FINAL REPORT

EX-MED CANCER

A Community Based Exercise Medicine Program For Cancer Survivors

The EX-MED Cancer VCSP Phase II Project was supported by the Victorian Government

Victorian Department of Health and Human Services
Victorian Cancer Survivorship Program
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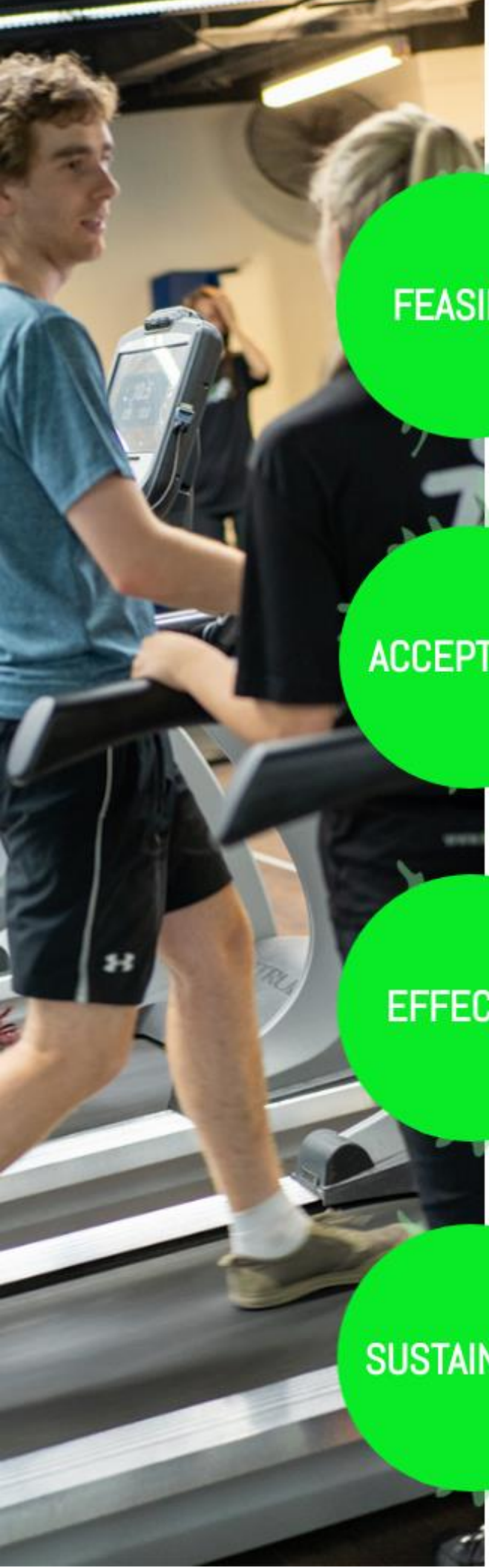

KEY MESSAGES

FEASIBLE

EX-MED Cancer model of care successfully implemented best practice exercise medicine to people with cancer in the community.

ACCEPTABLE

Patients & practitioners overwhelmingly satisfied with the service. Received over 1,200 patient & 300 health professional enquiries.

EFFECTIVE

Reduced cancer-related side effects & delivered profound improvements to the lives of people with cancer - physically, mentally & socially.

SUSTAINABLE

Dedicated not-for-profit organisation established & is independently operating to deliver EX-MED Cancer in Victoria.

EXECUTIVE SUMMARY

The EX-MED Cancer Victorian Cancer Survivorship Program project proposed to develop, implement and evaluate a sustainable model of care to address the chronic and late effects of cancer and its treatment through translation of best practice exercise medicine delivered in the community.

Overarching Aim: To enable people with cancer to access targeted exercise medicine specifically designed to counteract the negative effects of their cancer and its treatment; allowing them to exercise safely and effectively – minimising any risk of complications and maximizing benefits to physical, mental and social health and wellbeing.

Model of Care: EX-MED Cancer involves an ~4-month structured, supervised exercise program delivered by oncology trained exercise physiologists in community-based exercise facilities (e.g. leisure centres/gyms). The VCSP project involved people diagnosed with any type of cancer who had completed active treatment within 1 year of participating in the service. Participants received: two ~1 hour individual consultations pre-program to individually tailor the exercise prescription to the needs of each person; 36 ~1 hour group based exercise sessions delivered 3 times per week for 3 months involving moderate-high intensity exercise; a ~1 hour individual consultation post-program to track progress and develop an individualised long-term exercise plan; and a full access gym membership throughout the duration of their program. The core components of EX-MED Cancer include:

- EX-MED Cancer Hub – the Hub transforms the prescription of exercise medicine for cancer through centralising the referral process and facilitating quick and easy processes across every touch point for all stakeholders. All members of the cancer care team can refer a patient in ~30 seconds irrespective of their cancer type, stage, treatments or location. People with cancer can self-refer or be referred through various cancer organisations. The Hub then chaperons participants through every step of the program.
- EX-MED Cancer Exercise Physiologists – individualised exercise prescriptions are delivered by exercise physiologists who are specifically trained in oncology. Oversight and support by international leaders in the field allows for exercise to be safely and effectively delivered to even the most complex patients.
- EX-MED Cancer Groups – completing their personalised exercise prescription among a group of other cancer patients generates camaraderie and social support that is highly valued by patients.
- EX-MED Cancer Gyms – the program is delivered in specifically selected community-based gyms that are close to patients' homes and work. These facilities meet strict standards for creating a welcoming environment for patients to initiate and continue long-term exercise (facilitated by discounted ongoing gym memberships).

EX-MED Cancer is a comprehensive program that collaborates extensively with health services and stakeholders but operates independently in a community-based environment. All components of EX-MED Cancer are contextualised to the local environment in which it is being delivered. The service was free for project participants.

Evaluation: A robust research evaluation assessed the acceptability, effectiveness, sustainability and transferability of EX-MED Cancer. The demand for EX-MED Cancer from people with cancer and health professionals was high with over 1,200 patient and 300 practitioner enquiries in ~18 months. There was resounding approval of the service with strong endorsement of its acceptability from both patients and practitioners. Participants attended 83% of the 39 face-to-face exercise sessions and only 8% of patients did not complete the program. Effectiveness analyses involving 208 patients confirmed EX-MED Cancer delivers significant benefits to people with cancer. This includes a 10-23% improvement in function, 21% reduction in cancer-related fatigue, 8-12% reduction in anxiety and depression, and 7-14% improvement across various quality of life domains. EX-MED Cancer delivered a 15-34% reduction in the top three barriers to exercise and ~80-90% of participants were quite-extremely motivated and committed to continue exercising. Patients identified profound changes not just to their physical, mental and social wellbeing, but also to their ability to move past cancer and re-engage more fully in all aspects of their life.

Outcomes: EX-MED Cancer successfully translated the research into a service that systematically delivers exercise medicine in cancer care by facilitating exercise to be prescribed by health professionals, dispensed by exercise physiologists and taken by patients. EX-MED Cancer is a feasible model of care that is highly valued by patients and practitioners; an effective service that delivers clinically meaningful improvements in patient outcomes; and has been transformed into a sustainable and scalable health service effectively implemented in ongoing practice.

BACKGROUND

Compromised Health of People with Cancer

Advances in anti-cancer treatments mean that more people with cancer are living longer, but many people aren't living as well as they could be [1]. Addressing the chronic and late effects of cancer and its treatment has been consistently identified as a central component of survivorship care [2-4]. People with cancer can experience serious chronic health and psychological sequelae that persist long after active treatment has finished. These issues most commonly include fatigue, musculoskeletal symptoms, psychological distress, accelerated functional decline and a higher risk of developing other cancers and comorbid conditions such as cardiovascular disease, diabetes, osteoporosis and obesity [5-15]. Consequently, people with cancer experience considerable morbidity, increased risk of losing independence as they age, and significantly reduced quality of life. These effects also place unnecessary economic burden on the health care system [16]. The majority of current health care services are not adequately resourced to address the need for prevention and management of chronic and late effects [17, 18].

Exercise as Medicine for People with Cancer

Numerous systematic reviews and meta-analyses have concluded that appropriate exercise is a safe and effective intervention to counteract many of the adverse physical and psychological effects of cancer and its treatment [19-22]. Specifically, appropriate exercise prescription has been shown to: 1) improve quality of life across multiple general health and cancer-specific domains [21]; 2) enhance physical function [23]; 3) reduce cancer-related fatigue [24]; 4) alleviate psychological distress [20]; 5) counteract unfavourable changes in body composition [25]; 6) decrease pain [26]; 7) enhance sleep quality [27]; and 8) reduce sexual dysfunction [28]. Consistent evidence from epidemiological studies suggests exercise also confers benefits to cancer outcomes with significant reductions observed for the risk of cancer specific death and cancer recurrence in people who exercise regularly [29-34]. While prospective randomised controlled trials are required to evaluate this association, this observational data indicates a ~20-60% risk reduction in cancer-specific mortality for people with cancer who are more physically active (research focused mainly on breast and colorectal cancers) [29-34]. Furthermore, emerging evidence highlights that cancer patients who exercise regularly have a lower risk of developing new cancers and comorbid conditions [19]. The increasing body of evidence has led major health organisations (including the Clinical Oncology Society of Australia and the American Cancer Society) to develop guidelines recommending exercise for people with cancer [35-40]. For people with cancer to realise the therapeutic effects of exercise, these guidelines stipulate that targeted prescriptions of progressive exercise at appropriate intensities and volumes are required (hereon referred to as 'exercise medicine'). While the message for people with cancer to avoid inactivity is important, evidence underpinning the exercise guidelines arises from interventions that are appropriately prescribed and monitored [35-40]. Clearly, appropriate exercise is an effective intervention for the long-term management of cancer and should be a critical element of survivorship care [41].

Exercise Behaviour of Cancer Survivors

Despite the evidence base and recommendations from key health agencies which are widely disseminated by government and non-government cancer organisations, the majority of Australians with cancer do not participate in appropriate levels of exercise [42-44]. Reports indicate that ~70% of cancer survivors do not meet aerobic exercise guidelines (i.e. 150 minutes of moderate intensity walking/cycling/swimming each week) and ~80-90% do not meet resistance exercise guidelines (i.e. 2-3 moderate intensity weight lifting sessions weekly) [42-44]. Inactivity data demonstrates that current strategies to engage people with cancer in exercise do not work. As a result, very few people with cancer are realising the widespread benefits exercise provides to restoring health and wellbeing following treatment. Given the potential of exercise to reduce disease burden, there is a pressing need to facilitate optimal exercise behaviour in people with cancer.

Need for an Exercise Medicine Model of Care

Survivorship guidelines released by the Clinical Oncology Society of Australia, American Society of Clinical Oncology and the National Comprehensive Cancer Network specify exercise as a core component of high quality survivorship care [4, 35, 38, 45-47]. People with cancer have clearly indicated a desire to participate in appropriately designed and supervised exercise programs [48-56] however, no such services are routinely available for people with cancer.

Observational and clinical trial data illustrate that usual care, even if it includes a strong recommendation to exercise, does not result in people with cancer taking up exercise opportunities or engaging in exercise behaviours sufficient to realise significant health benefits [42-44, 57]. The challenge is developing a model of care for population wide implementation of affordable and effective exercise medicine for people with cancer. While relatively small, isolated exercise programs do exist (or have temporarily existed) in Victoria, current models of care fail to provide people with cancer access to best-practice exercise medicine as part of standard cancer care.

METHODOLOGY

Aim:
To develop, implement and evaluate a sustainable model of care to address the chronic and late effects of cancer and its treatment through translation of best practice exercise medicine delivered in the community.

