implement, and evaluate. Interested cancer services were asked to identify a local ADAPT champion, and to form a lead team to plan and oversee the ADAPT CP tailoring and delivery. The lead team optimally comprised multidisciplinary representatives including medical, nursing, psychosocial, administrative and IT staff, identified ADAPT CP champions, and discipline or department leaders as required (although actual composition varied from service to service).

Each lead team was asked to attend 6 to 8 structured *engagement meetings* facilitated by the research team. The purpose of the engagement meetings was to increase a sense of ownership of the ADAPT CP and tailor the CP to meet local service requirements. The intention was that the lead team would communicate information from and to their colleagues, effectively acting as ADAPT vectors from the lead team meetings to the wider cancer service.

During the engagement meetings, some elements of the ADAPT CP were presented by the research team as fixed, whereas others included options which services could choose to tailor to their needs and population (see Table 1 for fixed elements). The process for tailoring was to discuss each element for local "customization" until consensus was reached. ADAPT staff took detailed notes during engagement meetings to record the discussion and outcomes, which informed development of service workflows. These workflows were iteratively refined until a final version was agreed. Workflows were then used to communicate logistical and clinical decisions to the service and

Table 1
Fixed or Adaptable components of the ADAPT CP.

ADAPT CP Components	Details	
Introduce screening	A short conversation to introduce screening as routine care and obtain patient agreement Role responsibility to introduce screening to patients.	Fixed Adaptable
Screening	Validated screening tools to identify symptoms	Fixed
Screening tool	A brief screening tool (Distress Thermometer or Edmonton Symptom Assessment System) for all patients Detailed screening tool (Hospital Anxiety and Depression Scale) for patients scoring above clinical cut-offs	Adaptable Fixed
Screening mode	Services provided with three different modes of screening via email, in-clinic, phone	Adaptable
Step allocation	Confirmation for patients who score above clinical cut offs following the Triage Conversation	Fixed
Triage conversations	A conversation that occurs following completion of question to confirm responses and triage patients based on Stepped Care Model in the CP Different staff undertake this role depending on the anxiety/depression step to which patients are allocated.	Fixed Adaptable
Making a referral	Referrals to local referral networks depend on availability of support services in cancer services or community-based support and patient preference.	Adaptable
Progress review	Monitoring clinical progress of referred patient (eg, whether patient has made appointment/started online therapy) Allocation of role responsibility of staff member	Fixed Adaptable
Discharge treatment summary	Completion of form summarizing psychosocial care provided to patient Allocation of role responsibility of staff member	Fixed Adaptable
Re-screening	Involves screening patients regularly throughout cancer care	Adaptable
ADAPT Portal	Online Portal to operationalize the ADAPT CP Addition of local resources and information such as support groups, community services made available in ADAPT Portal	Fixed Adaptable

enable set up of the ADAPT online portal to facilitate delivery of the localized ADAPT CP. Once finalized, the ADAPT CP was then implemented in each service for 12 months.^[26]

2.3. Analysis

Engagement meeting notes detailing the tailoring process were content analyzed.^[28] Two researchers independently coded the notes line-by-line in the qualitative analysis software Nvivo12, with any differences resolved through consensus. Engagement meetings from two services were collaboratively coded by 4 researchers (HS, PB, JS, MH) to develop a draft framework. Six services were then collaboratively coded by 2 researchers (JC, MH). The framework was discussed and minor changes made. The remaining six services were then independently coded (3 each) with differences resolved through consensus. Workflow diagrams created for each service outlining the tailoring decisions and staff responsibilities were reviewed to identify similarities and differences between services.

We then examined the results through the lens of the Consolidating Framework for advancing Implementation Science (CFIR), one of the key frameworks that explain implementation success.^[29] The CFIR is comprised of 5 major domains: intervention characteristics, outer setting, inner setting, characteristics of the individuals involved, and the process of implementation. We examined our data in relation to all 5 domains.

3. Results

Twelve cancer services (7 located in major cities and 5 in regional areas) participated in the ADAPT CRCT. Ten services were publicly funded, 1 was a public and private partnership funded service, and 1 was a private funded service. Five services had already conducted screening for anxiety and depression within the past 12 months using a validated tool (see Table 2 for study site characteristics).

Lead teams had diverse multidisciplinary representation (Table 3). The greatest proportion of lead team members was

(mostly senior) nurses (mean of 39%), followed by psychosocial staff (27%), nonclinical managers/IT/admin (14%), medical staff (11%), and clinical trial/allied health staff (10%).