Objectives:
1. Develop and implement a sustainable exercise service for people with cancer to address the physical and psychosocial problems amenable to exercise intervention (EX-MED Cancer).
2. Provide people with cancer access to an individualised exercise medicine program.
3. Incorporate a coordinated pathway of care between multidisciplinary cancer specialists, general practitioners and exercise physiologists within the post-treatment plan of people with cancer.
4. Build the capacity of health professionals to deliver personalised exercise interventions to people with cancer.
5. Facilitate long-term exercise behaviour in people with cancer by promoting self-management.
6. Design a model of care that can be sustained and expanded throughout Victoria.
7. Evaluate the acceptability, effectiveness, sustainability and transferability of EX-MED Cancer.

EX-MED Cancer Model of Care
Central to the development of the exercise medicine model of care for people with cancer (EX-MED Cancer) was a comprehensive analysis of the scientific literature and application of the learnings from the Victorian Cancer Survivorship Program (VCSP) Phase I projects [58]. Learnings and recommendations stemming from these sources were coupled with the specialised expertise and proven track record of our multidisciplinary team to ensure the model capitalises on existing knowledge. EX-MED Cancer is a person centred model of care which involves a coordinated pathway between acute care, primary care, allied health care as well as community organisations and networks. The model capitalises on existing health care and community based workforce, services and resources. Aligned with the chronic disease management framework, EX-MED Cancer provides people with any type of cancer access to personalised exercise medicine using evidence based practice delivered in the community by upskilled allied health professionals. Education and awareness was tailored to the specialist cancer team, general practice team and exercise physiologists to ensure appropriate risk stratification and individualised exercise prescription. Self-management was a strong focus of the model with behaviour change theories guiding the content and delivery of the intervention. People with cancer received an individualised plan developed by their exercise physiologist which was be shared with their specialist cancer team and general practitioner. The plan was updated at the completion of the EX-MED Cancer program with a detailed strategy for transition to self-management.

Target Population
EX-MED Cancer has been designed to cater for people with any type of cancer. This is in line with international guidelines which recommend exercise for all people with cancer [35-40]. Processes incorporated within the model of care allowed for people with cancer to receive a personalised exercise prescription based on their individual needs. The project proposed a total of 200 people with cancer to participate in EX-MED Cancer. In anticipation of a high number of respondents, criteria were applied so that only people who had completed primary treatment for their cancer (e.g. surgery, chemotherapy, radiation, immunotherapy) within the last 1 year were eligible to participate. People meeting this criteria who were receiving maintenance therapy (e.g. hormone therapy) were eligible to participate.

EX-MED Cancer Delivery Pathway
People with cancer participating in EX-MED Cancer followed a pathway of care that involves four core components, outlined below as steps 1-4.

Step 1 – Referral:
Referral to EX-MED Cancer occurred through three channels: 1) member of the multidisciplinary cancer team; 2) person with cancer or their carer/family member; or 3) community based cancer organisations (e.g. Cancer Council Victoria, Breast Cancer Network Australia or Prostate Cancer Foundation Australia). Referrals were made by inputting the cancer patients' name and contact details into a dedicated website, email address or telephone line.

Step 2 – EX-MED Cancer Hub:
The EX-MED Cancer Hub incorporates a telephone line, email address and website manned by cancer-specialist exercise physiologists. Following referral, contact was initiated with patients to provide information about the service and resources required to navigate the pathway (i.e. EX-MED Cancer information pack). People with cancer were registered for the next available EX-MED Cancer term at a site closest to their home and the site exercise physiologist notified of the enrolment. The Hub is a central point of contact and information about EX-MED Cancer for patients and professionals throughout acute-, primary- and allied health-care sectors. Additionally, to maximise the use of established services within the community, the Hub provided a centralised point to access information about resources and programs to support ongoing exercise (e.g. community health services, walking groups etc.).

Step 3 – General Practitioner:
People with cancer were directed to their general practitioner for screening and preparation of a chronic disease management plan. The EX-MED Cancer information pack included a letter to general practitioners describing the service and encouraging referral to the site exercise physiologist. General practitioners were required to provide consent for involvement in the program according to criteria applied to minimise risk of harm associated with participation in the service. The criteria were 'no medical condition that could place the participant at unreasonable risk of injury or illness caused by the exercise program'. People with cancer who had exceeded their limit of services through the chronic disease management plan were subsidised by the VCSP project.

Step 4 – Exercise Physiologist:
The exercise intervention was delivered by upskilled exercise physiologists at five community based fitness centres across metropolitan Melbourne. The intervention was delivered in four 4-month terms over an ~18 month period. Participants received:

a) Initial consultation – an approximately 1 hour consultation involving health status screening in order to individualise the exercise prescription to each persons' specific needs according to their cancer site, treatment history, severity of any symptoms/side effects, as well as general health history, physical abilities and personal preferences. The personalised prescription was designed in accordance with international guidelines for best practice exercise medicine in order to provide optimal stimulus for health improvement while maximising safety, compliance and long term behaviour. The cost of this consultation was subsidised by Medicare.
b) Individual exercise session – an approximately 1 hour instructional session was completed to direct participants through their personalised exercise medicine prescription (i.e. familiarise them with the fitness centre, learn how to use the exercise equipment and what is involved with their program). The cost of this consultation was subsidised by Medicare.
c) Group based exercise sessions for 3 months – three, approximately 1 hour exercise sessions were conducted weekly for 3 months in groups of 10 people with cancer. Participants completed their personalised exercise prescription consisting of moderate to high intensity aerobic and resistance exercise under the supervision of the exercise physiologist. The supervised exercise sessions constituted 80% of the dosage recommended by international guidelines [34-38]. Peer support was fostered by the exercise physiologist encouraging interactions between group members and activities outside of the supervised sessions (e.g. post-exercise coffee, walking group etc.) [59]. Participants also received a 3-month fitness centre membership which allowed them to access the gym in between supervised sessions. The costs

involved with the group based exercise sessions were subsidised through the project budget (i.e. free for participants).

d) Program completion consultation – at the completion of the 3-month supervised exercise intervention, participants had an approximately 1 hour individual consultation with their exercise physiologist. The consultation re-evaluated their personalised exercise prescription in light of progress through the exercise sessions and developed a plan for long-term exercise behaviour. A variety of options and strategies to continue exercising after EX-MED Cancer were discussed (e.g. supervision options, continued fitness centre membership, home based exercise, other programs and services available in the local community). A formalised, written plan was provided. The cost of this consultation was subsidised by Medicare.

Delivering Best Practice Exercise Medicine for Cancer Survivors

EX-MED Cancer was specifically designed to maximise outcomes and accessibility while minimising burden to facilitate widespread participation by cancer patients and sustainability of the service. The design was guided by a comprehensive analysis of the scientific literature and the team's proven track record of research and clinical work in exercise for people with cancer. Throughout the literature larger effects have been observed for interventions delivered at exercise facilities by appropriately qualified allied health professionals [19-22, 60]. In Australia, accredited exercise physiologists are the most appropriate health professionals to deliver ongoing best practice exercise medicine to cancer survivors [61]. Exercise physiologists are tertiary qualified allied health professionals who specialise in delivering evidence based exercise interventions for clinical populations. Research has demonstrated that motivational outcomes are strong predictors of exercise behaviour in cancer patients [62]. Thus, best practice exercise medicine also involves the application of behaviour change theories to overcome identified barriers to exercise participation and capitalise on facilitators of exercise in people with cancer [48, 49, 62]. As such, the EX-MED Cancer exercise intervention is theoretically underpinned by the Theory of Planned Behaviour, the most widely used theory of exercise motivation for people with cancer [62]. The design of the intervention is in line with commonly identified facilitators of exercise among cancer patients which include appropriate supervision, group based but individually tailored and gradually progressed exercise prescription [48].

Stakeholder Engagement

To minimise risks and barriers to successful implementation and ongoing sustainability, the first year of the project was dedicated to extensive consultation with partners and external stakeholders. This explicit consultation period was coupled with detailed planning and further development of all components of the model of care.

Evaluation Protocol

Rigorous scientific methodology was utilised to evaluate EX-MED Cancer. The research design involved quantitative (i.e. objective measures and self-reported questionnaires) and qualitative (i.e. focus groups and interviews) analytical approaches. As required for this grant scheme, the evaluation strategy was guided by and adhered to the VCSP evaluation and outcome framework. Elements of the RE-AIM framework (reach, effectiveness, adoption, implementation and maintenance) [63] were also be incorporated. In line with the project objectives, the acceptability, effectiveness, sustainability and transferability of the EX-MED Cancer was evaluated.

Acceptability

- Participation rates of people with cancer and health professionals (i.e. referrals, enrolments, completions) including sociodemographic and clinical characteristics were obtained through routine data collection.
- Compliance to the EX-MED Cancer intervention was assessed through monitoring attendance rates and adherence to the exercise prescription including reasons for non-attendance/non-compliance. Adherence was defined as completing ≥ 80% of the exercise prescription provided by their exercise physiologist at each session. Tolerance was evaluated using ratings of perceived exertion [64] and the proportion of target dosage achieved at each exercise session. Target dose was defined as 20 minutes moderate to high intensity aerobic exercise and 6 exercises multiplied by the number of sets (increased from 2 to 4 sets over 12 weeks) for the resistance exercise component.
- Patient and health professionals lived experience of EX-MED Cancer was obtained through quantitative surveys and qualitative interviews/focus groups probing key themes associated with the perceived

acceptability of the model of care. The qualitative interviews/focus groups were performed by an independent researcher to ensure open discussion from participants and unbiased reporting of outcomes. Best practice methodology for the conduct of qualitative research was adopted [65].

- Fidelity of the service delivery. Compliance with the protocols and procedures for EX-MED Cancer service delivery was assessed by reviewing implementation documents and independent observation of operational procedures at monthly intervals.

Effectiveness

- The safety of EX-MED Cancer was assessed by monitoring the incidence and severity of any adverse events throughout the study by project staff. Participants also self-reported the incidence and severity of any adverse events using a weekly log and a custom survey administered at the end of the program.
- To assess the impact of EX-MED Cancer assessments were conducted prior to initiating EX-MED Cancer (pre-program), after completing the exercise intervention (post-program) and 3-months after completing the exercise intervention (3-month follow-up). All assessment tools and procedures have established validity and reliability and are used widely in clinical research. The following outcomes were measured:
    - Blood Pressure, Heart Rate and Weight. Resting heart rate and blood pressure was assessed using a validated oscillometric device. Weight and body mass index were monitored. Assessments were conducted by exercise physiologists.
    - Physical Function. Cardiorespiratory fitness was assessed using the 6 minute walk test [66]. Functional ability was assessed using the repeated chair rise test [67]. All participants were familiarised to the assessments to eliminate results being biased by a learning effect. Specifically, participants completed the series pre-program assessments on two separate occasions (separated by 3-7 days) with the actual pre-program score taken from the second occasion. Assessments were conducted by exercise physiologists.
    - Common Cancer Symptoms. The Edmonton Symptom Assessment System was used to assess a range of common issues including fatigue, psychological distress, pain and various other symptoms [68].
    - Quality of Life. Health-related quality of life was assessed using the Medical Outcomes Short Form 36 (SF-36) which evaluates various domains of physical, mental and social wellbeing [69].
    - Physical Activity Level. The Godin Leisure-Time Exercise Questionnaire [70] was utilised to assess participation in mild-, moderate- and vigorous-intensity aerobic and resistance exercise.
    - Determinants of Exercise Behaviour. A custom questionnaire developed in accordance with the Theory of Planned Behaviour guidelines [71] was utilised to assess constructs of behaviour. The survey items are used regularly in exercise oncology research.
- Cost-effectiveness of EX-MED Cancer will be assessed by international best-practice methodology. Data is continuing to be collected from the Medicare Benefits Scheme and the Pharmaceutical Benefits Scheme for approximately two years after the completion of the project to allow for a robust analysis. As such, no economic outcomes can be reported in this report but will be published in a scientific journal in the future.