3.1. Local ADAPT CPs

All clinical services chose to adapt their local clinical pathways to a greater or lesser extent; considerable diversity was demonstrated (Table 4). Although decision-making was presented by the research team as a collaborative exercise, in some services, a particularly influential member of the Lead Team, such as the Cancer Service Director or a senior medical or nursing staff member, drove decision-making. In other services, more open discussions were held. Some services implementing ADAPT in multiple treatment or cancer streams had different workflows for different streams, based on resource availability, patient entry and flow through services and other factors. Decisions made, and their rationales, are presented below. Quotes (in italics) are taken directly from lead team meeting notes.

3.1.1. Selecting patient cohort for ADAPT. All services had the option of including all or a subset of patients in ADAPT. Services chose to include all patients across a service, or various combinations of new and existing patients, and/or from specific tumor streams and/or receiving specific treatments. Rationales for this decision included:

3.1.1.1. Patient flow through the service. Services chose to focus on patients with whom they had ongoing contact and to omit patients who had not yet been clearly diagnosed, such as some surgery patients, or who for other reasons would likely have treatment elsewhere: *Lung patients—only to be those receiving ongoing treatment . . . as a lot of patients have treatment elsewhere.* (S8).

3.1.1.2. Belief in the value of ADAPT. A strong perception that ADAPT would provide benefits to the service and its patients motivated some services to choose a large patient cohort. For example, 1 Cancer Service Director argued strongly that a whole

Table 2

Site characteristics.

Site ID	Site location	Funding type	No. of patients attending service per 3-mo period	No. of departments included	Treatment modality departments included	Tumor streams included	No. of streams included	FTE psychosocial staff	Screening history in past 12 mo
1	Major city	Public	≥100	3	Med Oncology Rad Oncology Haematology	All	≥3	0.8	Yes
2	Inner regional	Public	<100	4	Med Oncology Rad Oncology Haematology Surgical	All	≥3	0.6	No
3	Inner regional	Public	<100	1	Med Oncology	All	≥3	0.6	No
4	Major city	Public	≥100	2	Med Oncology Surgical	Gastrointestinal	1	2.4	No
5	Inner regional	Public	<100	3	Med Oncology Rad Oncology Haematology	All	≥3	1	Yes
6	Major city	Public	≥100	2	Med oncology Haematology	All	≥3	7.9	No
7	Major city	Public	≥100	1	Surgical	Upper GI	1	2.4	Yes
8	Major city	Public	<100	3	Med Oncology Rad Oncology Haematology	All	≥3	5	Yes
9	Major city	Public	≥100	1	Haematology	Lymphoma, acute leukemia, multiple myeloma	≥3	2.4	No
10	Major city	Public	≥100	3	Med Oncology Rad Oncology Surgical	Head and neck	1	4	No
11	Major city	Public and private	≥100	1	Med Oncology	Sarcoma, gynae	2	6.9	Yes
12	Major city	Private	≥100	1	Med Oncology	All	≥3	0.9	No

of service approach would strengthen the service and provide a point of difference between their service and others.

3.1.1.3. To address disparity. Some services chose to focus on tumor streams or patient groups with high needs or who were without present access to high-quality psychosocial care: . . . *it would be good to include patients who have a difficult treatment path and little existing support such as GI [gastrointestinal] patients . . . (S4).*

3.1.1.4. Ease of implementation and desire to avoid overwhelming services. Some services chose to start small, planning to expand later once staff were comfortable with the process. Thus they variously started with new patients only, 1 or 2 tumor groups, or patients receiving one kind of treatment only. Lead teams also sought the simplest way to support staff to change their practice. For example, to easily identify patients for ADAPT within the existing service delivery flow, some services chose to focus on patients attending a particular clinic or event, such as a

Table 3

Lead team composition across all sites.

Site no.	Role of champion	Composition of lead team					Lead team total members, n
		Psychosocial, n (%)	Nursing, n (%)	Medical, n (%)	Admin/IT/ non-clinical manager, n (%)	Clinical trials/allied health, n (%)	
Site 1	Nursing	1 (17%)	1 (17%)	1 (17%)	3 (50%)	—	6
Site 2	Nursing	1 (13%)	5 (63%)	—	2 (25%)	—	8
Site 3	Clinical trials/allied health	1 (14%)	2 (28%)	1 (14%)	1 (14%)	2 (14%)	7
Site 4	Psychosocial	2 (22%)	3 (33%)	3 (33%)	—	1 (11%)	9
Site 5	Nursing	1 (17%)	3 (50%)	1 (17%)	1 (17%)	—	6
Site 6	Psychosocial	6 (50%)	2 (17%)	2 (17%)	—	2 (17%)	12
Site 7	Nursing	4 (44%)	4 (44%)	—	1 (12%)	—	9
Site 8	Psychosocial	2 (40%)	2 (40%)	1 (20%)	—	—	5
Site 9	Psychosocial	2 (25%)	5 (63%)	—	1 (13%)	—	8
Site 10	Psychosocial	2 (25%)	3 (38%)	—	—	3 (38%)	8
Site 11	Psychosocial	1 (20%)	2 (40%)	1 (20%)	1 (20%)	—	5
Site 12	Nursing	2 (20%)	4 (40%)	—	3 (30%)	1 (10%)	10
Combined sites total (n)		25	36	10	13	9	93
Combined sites average proportion (%)		27%	39%	11%	14%	10%	100%

Table 4**Tailoring the clinical pathway: collation of tailoring decisions.***

Tailoring decision point	Choices by study services at Go Live		
	Patients	Tumor types	Treatment types
1. Does the cancer service want to implement the ADAPT CP across all services, or specific areas of patient care?	New and follow-up patients (site 2, 3, 7, 9, 10, 11, 12) New patients only (site 1, 4, 5, 6, 8)	All tumor types (site 1, 2, 3, 5, 6, 8, 12) 2 tumor types (site 11) 1 tumor type (site 4, 7, 9, 10)	All treatment types (site 1, 2, 3, 5, 6, 8, 9, 10, 11) 1 treatment type (site 4, 7, 12)
2. How will patients be identified when they present at the cancer service?	<ul style="list-style-type: none"> • Administrator notified designated staff member of a potentially eligible patient attending soon, via email or by placing ADAPT pamphlet and registration slip in patient folder (all sites except site 1, 5, 6 where Clinical staff not prompted) • Eligibility determined when patient attended: chemo-education (site 6, 7, 8), a medical oncology appointment (site 4) or clinic appointment (Site 2, 3, 4, 10), or for chemotherapy infusion (site 12); OR at the MDT (site 11) or at any time after diagnosis (site 9). • Person responsible for determining eligibility: CC or CNC (site 1,6, 7), medical oncologist (site 4), psychologist (site 10); mixed staff (all other sites) 		
3. Which professional role/s will introduce the ADAPT Clinical Pathway to patients?	<ul style="list-style-type: none"> • Nurses only (site 1, 2, 3, 4, 7, 8, 9, 11, 12) • Nurses and specialists (site 5, 6) • Nurses and clinical psychologist (site 10) 		
4. Which patient contact point/s will be used to introduce patients to screening via ADAPT?*	<ul style="list-style-type: none"> • Patient education session (site 3, 4, 5, 6, 9) • Existing patient phone-calls (site 1, 2, 10) • Specialist appointment (site 5, 6, 10) • Treatment appointment (site 2, 5, 12) • Clinic nurse before appointment (site 1, 3, 6, 7) • Nursing contact—not specified (site 8, 9, 11) 		
5. Which screening tool will be used?	<ul style="list-style-type: none"> • Distress thermometer with problem checklist (site 1, 2, 3, 5, 6, 7, 8, 9, 10, 12) • Edmonton Symptom Assessment System (Site 4, 11) 		
6. How frequently will patients complete screening?	<ul style="list-style-type: none"> • 3-Monthly screening (site 1, 2, 3, 4, 5, 6, 8, 9, 11) • 2-Monthly (site 12) • 4-weekly screening (site 7) • Every 6 wks for 6 months and then 3-monthly (site 10) 		
7. Which screening modes will be offered to patients?	<ul style="list-style-type: none"> • Email, in-clinic, or phone (site 5, 7, 10) • Email or in-clinic (site 1, 6, 4, 3, 2, 8, 11, 12) • Email or phone (site 9) 		
8. How will patients who are due to screen be identified?	<ul style="list-style-type: none"> • Portal "Screening Due" report run, and aligned with patient appointments for the week. Matched list given to personnel assisting patients with in-clinic screening (site 1, 2, 3, 5, 6, 7, 9, 10, 12) an "ADAPT" note was added in MOSAIC (S4) • Nurses checked the Portal to see if a patient's screening status showed "Screening Due" (site 7, 8, 11) 		
9. Which professional role/s will be responsible for triaging positive screening scores?	<ul style="list-style-type: none"> • Step 2 scores triaged by: <ul style="list-style-type: none"> - nurse (site 1, 4, 8, 10, 11, 12) - social worker (site 6, 7, 9) - nurse or social worker via a roster (site 2, 3) - counsellor (site 5) • Step 3 scores triaged by: <ul style="list-style-type: none"> - nurse (site 1, 11, 12) - social worker (site 10) - social worker or nurse (site 2, 3) - social worker or clinical psychologist (site 4, 8) - clinical psychologist (site 6, 7, 9) - counsellor (site 5) • Step 4 scores triaged by: <ul style="list-style-type: none"> - nurse (site 1, 12) - nurse or social worker (site 2, 3) - social worker or psychologist (site 4, 8) - psychologist (site 6, 7, 9, 10, 11) - counsellor (site 5) 		
10. What is the acceptable timeframe for responding to positive screening scores?	<ul style="list-style-type: none"> • Step 2 scores by: <ul style="list-style-type: none"> - 3 days (site 1, 2, 3, 5) - 5 days (site 4, 6, 9, 10, 11, 12) 		