Sustainability and Transferability

- Level of interest from people with cancer and health professionals including the rates and nature of enquiries in EX-MED Cancer were obtained through routine data capture and monitoring website usage analytics.
- Identification of costs involved with maintaining the EX-MED Cancer model of care were determined by cost modelling and obtained by routine data capture of workforce requirements and program expenses. Evaluation of the level people with cancer are willing to pay for exercise services were assessed by a custom questionnaire completed by people who had completed EX-MED Cancer as well as a cohort of people who had not participated in EX-MED Cancer (i.e. registered but were ineligible for EX-MED Cancer).

Ethical Oversight

The evaluation protocol was approved by the Austin Health Human Research Ethics Committee (HREC) with site-specific approvals provided by Peter MacCallum Cancer Centre HREC, Western Health HREC, Australian Catholic University HREC and the Australian Government Department of Human Services (approval to access Medicare data). Reporting requirements for all HREC have been met and all participants provided written informed consent.

EVALUATION OUTCOMES

Acceptability

Enquiries from People with Cancer

A total of 1,209 people with over 25 different types of cancer registered for EX-MED Cancer which represents over 600% of the target participation rate. Relevant information on these enquiries is presented here:

Table 1. Information on People with Cancer who Registered for EX-MED Cancer	Number	Percentage
Gender – Female	851	70%
– Male	330	28%
Cancer Type – Breast Cancer	483	40%
– Blood Cancer	157	13%
– Prostate Cancer	93	8%
– Bowel Cancer	59	5%
– Lung Cancer	42	3%
– Other (over 20 different types)	375	31%
Cancer Stage – Localised	180	15%
– Locally Advanced	179	15%
– Advanced	204	17%
– Unsure/don't know	646	53%
Currently Receiving Treatment – No	520	43%
– Yes	415	34%
Why Did You Register for EX-MED Cancer – Improve physical and/or mental wellbeing	506	42%
– Doctors and/or nurses advice	415	34%
– Other (e.g. unknown, family members advice, improve survival)	288	24%
How Did You Find Out About EX-MED Cancer – Hospital	467	39%
– Word of mouth	117	10%
– Private oncology practice	107	9%
– Social media	63	5%
– Cancer organisation (e.g. CCVic, BCNA, PCFA)	51	4%
– Other	190	16%
– Missing data	213	18%
How Referred – Self-referral (unclear what number were advised by a doctor/nurse to do so)	865	72%
– Cancer specialist (surgeon, medical oncologist, radiation oncologist)	81	7%
– Cancer nurse	80	7%
– Other (e.g. carer/family member, exercise physiologist, physio, GP)	183	14%
Method of Contact – Website	824	68%
– Phoneline	299	25%
– Email	48	4%

Enquiries from Health Professionals

A total of 345 health professionals formally enquired about EX-MED Cancer through either the website, email or telephone line. This was supplemented by countless informal interactions with health professionals (estimated to be well into the hundreds of health professionals). Relevant information on these enquiries is presented here:

Table 2. Information on Health Professionals who Enquired about EX-MED Cancer	Number	Percentage
Role – Exercise physiologist or physiotherapist	165	48%
– Cancer nurse	50	14%
– Cancer specialist (surgeon, medical oncologist, radiation oncologist)	13	4%
– Other (GP, cancer organisation, dietician, occupational therapist)	117	34%
Reason for Contact – Interest in professional development/education opportunities	110	32%
– Seeking information about EX-MED Cancer	97	28%
– Other (providing information on a patient, wanting to get involved)	138	40%
Method of Contact – Email	161	47%
– Phoneline	93	27%

– Website	87	25%

EX-MED Cancer Participants

A total of 208 people with over 20 different types of cancer participated in EX-MED Cancer. Sociodemographic and clinical data of participants prior to initiating EX-MED Cancer are presented here:

Table 3. Sociodemographic and Clinical Characteristics of EX-MED Cancer Participants	**N or Mean ± SD**	**Percentage or Range**
Age (years)	55 ± 13	21 – 91
Gender – Female	157	75%
– Male	51	25%
Language spoken at home – English	176	85%
– Other language	32	15%
Marital Status – Married/de facto relationship	135	65%
– Single/widowed	63	30%
– Prefer not to answer/other	10	5%
Employment Status – Not currently working	79	38%
– Employed part time or casually	53	25%
– Employed full time	39	19%
– Other (e.g. prefer not to answer, student)	37	18%
Education Level – University bachelor's degree	58	28%
– University postgraduate degree	54	26%
– High school	36	17%
– Other (e.g. diploma, vocational qualification, prefer not to answer)	60	29%
Combined Household Income – Less than $20,799 annually (< $399 per week)	13	6%
– $20,800 to $41,599 ($400 – $799 per week)	32	15%
– $41,600 to $67,599 ($800 – $1,299 per week)	17	8%
– $67,600 to $103,999 ($1,300 –$1,999 per week)	34	16%
– $104,000 or more ($2,000 or more per week)	47	23%
– Prefer not to answer	65	32%
Cancer Type – Breast Cancer	117	56%
– Blood Cancer	38	18%
– Prostate Cancer	17	8%
– Bowel Cancer	8	4%
– Lung Cancer	6	3%
– Other (over 10 different types)	22	11%
Cancer Stage – Localised (stages 0 and 1)	73	35%
– Locally Advanced (stage 2)	54	26%
– Advanced (stage 3)	26	13%
– Metastatic (stage 4)	19	9%
– Unsure/don't know	36	17%
Time Since Diagnosis (months)	21 ± 47	1 – 635
Time Since Completing Last Surgical, Chemotherapy or Radiation Treatment (months)	7 ± 8	0 – 62
Previous Cancer Treatments – Surgery	167	80%
– Chemotherapy	154	74%
– Radiation	118	57%
– Hormone Therapy	85	41%
Number of Diagnosed Co-morbid Diseases – 0	94	46%
– 1	48	23%
– 2	39	19%
– ≥3	27	12%
Smoking Status – Never smoked	121	58%
– Previous smoker	79	38%
– Current smoker	5	2%
Alcohol Consumption – Less than 1 day each week	131	63%
– 1 to 2 days each week	35	17%

– ≥3 days each week	75	36%
Body Mass Index (kg/m^2)	28 ± 6	17 - 57

N – number of participants; SD – standard deviation

A total of 16 participants (8%) withdrew from EX-MED Cancer. The reasons for withdrawal are presented in Table 4. There were no significant differences between the patients who withdrew and those who completed EX-MED Cancer in any sociodemographic and clinical data or pre-program physical function, severity of cancer symptoms and quality of life.

Table 4. Reasons for Withdrawing from EX-MED Cancer	**Number**	**Percentage**
Withdrawn from EX-MED Cancer – No (completed)	192	92%
– Yes (did not complete)	16	8%
Reason for Withdrawing – Health condition (e.g. disease progression, hospitalisation, injury)	11	69%
– Time commitments external to EX-MED Cancer	3	19%
– Travel commitments external to EX-MED Cancer (e.g. holidays)	2	12%

EX-MED Cancer Participants Ability of Access Medicare Subsidies

87.5% of participants (n = 182) were able to access Medicare subsidies for the three exercise physiologist consultations through the Chronic Disease Management Plan. 12% (n = 25) of participants had already exceeded their annual limit of serviced through this scheme and 0.5% (n = 1) was a non-Australian without Medicare access.

Participants' Adherence to EX-MED Cancer Model of Care

Data evaluating the attendance, adherence and tolerance of EX-MED Cancer are presented here:

Table 5. Adherence to the EX-MED Cancer Exercise Service	N or Mean ± SD	Percentage or Range
Attendance to Exercise Sessions (percentage of total number of exercise sessions)	83 ± 14%	25 – 100%
Reason for Non-Attendance – Public holiday or personal holiday		31%
– Personal commitment or medical appointment		31%
– Illness		22%
– Other (e.g. work commitment)		16%
Adherence to Exercise Prescription[a] (percentage of sessions adhered to)	95 ± 7%	43 – 100%
Reason for Non-Adherence – Practical issue (e.g. late to session, machines occupied)		26%
– Clinical issue (e.g. injury concern, pain, cancer symptom)		7%
– Other (reason not provided)		67%
Sessions Requiring a Change in the Exercise Prescription (percentage of sessions)	12 ± 10%	0 – 64%
Reason for Change in Exercise Prescription – Pain		48%
– Fatigue		16%
– Prior injury		14%
– Other (e.g. symptoms, machine out of order)		22%
Target Dosage Achieved – Aerobic Exercise[b] (percentage of sessions)	96 ± 6%	66 – 100%
Target Dosage Achieved – Resistance Exercise[c] (percentage of sessions)	97 ± 9%	55 – 100%
Session Rating of Perceived Exertion (scale from 6 [no exertion] to 20 [maximal exertion])	14 ± 1	11 – 18

[a] Adherence equated to completing ≥ 80% of the exercise prescription provided by their exercise physiologist at each session

[b] Target dose for aerobic exercise component was 20 minutes

[c] Target dose for resistance exercise component was 6 exercises multiplied by the number of sets (increased from 2 to 4 sets over 12 weeks)

Participants' Lived Experience of EX-MED Cancer

Data from a patient survey (n = 208 participants) are presented in Table 6 and example quotes from the survey are presented in Appendix 8. Data from semi-structured focus groups and interviews probing key themes associated with the perceived acceptability of EX-MED Cancer (n = 54 participants) are presented in Table 7.

Table 6. Cancer Patients Appraisal of EX-MED Cancer (n = 208)[a]	**Percentage**
Overall, how would you rate your experience with EX-MED Cancer – Excellent	91%
– Very good	8%
– Good	1%
– Fair	0%

– Poor	0%
Should EX-MED Cancer be offered as a standard component of cancer treatment – Strongly favour	91%
– Somewhat favour	8%
– Neutral	1%
– Somewhat oppose	0%
– Strongly oppose	0%
Would you recommend EX-MED Cancer to other people with cancer – Extremely likely	91%
– Quite likely	8%
– Slightly likely	0%
– Neutral	1%
– Slightly unlikely	0%
– Quite unlikely	0%
– Extremely unlikely	0%
Was EX-MED Cancer beneficial for you – Very much	91%
– A fair bit	8%
– 'Somewhat' to 'not at all'	1%
Do you believe EX-MED Cancer improved your physical wellbeing – Very much	88%
– A fair bit	10%
– 'Somewhat' to 'not at all'	2%
Do you believe EX-MED Cancer improved your mental wellbeing – Very much	76%
– A fair bit	13%
– 'Somewhat' to 'not at all'	11%
Was the registration/enrolment process easy to navigate – Very much	84%
– A fair bit	11%
– 'Somewhat' to 'not at all'	5%
Was the exercise program tailored to your needs – Very much	92%
– A fair bit	6%
– 'Somewhat' to 'not at all'	2%
Was the frequency of exercise sessions (3 sessions per week) acceptable – Very much	89%
– A fair bit	10%
– 'Somewhat' to 'not at all'	1%
How important was it to you that the sessions were supervised by an exercise physiologist – Very much	89%
– A fair bit	9%
– 'Somewhat' to 'not at all'	2%

[a] Scoring of questionnaire utilised either a 5 or 7 point Likert scale (e.g. 1–poor, 2–fair, 3–good, 4–very good, 5–excellent; or 1–not at all, 3–somewhat, 5–a fair bit, 7–very much)

Table 7. Focus Group and Interview Data Capturing Cancer Patients Appraisal of EX-MED Cancer (n = 54)[a]

Domain	Theme	Interpretation	Exemplar Quotes
1. SELF	**1. My Self**: re-establishing a sense of self	EX-MED Cancer enabled feelings of control and choice that contrasted the lack of control imposed by a cancer diagnosis.	"This is something I can control, it's giving us the capabilities to do it for ourselves rather than having it done to us - which is a refreshing change." (P-36)
		Participants identified profound feelings of accomplishment elicited by EX-MED Cancer.	"The sense of accomplishment that you have is just incredible. It's probably one of the things I'm most proud of having done in my entire life which sounds a bit silly now I say it out loud, but it really just changed me completely." (P-20)
		Participants powerfully described the sense of being alive and being able to re-engage with aspects of life that mattered after EX-MED Cancer.	"It actually made me feel alive. Cause, you know, the tiredness and all the other crap that goes with it, you just live from day to day to day…and then doing this program just actually made me feel alive. It's weird to say that but that's how I felt." (P-44)