Tailoring decision point

Choices by study services at Go Live

- 7 days (site 8)
 - Step 3 scores by:
 - 2 days (site 5)
 - 3 days (site 1, 2, 3, 4, 6, 9, 10, 11, 12)
 - 4 days (site 8)
 - Step 4 scores by:
 - 2 days (site 5, 9, 10)
 - 3 days (site 1, 2, 3, 4, 6, 11, 12)
 - 4 days (site 8)
 - Site 7 declined limits to complete triage at any Step.
11. Which professional role/s will complete referral uptake and progress review alerts?
- Nurses (site 1, 12)
 - Nurses or social workers (site 2)
 - Clinical psychology and social work at Site 4, 6, 8, and 10, to clinical trials at Site 3, to clinical psychology at Site 11 and to counsellor at site 5.
 - Site 7 and 9 did not use the ADAPT Portal to make and manage referrals, so these alerts were unused.

* Numbers add up to >12 as some sites had >1 contact point.

treatment area, education session, or the medical oncology clinic: *Pamphlet could be easily added to their file before appointment* (S6). Or they chose tumor streams where staff (eg, Clinical Nurse Consultants) were already in place who could facilitate ADAPT. *Willingness of staff member . . . enabled haematology patients with a cancer diagnosis to be included* (S6).

3.1.2. Introducing ADAPT screening to patients. The first step of the ADAPT clinical pathway is to introduce screening as routine care and obtain patient agreement. Services considered different issues in determining when this introduction suited their service better; most chose to do this before or after patients' first appointments.

3.1.2.1. Rationales for timing included:

3.1.2.1.1. Catching patients early

A common rationale for introducing ADAPT early, was to identify distress and intervene before it developed into more significant morbidity.

3.1.2.1.2. Utilizing existing phone or face-to-face contact with patients

Some services utilized existing patient contact points, such as the surgical admission phone-call or during chemoeducation, to introduce ADAPT: *Although chemo-education sessions [are] seen as overwhelming for patients . . . [staff there were] willing to mention ADAPT* (S6).

3.1.2.1.3. Delaying until patients are settled

Some services chose to delay introducing ADAPT until after the patient's first appointment, when their initial anxiety had dissipated and they had the reassurance of a clear treatment plan. This was both to avoid overwhelming patients, and to exclude normal anxiety spikes that would quickly dissipate.

The introduction of screening was intended to be a brief conversation integrated within existing patient contact. As part of the implementation procedure, many services introduced strategies to prompt staff to introduce ADAPT, for example, in some services an ADAPT pamphlet designed to increase patient awareness of routine psychosocial screening was also used as a prompt to staff. The pamphlet (often together with an ADAPT registration slip) was placed where staff would see it, in new

patient files, chemotherapy induction packs, in clinic rooms, at the front desk, and/or carried by staff.

3.1.3. Registering patients onto the ADAPT portal. Once a patient agreed to routine ADAPT screening, staff were required to register them in the ADAPT portal. This required collection and manual entry of core patient data, since the portal was not integrated into hospital electronic medical records (eMRs). Such data included the patient's email address to enable communication and trigger online screening, and demographic and clinical characteristics. Obtaining email addresses in services not routinely collecting them required additional effort (although this was welcomed by some as a timely addition to patient data collection). Patient registration or booking forms already in use at some services needed to be adapted (which was not approved in one service), or complemented by a specific ADAPT registration form (sometimes requiring double-entry of details). In some services with multiple tumor streams participating in ADAPT, patient details could be obtained from existing patient records for some tumor groups but not others, resulting in different registration forms for different tumor groups. Registration forms raised concerns about patient privacy in some services where they were collated for later registration; some services overcame this by giving them directly to the administration staff/clerks registering patients. Although this administrative process appears minor, in some sites it presented a major barrier which delayed progress in CP implementation for many weeks.

3.1.4. Screening tool and processes. The ADAPT CP allows services a choice of the initial screening tool (Distress Thermometer (DT)^[30] or Edmonton Symptom Assessment Scale (ESAS-R).^[31] Patients scoring above normal cut-offs on the ESAS-R or DT then completed the Hospital Anxiety and Depression Scale (HADS)^[32] which was a fixed CP component, to confirm their level for the Stepped Care model. Ten services elected to use the Distress Thermometer, whereas 2 chose the ESAS-R. Choice of tool was impacted by what was already being used in the service, previous experience with a tool, the literature, and availability of measures in other languages.