		EX-MED Cancer provided people with the ability to believe that after the chaos of a cancer diagnosis, life could regain some semblance of normality.	"'The best thing about this program is that it has shown me that I can do it. That after all that you've been through…the whole world just fell apart, and this kind of got me back on going, I'm still normal even though I've got cancer" (P-39)
		For participants, EX-MED Cancer was about focusing on ability not disability and about normalisation after cancer.	"[EX-MED Cancer] was amazing. I felt in good hands, I felt that I was seen for what I can do not just about the cancer" (P-12)
	2. My Mind: recovering from the inside out	Many participants described benefits of EX-MED Cancer extending far beyond the physical dimension to mental and emotional wellbeing.	"The changes where the mind is concerned…that was so good. I was able to start thinking and planning. Before the program my mind was just so slow and unfocused. So strength started in the body and moved up to the brain as well." (P-8)
		The positive impact of EX-MED Cancer on participants self-belief, confidence and self-esteem was strongly identified.	"Going through cancer, the treatment and all of that, your life changes…emotionally and in your thought process. So to do something like taking control of your body a little bit…feeling empowered and strong and happy with yourself." (P-11)
		Participants described improvements in mood, feelings of depression and anxiety and their overall psychological wellbeing as they progressed through EX-MED Cancer. These improvements were noticed by their family/carers.	"I was quite an agitated person dealing with the consequences of the surgery which I clearly wasn't happy about. But feeling fitter and stronger…my wife would say to you that I'm an easier person to live with. I complain less, I'm less agitated. I'm better mentally." (P-20)
		Participants identified tangible improvements in chemo-brain resulting from involvement in EX-MED Cancer.	"I didn't expect that I would really pull out of that brain fog of the chemotherapy so quickly. That was just fantastic." (P-10)
	3. My Body: overcoming the effects of cancer treatment	Participants powerfully described the physical benefits of EX-MED Cancer and were struck by the magnitude of improvement.	"'It definitely made me stronger a lot faster than if I'd been trying to do it by myself and just doing it through lifestyle things." (P-49)
		The direct benefits of EX-MED Cancer on specific cancer-related side effects participants were experiencing were commonly identified.	"That was my experience with the tingles, like I had it quite bad in my fingers and my toes. And no one had actually given me any exercises until I joined this program. The EP gave me some really easy exercises and it came good in a short period of time." (P-6)
		Many participants described that EX-MED Cancer engendered a feeling of strength and better capacity to face cancer again if it should recur.	"If I get cancer again…exercise keeps me strong. So I hope to God I don't, but if I've got to face treatment again I'm in a better place" (P-16)
		Participants identified the impact of EX-MED Cancer on their views and beliefs about what their bodies could achieve.	"The thing a learnt from EX-MED is that my body can do a lot more than I ever thought it could. And I think that was probably something everyone learnt. The EP pushed us to our max and then pushed us to a next max and the next max. I never knew that we could do that." (P-13)

		Renewed confidence in their physical capabilities brought about through EX-MED Cancer allowed participants to re-engage with important daily activities (e.g. working, driving, social activities).	"The exercises she gave me for your balance and…I found now catching the train I can actually stand on the train. I was always asking to sit but now I stand a lot more." (P-17)
2. STRUCTURE	**4. The Group**: a point of difference	Participants described a sense of belonging to their EX-MED Cancer group, of being part of a specialised team.	"And the group got you, like if you said I'm really tired…they knew what you meant. You didn't have to explain, you didn't have to apologise, you could just do what you had to do." (P-32)
		EX-MED Cancer was described as different to participants' experiences of other support groups. They identified the purpose of coming together was about regaining a sense of wellbeing and learning skills to sustain the best health possible, for as long as possible.	"We all got to know each other gradually so it was quite natural, and it evolved…that evolution of friendship was a bit more natural, so people opened up when opportunities arose more naturally, and I think that was good." (P-16)
		The fact that EX-MED Cancer was a structured group activity was identified as a critical component of its success. Participants spoke about a motivation to attend driven by a sense of responsibility to their fellow group members or their EP.	"The accountability I think knowing that there's a group there, the EP is there. It's not like you can go anytime during the week and no one will know you were going." (P-14)
		Although the set-regimen was challenging for some people to manage other commitments, participants were largely supportive of EX-MED Cancer's set routine and believed it helped sustain commitment to the program.	"I organised my day around EX-MED. It meant I didn't procrastinate 'cause I could easily imagine myself finding reasons not to show up if I had to do it at any time." (P-15)
	5. The EP: specialised intervention and support	The EP's were recognised by all participants as a critical component of EX-MED Cancer's success.	'And just even attempting it was a big thing. But to have somebody there to help you, to guide you, to look after you, I think that was really important. I was still having lots of side effects, so it was really good to have someone there that understood, to help me through." (P-39)
		Participants spoke of the EX-MED Cancer EPs' ability to individualise the exercise program and provide personalised attention to be key to sustaining participation in, and success of, EX-MED Cancer.	"It's paced appropriately for each individual…I was really scared I would be too tired or too puffed to do anything and it was very gradual and appropriately paced for everybody to make achievements no matter what their ability was." (P-36)
		Participants also spoke of the EX-MED Cancer EPs' ability to build individual relationships and provide tailored support as a highly valued component of EX-MED Cancer.	"I'll always be eternally grateful for EX-MED. They gave me permission to exercise in an environment where I felt comfortable and prepared to take the risks [because] I have [the EP] beside me. She's good at her job, she's so personable, and it's a joy to have been with her." (P-29)
		Participants highly valued the EPs ability to offer practical interventions to help with complex, treatment-	"I had neuropathy and [the EP] gave me these sensory motor exercises. And look I've still got it but there are times now I can

		related side effects. Participants confidence to exercise was developed through the EPs ability to manage these issues alongside existing injuries unique to each participant.	walk around and I don't think about my feet which is rare, 'cause I've had times where I couldn't walk more than twenty metres. So it's the first time I've been offered a way forward that doesn't include drugs, which is terrific." (P-4)
		Although EPs primarily provided instruction and support to enable exercise in the context of a cancer diagnosis, participants identified the importance of the EPs concurrent focus on overall health and wellbeing.	"I think the fact that it was consistent and intensive, and it was geared for our own individual needs, the program that he drew up for us was very good I thought, because we talked about the other health issues as well not just the cancer." (P-10)
	6. The Gym: a safe space	Many participants stated that if it wasn't for EX-MED Cancer, they would never have engaged with a gym facility. The majority had overcome their fear of gyms after completing the program and had committed to ongoing involvement at gyms.	"It does give you the confidence to go into a gym independently. Whereas I don't know whether I would've walked into my local gym and joined and then gone into the weights room without having the confidence I suppose to get on the treadmill or exercise bike" (P-22)
		Participants identified their dislike of gyms prior to starting EX-MED Cancer. Feelings of discomfort and intimidation experienced when accessing a public gym were overcome by the specific environment created at the EX-MED Cancer gyms.	'I appreciated the quietness and the space in the gym, and I think this was what kind of kept me coming back. And it wasn't intimidating, like there were no boof heads there like staring at themselves in the mirror while they lifted weights, which is what I associate gyms' (P-36)
		The convenience of the gym locations was an important factor for many participants. People spoke about the importance of being able to choose an EX-MED Cancer gym location that suited their day to day lives.	"It was convenient 'cause it was literally down the road from my house. It was all these things that sort of fell into place, it was like OK, you are meant to be doing this…get in there." (P-11)
3. SUSTAIN-ABILITY	**7. Raising awareness**	People felt strongly that health professionals should be encouraging people to exercise during and after cancer treatment, and that exercise should be promoted as a standard part of cancer care. There was a sense that clinicians underestimated the power of exercise to reduce suffering.	"I don't think some of the health professionals understand how cancer can affect people. When you've had cancer, you might've lost a part of your body or something, and so, you know, you're not feeling like you're the same person, and I think the exercise makes you feel a bit more whole again. But I don't know how you explain that to medical people." (P-49)
		The need to raise awareness of EX-MED Cancer, ensuring access for all cancer patients, was strongly articulated across all focus groups and interviews.	"I think anyone that's in contact with a cancer patient should know about this program. Every [health professional] that you come in contact with regardless who they are should know [about EX-MED Cancer]." (P-23)
	8. Upscaling equal access	There was unanimous agreement that access to, and availability of EX-MED Cancer should continue beyond the life of the project. A range of funding possibilities were discussed with strong calls for Government support.	"Something that makes it affordable for everyone, I think that's the key issue is making sure that, yeah, that it's accessible and affordable for people." (P-35) "If the government was to say well you have had cancer, we're going to subsidise

			[EX-MED Cancer] for you and get you fit and healthy and in a good mindset, then it's gonna' save them money in the long run." (P-38)
		Participants raised concerns about cancer patient's ability to pay for EX-MED Cancer. Lack of awareness of the benefits of EX-MED Cancer were perceived to influence people's willingness to pay but having experienced the positive impact of EX-MED Cancer participants identified a strong willingness to pay.	"Honestly, before I started I would say no, the cost would be sort of…I can't afford it. But after doing it I'd say it's worth every cent…you know, whatever you want to pay. But not everybody can afford it" (P-38)

[a] Participants included 39 women (72%) and 15 men (28%) which is representative of the full cohort. 42 people participated in focus groups and 12 people participated in individual interviews. Focus groups and interviews were audio-recorded data, transcribed verbatim and entered into NVivo, a qualitative data management software program. A thematic analysis framework was used to identify patterns of meaning as they related to the research questions being explored. Patterns were identified through a rigorous process of data familiarisation, data coding, theme development and revision.

Health Professionals Lived Experience of EX-MED Cancer

Data from a health professional survey (n = 37 health professionals who referred patients) are presented in Table 8 and Appendix 9. Data from semi-structured interviews probing key themes associated with the perceived acceptability of EX-MED Cancer (n = 20 health professionals who referred patients) are presented in Table 9.

Table 8. Cancer Health Professionals Appraisal of EX-MED Cancer (n = 37)[a]	**Percentage**
Clinical Role – Cancer nurse	38%
– Cancer specialist (surgeon, medical oncologist, radiation oncologist, haematologist)	30%
– Other (e.g. GP, exercise physiologist, physiotherapist, dietician)	32%
Years' Experience Working with Cancer Patients – over 20 years	35%
– 10 to 19 years	24%
– 2 to 9 years	32%
Gender – Female	76%
– Male	24%
Overall, how would you rate your experience with EX-MED Cancer – Excellent	50%
– Very good	19%
– Good	25%
– Fair	6%
– Poor	0%
Should EX-MED Cancer be offered as a standard component of cancer treatment – Strongly favour	80%
– Somewhat favour	17%
– Neutral	3%
– Somewhat oppose	0%
– Strongly oppose	0%
Would you recommend EX-MED Cancer to your colleagues – Extremely likely	67%
– Quite likely	25%
– Slightly likely	6%
– Neutral	0%
– Slightly unlikely	0%
– Quite unlikely	2%
– Extremely unlikely	0%
Will you continue to refer your patients to EX-MED Cancer – Extremely likely	58%
– Quite likely	31%
– Slightly likely	11%
– Neutral	0%
– Slightly unlikely	0%

– Quite unlikely	0%
– Extremely unlikely	0%
Do you feel confident referring patients to EX-MED Cancer – Very much	72%
– A fair bit	14%
– Somewhat	14%
– Not at all	0%
Do you have any concerns regarding the safety of EX-MED Cancer – Not at all	97%
– Somewhat	0%
– A fair bit	3%
– Very much	0%
Do you believe EX-MED Cancer improves the general health and wellbeing of patients – Very much	92%
– A fair bit	8%
– Somewhat	0%
– Not at all	0%
Is referring to EX-MED Cancer is more beneficial than providing an exercise recommendation – Very much	91%
– A fair bit	6%
– Somewhat	3%
– Not at all	0%

[a] Scoring of questionnaire utilised either a 5 or 7 point Likert scale (e.g. 1–poor, 2–fair, 3–good, 4–very good, 5–excellent; or 1–not at all, 3–somewhat, 5–a fair bit, 7–very much)

Table 9. Interview Data Capturing Oncology Health Professionals Appraisal of EX-MED Cancer (n = 20)[a]

Theme	Interpretation	Exemplar Quotes
1. VALUE OF THE SERVICE	Health professionals consistently recognised the value of EX-MED Cancer and identified the positive impact it had on their patients.	"It's a fantastic initiative and it gives patients the opportunity to get more involved in exercise rather than having to do their own thing and figure it out for themselves. All patients that I referred just had a fantastic time, they loved the social aspect of it and they came to me thrilled reporting their weight loss and how heavy the weights they were able to lift and they were feeling safe and secure to do their exercise. Patients have raved about it. So overall very positive experiences from the patients." (P-17)
2. FACILITATORS TO REFERRALS	Strong awareness and branding of EX-MED Cancer helped health professionals advocate for exercise and educate patients about exercise.	"Maybe [I] always considered it as important but didn't think about exercise in cancer so much before EX-MED and particularly the promotion that it's got. Always knew it was a part of cancer therapy and treatment but definitely my active promotion and referring was much, much better and more common after EX-MED." (P-20)
	Health professionals reported the importance of having the security of referring patients to an evidence-based program that had exercise physiologists trained in the care of people with cancer.	"That's why EX-MED's so, you know, that I really encourage it because a lot of [patients] want to continue exercising but you don't want them to go to the gym and then, you know, lift lots of weights and then do themselves an injury or a fracture or whatever. So that's why it's really good, you know, EX-MED can give a plan specific to the patient." (P-8)
	The ease of the referral process was identified as a key factor contributing to health professionals referring EX-MED Cancer to their patients.	"The whole referral process for me was great and it's how things should be. They [EX-MED Cancer] kind of really make it easy which is how it should be. You don't want to give people barriers to start with, you just want to get people in and then you can assess and triage them and that kind of thing. So that was really good, I really liked their website." (P-15)

	Health professionals' experiences when interacting with the EX-MED Cancer team and the accessibility of information on the program was valued.	"When I made a phone call to the organisers they were able to answer every question that I had." (P-10)
	There was strong endorsement for EX-MED Cancer in the way ineligible patients were managed (i.e. ineligible patients were provided with advice, resources and referral to exercise services local to them).	"People who were eligible and did participate were very happy with the program. If people weren't eligible the EX-MED staff…rather than just saying to us look that patient's not eligible, they would contact the patient and give them some advice about options in terms of participating in a form exercise program. So I thought that was very good service that they provided." (P-14)
3. BARRIERS TO REFERRALS	Health professionals commonly identified the wait-list as a barrier for referring EX-MED Cancer to their patients. Minimising the time between referral and program initiation would help encourage more referrals and engagement by patients.	"I just want to be confident that when I refer a patient…as I said it's critical that time when a patient accepts the referral for exercise that they can access it within a timely period, and if they can't then it's not good for them physically and they'll lose motivation to do it." (P-2)
	Restricting the program to patients who had completed primary treatment was viewed as a negative element of EX-MED Cancer. Health professionals identified the value of expanding the eligibility to include patients currently receiving treatment.	"I think that if possible, it would be better that [patients] can start [EX-MED Cancer] at any time during their treatment. Obviously not immediately post-operatively because they've got to wait for wound healing, but I think it would be more beneficial to be able to start it, you know, in conjunction with maybe chemotherapy just to help with the symptoms." (P-9)
	The relative limitation of EX-MED Cancer locations and lack of regional coverage was identified by health professionals as a challenge to referring patients.	"I can't refer most of my patients because we have a huge number of regional and rural patients. So I think we had less ability to refer patients than other city based hospitals that are mostly seeing Melbourne based patients. Our patient cohort is from all over." (P-5)
	Some health professionals identified the desire to provide more detailed information when referring patients would be an important improvement to facilitate referrals.	"When you fill out the referral form, there's very little space for you to give clinical information about patients. So where I've had patients who are non-English speaking for example and they need an interpreter I've emailed the team directly. But, you know, it would be helpful for example if there was something simple, even if it were just like a dropdown box about how fit that patient is, or about whether that patient for example have metastases in parts of their body" (P-11)
4. FACILITATORS TO A POSITIVE PATIENT EXPERIENCE	The fact that EX-MED Cancer was a cancer-specific exercise program was identified by health professionals as a key element to its success.	"I think also it was very attractive that it was obviously set up specifically for cancer patients and to some extent endorsed by cancer professionals as well. Because, you know, it's hard for patients to judge what information is important." (P-11)
	Health professionals recognised the value of the structure involved EX-MED Cancer as a key factors to helping patients engage in exercise.	"Post cancer therapy [exercise] is hard to do, it's hard for patients to be self motivated. But when there's a structure, when there's a commitment and when there's a relationship with a provider, it's much more likely to happen. And so one of the advantages of the EX-MED program as far as I see is not just expertise in exercise and exercise recovery, but providing a diary

		of activities and a patient making a commitment, and that's much more likely to be followed through on rather than just hoping the patient will go out for a walk every day." (P-19)
	The ease of access to various locations was identified as contributing to the positive participant experience as well as consideration for various transport options.	"My patients had pretty good access, I don't know if that was 'cause Sunshine was an easier site or I have no idea but, yeah, there wasn't any major holdups for any of mine [patients]." (P-4)
	Health professionals discussed the importance of EX-MED Cancer being based in the community rather than being limited to a hospital-based setting.	"I actually think it works very well in the community because, you know, for patients commuting to access something once they've finished treatment in a cancer centre is just hard, it's expensive, it's sort of a barrier to participation. And also some patients just don't want to come into hospital, they want to move on. And so having it in a normal gym I think is actually good because it's very normalizing, everybody goes to the gym." (P-11)
	The group-based environment was frequently raised as a valued component of EX-MED Cancer by health professionals. Their patients described the positive effect of building a social network of other participants involved with EX-MED Cancer.	"People that did participate in EX-MED spoke very, very highly of it. They really liked not only the training and the exercise under professional guidance, but the formation of groups with other people, different cancers but on a similar sort of cancer experience if you like, the survivorship experience, and providing support." (P-3)
5. BARRIERS TO A POSITIVE PATIENT EXPERIENCE	The time delay between when a patient was referred and when they were able to start the program due to the waitlist was identified as a limitation of EX-MED Cancer.	"But it's more the waiting period, sort of the oh you know, I've got to wait too long and so we'll go somewhere else, you know." (P-2)
	Health professionals described the restrictions with the set locations and timing of exercise sessions limited the potential impact of EX-MED Cancer.	"The only negatives were just the timing of the sessions and the location of the settings." (P-10)

[a] Participants included medical oncologists (n = 3), surgical oncologists (n = 2), radiation oncologists (n = 2), haematologist (n = 1), cancer nurses (n = 6), general practitioner (n = 1), physiotherapists (n = 3), exercise physiologist (n = 1) and dietitian (n = 1) who referred patients.

Service Fidelity

All required elements of the model of care were implemented in line with the protocol. This was confirmed by tracking compliance with procedures required throughout steps 1-4 of the service delivery pathway.

Effectiveness

Safety of EX-MED Cancer

Exercise related adverse events occurred in 16% of participants involved in EX-MED Cancer. The vast majority of the events were of mild severity with only 1% of issues being moderately severe and requiring cessation of the exercise intervention. The nature of events that occurred were all standard, expected issues arising from exercise prescription. Relevant information on these events/issues is presented here:

Table 10. Exercise Related Events/Issues Experienced During EX-MED Cancer	Number	Percentage
Incidence of Exercise Related Event/Issue	34	16%
Severity of Exercise Related Event/Issue [a] – Grade 1 (mild)	31	15%
– Grade 2 (moderate)	3	1%
– Grade 3 (severe)	0	0%
Type of Exercise Related Event/Issue – Exacerbation of pre-existing injury/issue	16	8%
– New injury/issue	15	7%

– Other	3	1%
Nature of Exercise Related Event/Issue – Joint pain	13	6%
– Back pain	9	4%
– Tendonitis	5	3%
– Muscle strain	3	1.5%
– Dizziness and/or nauseous	2	1%
– Other (dropped weight on foot)	1	0.5%

[a] Common Terminology Criteria for Adverse Events (CTCAE) version 5.0 used to classify the severity of exercise related events/issues. Relevant definitions: 1) Grade 1 - mild; asymptomatic or mild symptoms; clinical or diagnostic observations only; intervention not indicated. 2) Grade 2 - moderate; minimal, local or non-invasive intervention indicated; limiting age appropriate instrumental activities of daily living. 3) Grade 3 - Severe or medically significant but not immediately life-threatening; hospitalization or prolongation of hospitalization indicated; disabling; limiting self care activities of daily living.

Impact of EX-MED Cancer

EX-MED Cancer led to clinically meaningful improvements in physical function, fatigue, psychological distress and quality of life (Table 11 and 12). Participants significantly improved their physical activity levels and reduced their perceived barriers to engaging in regular exercise (Table 12 or 13). Improvements were sustained 3 months after completing EX-MED Cancer although the magnitude of improvement was attenuated for numerous variables (Table 12 and 13). EX-MED Cancer elicited favourable attitudes and strong motivation levels for continued exercise after the completion of the program (Table 14). Detailed data from the evaluation are presented in the following series of tables:

Table 11. Objective Assessments of EX-MED Cancer's Impact	**Pre-Program** (mean ± SD)	**Post-Program** (mean ± SD)	**Pre to Post Change** (% change)
Physical Function – 6 min Walk Test[a] (distance walked)	548 ± 97	602 ± 99.6	10%
Physical Function – Timed Repeated Chair Rise[b] (seconds)	10.7 ± 3.1	9.2 ± 2.2	-23%
Weight (kg)	78.4 ± 18.1	78.0 ± 17.9	-1%
Resting Heart Rate[b] (beats per minute)	78.7 ± 11.3	78.3 ± 11.2	-1%
Resting Bloody Pressure - Systolic[b] (mmHg)	123.7 ± 16.1	123.4 ± 15.2	0%
Resting Bloody Pressure - Diastolic[b] (mmHg)	82.8 ± 9.8	81.9 ± 9.7	-1%

[a] Increase in value represents an improvement; [b] Reduction in value represents an improvement