3.1.4.1. Screening mode. Services could tailor mode of screening (via email, in-clinic, phone); one chose email or phone,

8 email or in the clinic, 3 email, phone, or in-clinic. Concerns about *emails* included patient acceptability, equity, and accessibility issues for patients who are older, from culturally linguistic and diverse backgrounds or those with lower socioeconomic status (SES), and that with no staff onhand for follow-up, email alerts may be ignored. One healthcare professional (HP) commented: *The point was raised that many of their patients are low income and will not have internet at home* (S4).

Concerns about *in-clinic screening* included the time required to help patients in the clinic or on the phone: *Staff [were] anxious about how screening was going to work and the impacts this would have on workload* (S6); that an immediate response might be required which staff would not be able to accommodate: *feeling obliged to offer immediate support to high-screening patients and had concerns about people at risk then leaving the service without help* (S6); and connectivity and infection issues with in-clinic tablet devices: *CNC reported that . . . because of infection concerns, tablets would need to be hospital grade and having them properly wiped down between patients would be an issue . . .* (S9). In addition, staff predicted challenges in identifying patients who should be screened, and that patients might have insufficient time in-clinic to screen: *. . . patients' . . . time to screen in clinic will be limited* (S5); *[Nursing staff] . . . patients due for screening would need to be identified and found, and . . . those due for screening may not present in clinic for weeks* (S12).

Sometimes logistic concerns were resolved by staff training or sharing the workload of helping patients in the clinic across disciplines through use of volunteers. Many clinics ultimately chose to focus on 1 format, with back-up of the alternative for some patients: *Due to these issues [connectivity issues, infection risk, workload concerns], email screening will be the preference with paper-based as back-up.* (S9)

3.1.4.2. Identifying patients due to screen. The ADAPT portal can generate a notification report of patients due for screening, and most services utilized this mechanism. The implementation procedure for communicating this list to responsible staff varied from noting patients due in the eMR, informing staff or volunteers directly on the day when patients were due, discussing in a daily meeting, writing on the patient's appointment card, or a combination of these approaches.

3.1.4.3. When to screen. Considerations around the timing of initial screening included avoiding times of peak anxiety (eg, at initial diagnosis); ensuring uptake would be maximized: *they would rather the screening invitation came quickly afterwards (in days) to keep it front of mind for the patient.*" (S12); and fitting into workflow. One service requested literature regarding the best screening timing for their patients, to ensure an evidence-based approach.

Screening frequency varied from 4 weekly to 3 monthly across services. Factors impacting these decisions included evidence-based recommendations from the ADAPT team, usual patient review timing, degree of distress in particular patient cohorts, and individual patient needs. Although many services appreciated the ability to tailor timing to individual patients, the workload of keying this into the portal was considered by some to be a barrier.

3.1.5. Triage processes. The ADAPT CP recommends that staff have a conversation (triage conversation) with patients who score over cut-off (steps 2-5), to confirm levels and source of distress, and determine the next action, which may be referral to

specialist psychosocial staff. This critical task requires clinical expertise, but is not a formal clinical assessment of psychological morbidity. The ADAPT CP recommends different staff undertake this role, depending on the anxiety/depression step to which patients are allocated. Most services adhered to these recommendations, with nurses responsible for triaging patients with mild symptoms (Step 2), and psychosocial staff moderate to severe symptoms (Steps 3-5). Some services further differentiated, staff roles, nominating social workers to deal with step 3 and psychologists step 4, based on level of expertise and specific skills.

The ADAPT portal includes automated escalation alerts that are emailed to designated staff if actions are not completed within agreed timeframes to ensure patients are not missed ("*fell through the cracks*"). Regarding the implementation procedure for this, many services nominated group emails to receive alerts, to ensure they were received even if individual staff were not working. Some did this only for Step 3 and above to minimize email traffic. Other services chose an individual email to receive alerts, as they felt group emails were easier to ignore: *Nurses prefer to have screening alerts sent to individual portal accounts/emails as currently workflow with group email is inadequate as allocation of read emails and who is responsible is unclear* (S1). One service refused escalation alerts as: *psychosocial staff . . . are more than likely to be able to address triaging on the day of screening by seeing the patient in their bed* (S7).

Services were able to nominate time to complete the triage conversation; decisions ranged from 3 days to 1 week; many services opted for shorter timeframes for patients allocated to higher severity steps (eg, 3 business days for steps 3-5 and 5 days for step 2).