Table 12. Self-Reported Assessments of EX-MED Cancer's Impact	**Pre-Program** (mean ± SD)	**Post-Program** (mean ± SD)	**Pre to Post Change**	**3-month Follow-up** (mean ± SD)	**Pre to Follow-up Change**	**Post to Follow-up Change**
Common Cancer Symptoms (ESAS; score; lower score = lower severity of symptom)						
– Wellbeing[b]	3.8 ± 2.0	3.2 ± 2.0	-16%	3.4 ± 2.0	-10%	7%
– Pain[b]	2.5 ± 1.9	2.5 ± 1.8	0%	2.8 ± 2.1	10%	10%
– Fatigue/Tiredness/Lack of Energy[b]	4.7 ± 2.3	3.7 ± 2.1	-21%	3.8 ± 2.3	-19%	2%
– Drowsiness[b]	3.0 ± 2.2	2.6 ± 2.1	-14%	2.5 ± 2.0	-16%	-3%
– Shortness of Breath[b]	2.5 ± 1.9	2.1 ± 1.7	-15%	2.1 ± 1.8	-15%	0%
– Nausea[b]	1.5 ± 1.3	1.4 ± 1.2	-2%	1.5 ± 1.3	3%	5%
– Lack of Appetite[b]	1.8 ± 1.6	1.6 ± 1.5	-9%	1.6 ± 1.4	-11%	-2%
– Depression[b]	2.7 ± 2.3	2.5 ± 2.1	-8%	2.4 ± 2.0	-14%	-6%
– Anxiety[b]	3.2 ± 2.3	2.8 ± 2.0	-12%	2.7 ± 1.9	-16%	-4%
Health-Related Quality of Life (SF-36; norm-based score; higher score = better quality of life)						
– General Health[a]	43.3 ± 9.9	46.7 ± 10.6	8%	46.8 ± 11.6	8%	0%
– Physical Health Composite Score[a]	42.2 ± 8.9	45.8 ± 8.1	8%	45.9 ± 9.2	9%	0%
– Mental Health Composite Score[a]	43.8 ± 13.0	47.6 ± 12.1	9%	47.4 ± 12.3	8%	0%
– Vitality[a]	44.5 ± 10.0	50.6 ± 10.4	14%	49.9 ± 11.1	12%	-1%
– Physical Functioning[a]	43.9 ± 8.9	48.5 ± 8.5	11%	48.2 ± 9.1	10%	-1%
– Social Functioning[a]	42.4 ± 11.4	46.8 ± 10.3	10%	46.7 ± 10.6	10%	0%
– Role Functioning: Physical[a]	40.5 ± 10.7	46.3 ± 9.5	14%	46.1 ± 9.9	14%	0%
– Role Functioning: Emotional[a]	43.3 ± 12.0	46.5 ± 10.6	7%	46.2 ± 11.0	7%	-1%
– Mental Health[a]	45.9 ± 11.2	49.3 ±10.8	7%	49.5 ± 10.7	8%	0%
Physical Activity Levels (Godin questionnaire; minutes per week or proportion of participants)						
– Aerobic Exercise: Vigorous Intensity (mins/week)[a]	17.4 ± 46.6	71.7 ± 83.7	↑ 54 mins	45.9 ± 80.4	↑ 63 mins	↓ 26 mins

– Aerobic Exercise: Moderate Intensity (mins/week) [a]	71.6±103	124.5±180	↑ 53 mins	104.6±143	↑ 33 mins	↓ 20 mins
– Aerobic Exercise: Mild Intensity (mins/week) [a]	128.2±168	135.0±193	↑ 7 mins	124.2±168	↓ 4 mins	↓ 11 mins
– Resistance Exercise (mins/week) [a]	19.5 ± 39.2	104.3±96.8	↑ 85 mins	58.6 ± 65.8	↑ 39 mins	↓ 46 mins
– Meeting Aerobic Exercise Guidelines (%) [a]	25%	69%	↑ 44%	44%	↑ 19%	↓ 25%
– Not Performing Any Aerobic Exercise (%) [b]	41%	7%	↓ 34%	23%	↓ 18%	↑ 11%
– Meeting Resistance Exercise Guidelines (%) [a]	9%	65%	↑ 56%	33%	↑ 24%	↓ 32%
– Not Performing Any Resistance Exercise (%) [b]	70%	11%	↓ 59%	36%	↓ 34%	↑ 25%

[a] Increase in value represents an improvement; [b] Reduction in value represents an improvement

Table 13. Proportion of Participants Who Feel These Factors are Barriers to Regular Exercise [a]	**Pre-Program**	**Post-Program**	**Pre to Post Change**	**3-Month Follow-up**	**Pre to Follow-up Change**	**Post to Follow-up Change**
Feeling tired or fatigued	65%	50%	↓ 15%	45%	↓ 20%	↓ 5%
Not sure about what to do	56%	22%	↓ 34%	13%	↓ 43%	↓ 9%
Worry about injury	51%	34%	↓ 17%	25%	↓ 26%	↓ 9%
Symptoms and side effects of treatments	51%	37%	↓ 14%	30%	↓ 21%	↓ 7%
Don't like to exercise in bad weather	48%	42%	↓ 6%	36%	↓ 12%	↓ 6%
Too busy	46%	52%	↑ 6%	50%	↑ 4%	↓ 2%
Lack of motivation or no willpower	43%	39%	↓ 4%	38%	↓ 5%	↓ 1%
Responsibilities at home	39%	50%	↑ 11%	42%	↑ 3%	↓ 8%
Other medical or health problems	33%	37%	↑ 4%	42%	↑ 9%	↑ 5%
Don't want to get sore	33%	23%	↓ 10%	17%	↓ 16%	↓ 6%
Feel self-conscious	33%	22%	↓ 11%	16%	↓ 17%	↓ 6%
No access to gym or exercise equipment	32%	16%	↓ 16%	16%	↓ 16%	0%
Feeling sick or not feeling well	30%	33%	↑ 3%	27%	↓ 3%	↓ 6%
Don't enjoy it	30%	28%	↓ 2%	31%	↑ 1%	↑ 3%
No one to exercise with	29%	30%	↑ 1%	22%	↓ 7%	↓ 8%
No one helps or supports me	25%	22%	↓ 3%	20%	↓ 5%	↓ 2%
Nowhere to exercise	24%	16%	↓ 8%	14%	↓ 10%	↓ 2%
Don't like to sweat	18%	11%	↓ 7%	11%	↓ 7%	0%

[a] Proportion of people with cancer who rate the barrier between 'somewhat' to 'very much' on a 7-point Likert scale (1 – not at all, 3 – somewhat, 5 – a fair bit, 7 – very much)

Table 14. Impact of EX-MED Cancer on Exercise Motivation Levels	**Extremely Positive**	**Quite Positive**	**Slightly Positive**	**Neutral**	**Slightly Negative**	**Quite Negative**	**Extremely Negative**
After Completing EX-MED Cancer: Post-Program (proportion of participants)							
– How *motivated* are you to continue exercising [a]	40%	46%	10%	1%	1%	1%	1%
– How *committed* are you to continue exercising [a]	47%	44%	6%	2%	1%	0%	0%
– How *confident* are you about continuing exercising [a]	31%	48%	13%	2%	3%	2%	1%
– I *strongly intend* to do everything I can to exercise [a]	50%	42%	3%	2%	2%	1%	0%
– If I exercise regularly, I think I would [b]:							
- improve my wellbeing	56%	34%	6%	2%	0%	1%	1%
- improve my energy levels	44%	40%	12%	2%	1%	1%	0%
- relieve stress	40%	36%	14%	8%	0%	1%	1%
- get my mind off cancer	29%	32%	15%	19%	1%	2%	2%
- reduce the risk of cancer returning	28%	37%	8%	20%	0%	1%	6%
- live longer	35%	33%	14%	16%	0%	0%	2%
3-months After Completing EX-MED Cancer: 3-month Follow-up (proportion of participants)							
– How *motivated* are you to continue exercising [a]	29%	41%	16%	7%	1%	5%	1%
– How *committed* are you to continue exercising [a]	40%	40%	9%	8%	1%	2%	0%
– How *confident* are you about continuing exercising [a]	27%	44%	14%	6%	4%	3%	2%
– I *strongly intend* to do everything I can to exercise [a]	42%	35%	11%	9%	2%	1%	0%
– If I exercise regularly, I think I would [b]:							
- improve my wellbeing	57%	27%	10%	4%	1%	1%	0%
- improve my energy levels	44%	36%	15%	3%	1%	1%	0%

- relieve stress	41%	37%	13%	8%	0%	0%	1%
- get my mind off cancer	31%	27%	11%	22%	1%	5%	3%
- reduce the risk of cancer returning	33%	29%	12%	17%	0%	2%	7%
- live longer	36%	33%	9%	18%	0%	3%	1%

[a] Responses ranked on a 7-point Likert scale with the key word modified to suit each question (e.g. extremely motivated to extremely un-motivated; extremely committed to extremely un-committed; extremely confident to extremely un-unconfident; extremely agree to extremely disagree)

[b] Responses ranked on a 7-point Likert scale (extremely likely, quite likely, slightly likely, neutral, slightly unlikely, quite unlikely, extremely unlikely)

Sustainability and Transferability

Interest in EX-MED Cancer

There was strong interest in EX-MED Cancer from people with cancer (>1,200 registrations; Table 1) and oncology health professionals (>340 official enquiries; Table 2). This was supplemented by over 50 presentations to oncology health professionals in a variety of settings including multidisciplinary team meetings, seminars, workshops and conferences. A series of meetings were conducted with state and federal ministers and government departments including: Federal Minister for Health Greg Hunt's senior advisor; the Federal Shadow Minister for Health Catherine King's chief of staff; Federal Minister for Rural Health Bridget McKenzie's senior advisor; Federal Senator Catryna Bilyk who delivered a parliamentary speech on EX-MED Cancer (appendix 7); Victorian Minister for Health Jenny Mikakos's senior advisor; Victorian Assistant Shadow Health Minister Margaret Fitzherbert; various senior officials from the Australian Department of Health; Victorian Department of Health and Human Services Director of Cancer, Specialty Programs, Medical Research & International Health. Furthermore, analytics capturing the usage of the EX-MED Cancer website demonstrates strong online engagement, with relevant data presented here:

Table 15. EX-MED Cancer's Website Usage [a]	**Value**
Total Number of Sessions (i.e. number of times the website was accessed)	17,087 sessions
Number of Unique Users (i.e. number of people who accessed the website)	11,774 people
Proportion of Users who Returned to the Website (i.e. returning users)	17.2%
Average Session Duration (i.e. amount of time users spent viewing the website)	2 mins 27 sec
Number of Page Views per Session (i.e. how many different pages were viewed in a session)	2.6 pages
Breakdown of Page Views (i.e. proportion of total page views for each webpage)	
– Home (an overview of EX-MED Cancer)	36%
– Locations (where EX-MED Cancer is delivered and who the EPs are at each location)	15%
– Program (detailed information of the components involved with EX-MED Cancer)	15%
– Education (information about exercise medicine for patients and health professionals)	14%
– Enrol/Refer (portal to register for EX-MED Cancer or refer a patient to EX-MED Cancer)	8%
– About (information about the project's purpose and vision, project team and partners)	7%
– Contact Us (phone number, email address and fax number)	5%

[a] Data obtained during the period from the first day the website went live on 12 October 2017 to 30 September 2019.

Cost Implications to Deliver EX-MED Cancer

Modelling of the costs associated with delivering EX-MED Cancer as a stand-alone health service indicated a per patient cost of $1,000. The primary contributors to this cost are staffing the Hub, exercise physiology supervision, gym memberships and a range of administrative costs (e.g. IT system maintenance, accounting services, insurances, promotional materials etc.). This cost is 12-22% cheaper than industry standard rates for exercise physiologist led and personal trainer led programs respectively. Data from a patient survey (n = 210 people with cancer not involved with EX-MED Cancer and n = 92 EX-MED Cancer participants) evaluating cancer patients' willingness and capacity to pay for exercise services are presented in Table 16 and 17.

Table 16. The Level People with Cancer are Willing to Pay for Exercise Services	**EX-MED Cancer Participants [a]** (n = 92)	**People with Cancer [b]** (n = 210)
Would you be willing to pay for individual consultations with an exercise physiologist (EP) who specialises in working with cancer patients		
– Yes, I would pay	64%	71%
– No, I would not pay	36%	29%
Reason for being unwilling for pay for exercise physiology consultations		
– Unable to afford it	17%	16%

– Believe it should be covered by Medicare &/or private health insurance	16%	9%
– Other (e.g. already had consultations with an EP)	3%	4%
How much would you pay for an ~45-60 min consultation with an EP		
– $25 to $50	55%	48%
– $51 to $79	26%	31%
– $80 to $100	17%	20%
– over $100	2%	1%
The industry standard rate for EP consultations is $80, would you be willing to pay $80 for a ~45-60 min consultation with an EP		
– Yes, I would pay	53%	54%
– No, I would not pay	47%	46%
Would you be willing to pay for a group-based exercise session involving ~60 min individualised exercise prescription supervised by an EP		
– Yes, I would pay	81%	73%
– No, I would not pay	19%	27%
Reason for being unwilling for pay for group-based exercise session		
– Unable to afford it	14%	14%
– Believe it should be covered by Medicare &/or private health insurance	4%	6%
– Other (e.g. unsure, not looking for group sessions, unnecessary)	1%	7%
How much would you pay for a ~60 min group-based exercise session		
– $5	22%	14%
– $6 to $10	23%	23%
– $11 to $15	21%	30%
– $16 to $20	22%	18%
– $21 to $30	11%	12%
– over $30	1%	3%
The industry standard rate for group-based exercise sessions is $10, would you be willing to pay $10 for a ~60 min group-based exercise session		
– Yes, I would pay	75%	70%
– No, I would not pay	25%	30%
Combined annual household income		
– No income	0%	4%
– Less than $20,799 (< $399 per week)	14%	10%
– $20,800 to $41,599 ($400 – $799 per week)	20%	23%
– $41,600 to $67,599 ($800 – $1,299 per week)	13%	13%
– $67,600 to $103,999 ($1,300 –$1,999 per week)	15%	22%
– $104,000 or more ($2,000 or more per week)	21%	15%
– Prefer not to answer	17%	13%

[a] People with cancer who have completed the EX-MED Cancer program (i.e. received 3 individual EP consultations, 36 group-based exercise sessions and an approximately 3-month gym membership)
[b] People with cancer who have not been involved with EX-MED Cancer (i.e. registered for, but not completed EX-MED Cancer)

Table 17. EX-MED Cancer Participants Ability to Pay for the Program (n = 178)	Extremely Likely	Quite Likely	Slightly Likely	Neutral	Slightly Unlikely	Quite Unlikely	Extremely Unlikely
Would you have participated in EX-MED Cancer if you were required to pay for the program?	11%	30%	17%	15%	9%	13%	5%

VCSP Evaluation Domains

The evaluation questions identified in the VCSP evaluation outcomes framework are addressed in this section.

Model of care

- 'What are the key components of the program design; and what tools and systems will support the program's development and delivery': 1) EX-MED Cancer Hub – the HUB transforms the prescription of exercise medicine for cancer through centralising the referral process and facilitating quick and easy processes across every touch point for all stakeholders. 2) EX-MED Exercise Physiologists – individualised exercise prescriptions are delivered by allied health professionals who are specifically trained in oncology. Oversight and support by

international leaders in the field allows for exercise to be safely and effectively delivered to even the most complex patients. 3) EX-MED Cancer Groups – completing their personalised exercise prescription among a group of other cancer patients generates camaraderie and social support that is highly valued by patients. 4) EX-MED Cancer Gyms – the program is delivered in specifically selected community-based gyms that are close to patients' homes and work. These gyms meet set standards for creating a welcoming environment for patients to initiate and continue exercise. 5) EX-MED Cancer Research – the program is underpinned by the latest research evidence and a robust evaluation framework to constantly drive advances across all elements of the program ensuring world-leading practices are adopted.

Organisational development and leadership

- 'To what extent has the program been adopted in the intended settings/organisations': As detailed in tables 1-2 and appendix 1-2, EX-MED Cancer has received strong engagement from relevant stakeholders and organisations.

Project implementation and evaluation

- 'To what extent was the program/initiative delivered as intended? Can it be delivered across all settings and by all staff identified': Service fidelity monitoring confirms that all required elements of the model of care were implemented in line with the protocol. This included all settings and staff identified (e.g. cancer health professionals, general practitioners, exercise physiologists, community-based exercise facilities).
- 'What parts of the model are flexible/adaptable without decreasing effectiveness': The core elements of the model of care are essential to maintain the acceptability and effectiveness observed in this report (as reinforced by focus group/interview data). It is anticipated that the eligibility criteria can be extended to include all people with cancer irrespective of their stage of treatment. EX-MED Cancer can appropriately cater for the individual needs and requirements of patients without compromising acceptability and effectiveness.
- 'What are the workforce implications/opportunities': EX-MED Cancer does not impose any additional workforce requirements on hospitals and cancer treatment facilities and in fact provides a value-add to the multidisciplinary team without requiring much extra time or work. The model of care provides an avenue for community-based exercise physiologists to work with cancer patients within an evidence-based framework. There is a pool of >5,500 exercise physiologists practicing throughout Australia available to EX-MED Cancer.

Participation (individual reach and system level reach)

- 'What is the size of the target population for this initiative? What percentage of the target population for this initiative participated? Are participants representative of the target population': Refer tables 1 and 3.
- 'What is the extent of participation achieved (based on the intended intervention)': Refer tables 1-5.
- 'What needs were identified and what response(s) to needs were implemented': As identified in the background (page 3-4) best-practice exercise medicine was implemented to counteract common side-effects.
- 'What were the barriers to and enablers of participation': Refer to table 13 for the patient-reported barriers to exercise participation before and after EX-MED Cancer. Further information is detailed in the qualitative data collected from patients and health professionals reported in tables 7 and 9. An additional barrier to participation was the level of patient enquiries/referrals meant that there was a significant wait-list and limited funding meant that a maximum of 200 people with cancer could participate. EX-MED Cancer was designed and operationalised to address the evidence-based enablers to exercise. The components of the EX-MED Cancer model of care provides the structure, setting, support and expertise required to enable cancer patients to engage in exercise.

Expected outcomes (individual and organisational level)

- 'Has the project achieved its intended objectives? What has been the impact of the project on patients and carers': The intended objectives have been met and the impact on patients has been significant – refer tables 5-14. The impact on carers was outside the scope of this project and thus not evaluated.
- 'How could the effectiveness of the program be improved': A significantly greater number of people with cancer could be accessed with the injection of further funding to support scale-up and sustainability.

- 'What systems and tools were instrumental in achieving the observed outcomes for patients': The key elements of the model of care identified on page 4-5. The extensive stakeholder engagement and continued communication efforts of the EX-MED Cancer team contributed to the observed level of patient engagement.
- 'Is the model of care tested in this project feasible to be delivered on an ongoing basis': The feasibility of the model of care has been established through exceptional engagement data, strong acceptability data from patients and health professionals as well as clear-cut service fidelity data (refer tables 1-9).
- 'What are the implications of this model of care at an organisational level': EX-MED Cancer provides hospitals, cancer treatment centres and cancer organisations with a feasible, acceptable, effective, sustainable and scalable model of care to embed exercise medicine into routine cancer care (refer tables 1-4, 8 and 9).

Sustainability and Spread

- 'Does the project inform a feasible model that could be sustained or further developed over time in existing sites and/or spread to others': This project provides the framework and infrastructure for a sustainable best-practice exercise service for people with cancer. Based on the success of this project a dedicated, independent not-for-profit organisation has been established to sustain this service - EX-MED Cancer Ltd. The service is continuing to be delivered across the 5 established sites and the organisation aims to rapidly expand to 15 sites in Victoria. Longer term we aim to expand EX-MED Cancer to be delivered across 50 sites nationally.
- 'Does the program/initiative produce lasting effects': As detailed in tables 12-14, EX-MED Cancer delivers lasting improvements to the health and wellbeing of people with cancer (please note only measured to 3-months post-program due to time limitations associated with 3-year funding period).
- 'Can the organisations/sites involved in the project sustain the program/initiative over time': As the service has been sustained through the not-for-profit organisation, the organisations involved with this project and other organisations/stakeholders can continue to refer people with cancer to EX-MED Cancer.
- 'What are the differences between services/settings in which the model is sustainable and those in which it is not': Compared to people with cancer referred to EX-MED Cancer, people with cancer who don't participate in a structured exercise medicine program should expect to experience worse cancer-related fatigue, more debilitating physical deconditioning, greater severity of psychological distress and worse quality of life [19-44].

DISCUSSION

Summary of Key Findings

EX-MED Cancer is a feasible, acceptable, effective and sustainable model of care that successfully implemented best practice exercise medicine to people with cancer. The model of care was delivered as proposed and demonstrated high fidelity. Participation rates from people with cancer and health professionals were very strong with over 1,200 patient and 300 practitioner enquiries in ~18 months. Over 50 invited presentations, numerous meetings with state and federal government representatives and over 17,000 website visits further highlight the demand for EX-MED Cancer. Outstanding compliance rates were observed with only 8% of participants not completing the service, 83% attendance rate to the 39 x ~1 hour face-to-face exercise sessions and 95% adherence to the exercise prescription during each of these sessions. The acceptability and significant impact of EX-MED Cancer was resoundingly confirmed through patients' and health professionals' appraisal of the service. Effectiveness analyses involving 208 patients confirmed EX-MED Cancer delivers significant benefits including 10-23% improvement in function, 21% reduction in cancer-related fatigue, 8-12% reduction in anxiety and depression, and 7-14% improvement across various quality of life domains. The service resulted in a 15-34% reduction in the top three barriers to exercise and ~80-90% of participants were quite-extremely motivated and committed to continuing exercise after completing EX-MED Cancer. Exercise was safely implemented with only 1% of participants experiencing a moderate severity exercise-related adverse event which required cessation of the program but only minimal medical intervention. Between 64-81% of patients are willing to pay for EX-MED Cancer with inability to afford the service (14-17%) and belief that the service should be covered by Medicare/private health insurance (4-16%) the primary reasons for unwillingness to pay. Most importantly, patients overwhelming identified that EX-MED Cancer elicited profound changes to their lives, not just to their physical and mental wellbeing, but also to their ability to move past cancer and re-engage more fully in all aspects of their work, family and social life. Participants described how EX-MED Cancer helped move them from being a cancer patient to living again.

Recommendations

Consistently, the strongest recommendation arising from this project was the need for EX-MED cancer to be transitioned into a sustained health service. This was very strongly voiced by people with cancer, health professionals, key stakeholders, partners and project committee members. To maximise the impact of EX-MED Cancer as an ongoing health service, the following key recommendations are made:

1. Secure funding support to provide the service at the lowest possible out-of-pocket cost for patients.
2. Provide open access to all people with cancer before, during and after cancer treatment.
3. Implement rolling enrolments to remove wait-lists and provide faster access to the service after referral.
4. Expand the number of locations EX-MED Cancer operates from to accommodate more patients from outer suburbs and those living in regional areas.
5. Offer more exercise sessions throughout the day to allow for flexible scheduling options to suit patients' lives.
6. Further enhance the communication of patient status to referrers through more frequent communication.

All these recommendations have already been integrated into the refined EX-MED Cancer model of care now operating as an ongoing service in Victoria.

Sustainability

Building on the VCSP project, EX-MED Cancer has transitioned into an independent not-for-profit organisation to enable sustained delivery of the service. The EX-MED Cancer organisation was registered with the Australian Charities and Not-For-Profits Commission in October 2018 and successfully launched operations in September 2019. In it's first month of operation, EX-MED Cancer has received 150 referrals and initiated service delivery across five locations in Melbourne. The not-for-profit organisation has secured extensive volunteer and pro-bono support spanning health, business, finance, legal, marketing, information technology, cyber security, government and not-for-profit sectors. Strong governance has been established through the EX-MED Cancer Board and Advisory Group who are supported by pro-bono services from Corrs Chambers Westgarth (legal), The Kearney Group (financial services) as well as governance, risk and compliance specialists xGRC. The organisation is currently seeking funding and partnerships to expand the sphere of EX-MED Cancer's impact and rapidly accelerate our ability to change the lives of people with cancer. The goal is to scale up to delivering EX-MED Cancer in 15 locations across Victoria in the coming years with the ultimate aim of expanding to 50 locations throughout Australia.