3.1.6. Referrals. Tailoring referral pathways required documenting current pathways (internal and external/community providers, some previously unknown by HPs), and gaps in psychosocial care. Several issues arose during this process, including: long wait times to access internal psychosocial supports (S1, S4, S11, S12): "*Current wait time for psychology services is 2 weeks*" (S11); no psychosocial support available for patients who were not on active treatment (S8) or outpatients (S9): "*Patients not supposed to be seen by psychosocial services if having no active treatment, but this is done on a case by case basis*" (S8); lack of on-site psychologist (S1, S2, S5, S6, S9); and lack of easily accessible psychiatry services in case of emergency (S8): *A patient requiring psychiatry services will go to the Emergency Department*" (S8).

Some services identified diverse ways patients could be referred to psychosocial services, including informal/undocumented verbal referrals (eg, S3, S6, S7, S10): "*Currently referrals are made over the phone—there is no paper-trail/electronic referrals . . . so they do not know if referrals are taken up or the numbers of referrals made. Patients need to take the initiative to follow-up if given a referral, this is not done by staff.*" (S12)

Lack of appropriate/best-practice referral pathways contributed to staff concerns regarding duty of care, patient safety and services being overwhelmed. Diverse strategies were adopted to overcome these issues, including referring to existing HPs (eg, social workers) where possible, or to external/community providers or private psychologists through the GP-initiated, Medicare-funded Better Access scheme. However, barriers to accessing these services (eg, cost, long wait-times) were identified: "*. . . community [Psychosocial Staff] are a potential resource but not sure if this role is operational. These people were preferred . . . rather than private psychs as the majority of*

patients cannot afford private practitioners” (S1); “Takes approximately 3-4 weeks for a patient to see the GP to get a Mental Health Care Plan.” (S3).

Some services noted that they had good psychosocial resources, and established referral processes. However, there was still concern that routine screening of patients may exceed psychosocial staff capacity (eg, S8, S12). One solution was to “pace” recruitment through initially limiting the patient cohort eligible for ADAPT and expanding later (S12). “[Champion]’s answer to people’s worries about identifying unmet need was to pace the recruitment of patients into ADAPT and see how it goes.” (S12)

3.1.6.1. Progress review and discharge treatment summary. Following referral, Oncology staff act on alerts (sent 14–21 days after referral to prompt staff to check whether the patient has made an appointment with the referred healthcare professional; a second alert is sent 14–21 days later to check whether the patient has attended their appointment; subsequent alerts are sent at varied times depending on severity of symptoms to prompt review of progress). Finally at discharge, psychosocial health professionals complete a form summarizing the psychosocial care provided to each patient.

There was usually consensus that staff who completed triage would also action these steps, as they would have knowledge of the patient referral and status: “It was thought perhaps the Referral Uptake 1 & 2 alerts be discussed with [Psychosocial Staff] as they will have triaged the patient and likely be referring patients to themselves and thus well placed to know the status of the patient.” (S4).

3.1.7. Re-screening. The ADAPT CP included re-screening after initial screen. Services generally chose to re-screen 3-monthly (as per ADAPT CP recommendations); however, this varied across services depending on patient fit and service preference.

3.1.8. Workflows.

3.1.8.1. Rationales for staff nominated for ADAPT roles. In many services, staff were concerned that ADAPT roles might be burdensome, thus discussion about staffing was lengthy and sometimes heated. In most services, clinical staff (doctors, nurses, psychologists) introduced ADAPT to patients, administration, or clinical trial staff-registered patients, nurses-screened patients, and different HP staff triaged and made referrals dependent on symptom severity. Rationales for decisions included:

3.1.8.1.1. Acceptability of role to staff

Some services viewed all ADAPT roles to be the responsibility of psychosocial staff, who thus undertook many roles; this, however, was not considered sustainable. In other services, some roles (eg, introducing screening) were felt to be well within the remit of clinical disciplines such as medicine and nursing; nurses intended to include ADAPT *in their spiel* (S9). Where there was wide acceptability, a multidisciplinary approach could be taken to suit different patient groups, with tasks shared between nursing, psychology, social work, and allied health workers such as speech pathologists, although this planned sharing did not always eventuate. However, there was general agreement that clear delegation of responsibility for screening was required, or it would not happen: *Agree that if all are [delegated to] doing it, none will do it. Decision to run planned notification report [on who was due for screening] and then divide the list up* (S10).

3.1.8.1.2. Capacity

Time and capacity impacted many staffing decisions: *(Clinic manager) felt that her staff would not be able to cope with the workload of registering patients, so they will not be involved in this process* (S12). In this service, cancer care co-ordinators triaged all patients, as they were the only staff who “*have space/time within their role for this to be easily integrated*” (S12). In one service, progress on implementing ADAPT was stalled for several months until this could be resolved: *As . . . nurses had previously stated that they were unable to undertake registration of patients, clinical trials agreeing to this meant that we were able to progress.* (S6). In another service, nurses undertook registrations but these were batched and completed once a week “*when the nurse had time*” (S11). In one service, staff: *wanted a lack of capacity to respond within timeframes due to pre-existing workload to be able to be documented—this can be done in the notes* (S10). Staff concerns about the potential workload involved with triage were generally allayed by evidence that most patients would score at Step 1 (minimal to mild).

3.1.8.1.3. Required skillset

Despite the ADAPT Program providing online staff training related to introducing psychosocial screening and managing patient emotions, some lead teams were concerned nurses lacked skills to discuss mental health with patients: *. . . a lot of the nurses don’t have good communication skills* (S12). The training and education required to upskill nurses were felt to be excessive in another service. Thus they chose to utilize medical or psychosocial staff in this role. Volunteers were utilized in some services to assist patients to screen, but in others, were considered unsuitable: *. . . volunteers don’t have good boundaries and are there volunteering because they have had their own cancer experience and want to impart their experience which isn’t always helpful* (S4).

3.1.8.1.4. Trustworthiness/likely fidelity of staff

In some services it was perceived that doctors, although busy, were most likely to see all patients, and were therefore the best group to introduce ADAPT. However, at other services doctor-led introductions were felt likely to be unreliable due to the amount of material they already had to cover with patients. In one service, administrators/clerks were seen as likely most reliable. In another service, an application to the Hospital Foundation resulted in funding for a new position, to ensure this task was prioritized and completed.

Once all decisions had been made regarding the local tailoring of the ADAPT CP, an individualized workflow was made for that service as a record, communication tool, and to assist adherence. See Supplementary File 1, <http://links.lww.com/OR9/A26> for two examples. The workflows reflect the large amount of work that went into tailoring the clinical pathway, including multiple steps taken across a range of time points, and requiring interdisciplinary support, communication, and engagement.

4. Discussion

This is one of the first studies to detail decisions, their rationales made by health services and procedures to be put in place in tailoring a new CP before implementation as part of routine care. The CP in this case was for screening and management of anxiety

and depression in cancer patients. Rationales for decisions mostly reflected fitting in with existing workflows, utilizing staff with required skills, minimizing staff burden, ensuring no patient was missed, and minimizing potential patient distress.

Consistent with the first domain within the Consolidating Framework for advancing Implementation Science (CFIR), much of the tailoring work occurred before implementation following a barrier analysis.^[2,3] Implementation design features and strategies were incorporated into the ADAPT CP, allowing flexibility, providing support to staff wherever possible, and ensuring good fit to workplace requirements. Core CP components and an adaptable periphery were defined, which were communicated to staff as the engagement process began. This worked well on the whole, with services accepting unchangeable elements, but feeling a sense of ownership over elements they could tailor. All services were able to reach decisions about adaptable elements, albeit sometimes requiring extended discussion. Many services added small refinements to further tailor processes, such as how to cue staff to introduce screening, and registration processes.

The second CFIR domain is the outer setting, the economic, political, and social context within which an organization resides. An influential factor from the outer setting is the shift to patient-centered care, now clearly in place within healthcare policy internationally.^[33] Our participants often made decisions that would optimize patient access to ADAPT, and ensure that patients' individual needs (such as for screening tools in their own language) would be met (although in other instances, as discussed below, reducing staff burden was the primary concern). Staff also saw ADAPT as an opportunity to differentiate their service from others, that is, to be seen to be offering more patient-centered care, which motivated a whole-of-service approach.

However, economic constraints clearly impacted participating services through lack of psychosocial staff in particular and low staffing overall. This challenged some services when identifying referral pathways, requiring creative problem-solving to find alternative pathways to care for their patients. A strong theme that emerged pertained to staff feeling time constrained and burdened with many existing duties, making them very reactive to the possibility of ADAPT adding new tasks requiring more time. Although the ADAPT CP and resources were designed to minimize staff time required, lack of integration with local eMRs added burden, which required considerable "work arounds" from services to manage. Time constraints impacted tailoring decisions. For example, some services elected to use online screening primarily to avoid time-consuming in-clinic screening, although online screening was not seen as ideal and probably resulted in lower uptake from patients.

Overall, this set of issues emphasizes how critical it is that at a national, state and institutional level, the parity of mental health with physical health is recognized and fully realized. This requires adequate resourcing for mental health, which includes sufficient budget, as well as a culture that values and mandates adequate mental health care across the organization. Legislation is not enough to achieve this end. In England, the "parity of esteem" principle by which mental health must be given equal priority to physical health was enshrined in law by the Health and Social Care Act 2012. However, mental health problems account for 28% of the burden of disease but only 13% of NHS spending.^[34] With the best of intentions, staff will not be able to optimally enact CPs such as the ADAPT CP without dedicated resourcing, a factor that all health services seeking to improve their mental health care need to consider.

The third CFIR domain, the inner setting, represents features of structural, political, and cultural contexts through which the implementation process will proceed.^[35] In this domain, existing workflows and structures heavily influenced ADAPT CP decisions. For example, services selected patient cohorts to participate depending on how they flowed through the service; those who were easily identifiable and had clear contact points with key staff were preferred. Similarly, services chose to introduce ADAPT screening to patients at points when they naturally interacted with staff, adapted existing registration processes to accommodate the ADAPT CP, and tailored referral pathways to existing resources. Although this facilitated implementation, it did mean that certain groups missed out, potentially establishing or consolidating systemic disparities.

Another influential factor associated with the inner setting was the degree of perceived specialization of staff; in some services psychosocial care was seen as the domain of psychosocial staff with limited buy-in to ADAPT CP roles from other disciplines, whereas in other services, psychosocial care was perceived as a service-wide responsibility resulting in significant cross-disciplinary collaboration and co-operation. Damschroder et al^[29] note that the overarching culture and climate of workplaces, often unseen and unacknowledged, can make or break health service change.

The fourth CFIR domain is the individuals involved with the intervention and/or implementation process. Several elements within this domain (such as knowledge and beliefs about the intervention and self-efficacy to execute the intervention) were reflected in our data. In this real-world implementation of the ADAPT CP, its success relied on everyone involved understanding and completing their part of the process, which was challenging in busy oncology services. It was often individual staff initiative that solved perceived barriers to the CP,^[36] with creative solutions put in place to support the CP. Similarly, Greenhalgh et al^[37] describe the significant role of individuals: *People are not passive recipients of innovations. Rather . . . they seek innovations, experiment with them, evaluate them, find (or fail to find) meaning in them, develop feelings (positive or negative) about them, challenge them, worry about them, complain about them, "work around" them, gain experience with them, modify them to fit particular tasks, and try to improve or redesign them—often through dialogue with other users.* Our findings reinforce the importance of engaging with all levels of staff involved in implementation, and facilitating communication within the organization to ensure individuals feel engaged and rewarded for playing their part.

This study is not without limitations. The research team was unable to audio-record engagement meetings, although we took detailed notes; thus, some rationales and interactions may have been omitted. Agendas and issues not articulated in meetings may have impacted decisions, to which we were not privy. Thus, our findings may not represent a full picture of factors impacting decisions about how to enact the ADAPT CP in each service.

4.1. Clinical implications

From the study findings, a number of recommendations can be formulated for services attempting to implement mental health CPs, or indeed any health service change. First, at the state or national level, inclusion of interventions to detect and manage psychosocial distress should be established as a KPI for all cancer services, to support their activity in this area.

Establishing a regular forum to identify, discuss and plan whole of service approaches to patient care is helpful. It was uncommon for services in this study to have an existing forum for administrative, management, nursing, medical, social work, psychology and psychiatry team members to come together to discuss service issues. Existing multidisciplinary team meetings (as also reported in other studies)^[38] addressed care related to individual patients focusing on treatment and diagnostic decision-making, educational purposes and evidence-based medicine, with psychosocial care needs discussed for only some patients, and few referrals made as a result.

Clearly defining who is responsible for identification of patient concerns, referral and management, and how these steps will be conducted, are key when implementing stepped care models incorporating evidence-based allocation of resources to avoid overburdening services^[39]. Including psychosocial care as an essential component of the job descriptions of staff such as nurse coordinators or patient navigators would give legitimacy to these activities, ensure time is allocated to these tasks, and reduce staff resentment about being burdened with additional tasks.

In the context of cancer services where patients move through different clinical areas, shared responsibility but consistent and efficient processes are likely to build sustainability.^[40] Change that will impact the whole service requires a co-ordinated approach and commitment from all stakeholders, particularly service leaders. To support implementation of new initiatives, establishment of a lead team within the service, with representation from the key players with most responsibility for associated tasks, is important.^[41] Opportunity for that team to meet regularly within working hours requires senior management support, leading to endorsement and ownership of changes that impact frontline staff.

5. Conclusions

In this study, we have documented in detail decisions made in tailoring the ADAPT CP for individual services prior to implementation, and their rationales, adding to the scarce literature on intervention adaptation in real-world studies. In a planned process, we presented fixed and adaptable elements to services and engaged them in a process of collaborative decision-making to resolve tailoring decisions. Decisions and their rationales conformed well to the CFIR framework, reinforcing its utility in guiding implementation efforts.

Conflicts of interest

The authors declare no conflicts of interest.

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