Conclusions

EX-MED Cancer successfully translated the research into a service that systematically delivers exercise medicine in cancer care by facilitating exercise to be prescribed by health professionals, dispensed by exercise physiologists and taken by patients. EX-MED Cancer is a feasible model of care that is highly valued by patients and practitioners; an effective service that delivers clinically meaningful improvements in patient outcomes; and has been transformed into a sustainable and scalable health service effectively implemented in ongoing practice.

GOVERNANCE ROLES & RESPONSIBILITIES

Overview

Best practice governance and project management procedures were employed to ensure the project met its aims and objectives. A project management team, steering committee and advisory committee operated under the oversight of the Austin Health (administering organisation) and Australian Catholic University (host organisation) governance policies. The project was led by Associate Professor Prue Cormie, who was responsible for overseeing all elements of the development, execution, coordination and financial management of the project. The project management committee executed the daily functions required to successfully complete the project; they completed weekly meetings throughout the duration of the project. The steering committee provided expert guidance and input across all elements of the project and ensured the execution of the project was in line with the proposed framework; they completed quarterly meetings throughout the duration of the project. The advisory committee provided feedback from key stakeholder groups to inform the operation and ongoing refinement of the model of care; they completed a series of meetings at key points throughout the duration of the project. The project lead supplemented formal meetings with extensive individual contact with all committee members throughout the duration of the project. Member listings for each committee are contained within Appendix 2.

APPENDIX

1. References
2. EX-MED Cancer Committees Membership
3. EX-MED Cancer Partner Organisations
4. EX-MED Cancer Website
5. EX-MED Cancer Videos Developed
6. EX-MED Cancer Promotional Materials
7. Federal Parliament Speech on EX-MED Cancer
8. Example Feedback from EX-MED Cancer Participants
9. Example Feedback from Oncology Health Professionals

APPENDIX 1 - REFERENCES

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APPENDIX 2 – EX-MED CANCER COMMITTEES MEMBERSHIP

This project was made possible through the extensive in-kind contributions made by all members of the EX-MED Cancer team. The project simply would not have been possible without their substantial contributions which are unreservedly recognised and acknowledged as key to the success of EX-MED Cancer.

Project Lead

- Prue Cormie, Australian Catholic University

Project Management Committee

- Prue Cormie, Australian Catholic University
- Kelly Spence, Australian Catholic University
- Mark Trevaskis, Australian Catholic University
- Eva Zopf, Australian Catholic University

Steering Committee

- Chair: Prue Cormie, Australian Catholic University
- Anna Boltong (replaced by Katherine Lane), Cancer Council Victoria
- Michael Bramwell (replaced by Vicki Georgaklis), Darebin Community Health/Your Community Health
- Julie Cairns, Olivia Newton-John Cancer & Wellness Centre and Austin Health (completed role in Feb 2017)
- Chris Carter (and proxy Sarah O'Leary), North Western Melbourne Primary Health Network
- Chris Doran, Central Queensland University
- Jon Emery, University of Melbourne
- Ilana Hornung, Western Health
- Mei Krishnasamy, University of Melbourne
- Alicia Martin (proxy Anya Traill), Peter MacCallum Cancer Centre
- Linda Mileshkin, Peter MacCallum Cancer Centre
- Debbie Munro (proxy Sue Berney), Austin Health
- Felicity Munt (replaced by Amanda Winiata; proxy Fiona Tansley), Breast Cancer Network Australia
- Meron Pitcher, Western Health
- Amanda Pomery, Prostate Cancer Foundation Australia (completed role in April 2019)
- Kathy Quade (and proxy Eldene Ross), Western and Central Melbourne Integrated Cancer Service
- Narelle Quinn, Eastern Melbourne Primary Health Network
- Penelope Sanderson, Olivia Newton-John Cancer & Wellness Centre and Austin Health
- Sophie Scott (proxy Rebecca McAllister), Hume Regional Integrated Cancer Service
- Katherine Simons, North Eastern Melbourne Integrated Cancer Service

Advisory Committee

- Gina Akers, Victorian Cancer Survivorship Program
- Ashley Bigaran, Exercise Physiologist
- Nicole Cooper, Consumer Representative
- Jane Crowe, General Practitioner
- Rochelle Gannon, Exercise Physiologist
- Leslie Gilham, Consumer Representative
- Vin Jenkins, Consumer Representative
- Carla Morales, Carer Consumer Representative
- Rob Peters, Consumer Representative
- Amanda Piper (replaced by Michael Jefford), Australian Cancer Survivorship Centre
- Heather Watson, Consumer Representative

EX-MED Cancer Exercise Physiologists

- Stephen Harvey
- Phoebe Jones
- Matthew Koroneos
- Paul Sansonetti
- Kelly Spence

Qualitative Evaluation Performed By

- Mei Krishnasamy, University of Melbourne
- Matthew Perich, University of Melbourne

Economic Evaluation To Be Performed By

- Chris Doran, Central Queensland University

The EX-MED Cancer team acknowledges the invaluable contribution of all health professionals and people with cancer who participated in this project. We have been honoured to be able to work with you and are immensely grateful for your willingness to contribute to EX-MED Cancer.

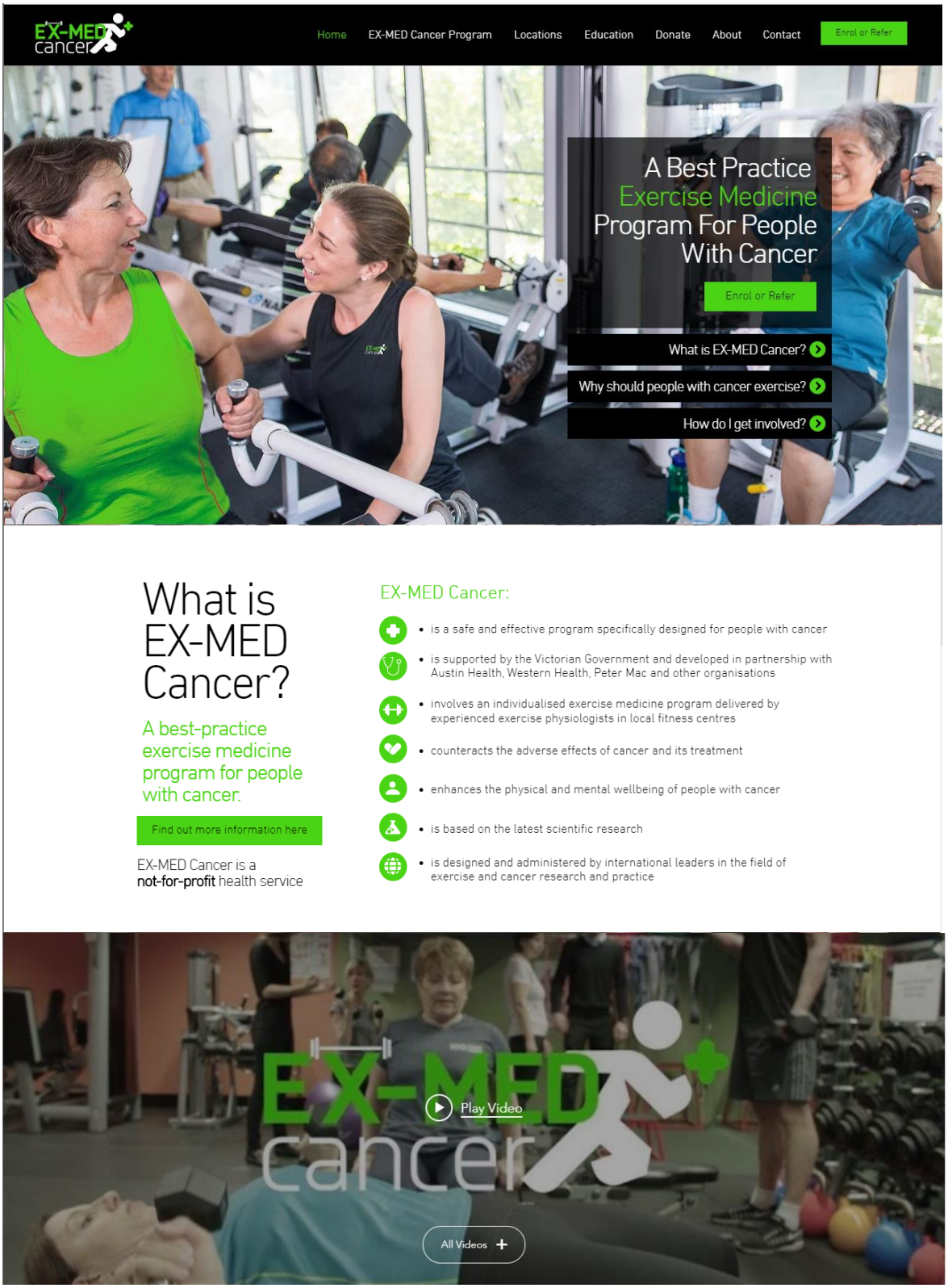
APPENDIX 3 – EX-MED CANCER PARTNER ORGANISATIONS

The EX-MED Cancer VCSP project was a partnership between the following primary organisations:

- Austin Health (administering organisation)
- Australian Catholic University (host organisation)
- Western Health
- Peter MacCallum Cancer Centre
- North Eastern Melbourne Integrated Cancer Service
- Western and Central Melbourne Integrated Cancer Service
- Hume Regional Integrated Cancer Service
- North Western Melbourne Primary Health Network
- Eastern Melbourne Primary Health Network
- Cancer Council Victoria
- Breast Cancer Network Australia
- Prostate Cancer Foundation Australia
- Ovarian Cancer Australia
- Genesis Health + Fitness Gym, Melbourne CBD
- Coburg Leisure Centre
- Hawthorn Leisure Centre
- Monash Sport and Fitness
- Sunshine Leisure Centre

The support provided by each of the partner organisations was integral to the success of this project. The EX-MED Cancer team acknowledges the substantial in-kind contributions provided by our partner organisations and sincerely thanks them for their invaluable assistance.

APPENDIX 4 – EX-MED CANCER WEBSITE

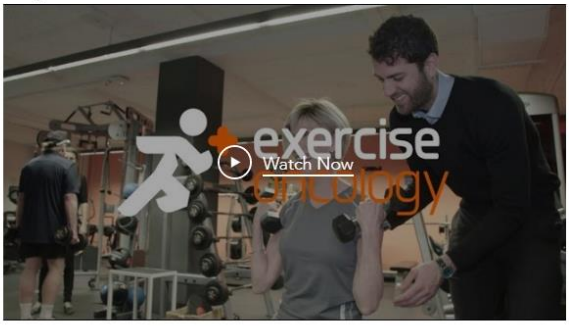


Why should people with cancer exercise?

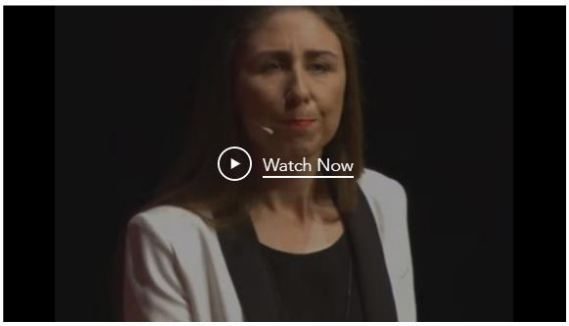
If the effects of exercise could be encapsulated in a pill it would be prescribed to every person with cancer. Even if this pill had just a fraction of the positive health benefits exercise provides it would be viewed as a miracle drug in the fight against cancer

- Years of scientific research has established exercise as an invaluable medicine in the management of cancer. Evidence based guidelines recommend all people with cancer exercise regularly to help tolerate and recover from cancer treatments.
- Research shows that people with cancer who exercise regularly have a lower relative risk of dying from cancer, a lower relative risk of cancer recurrence and they experience fewer and/or less severe treatment-related adverse effects.

Why exercise?

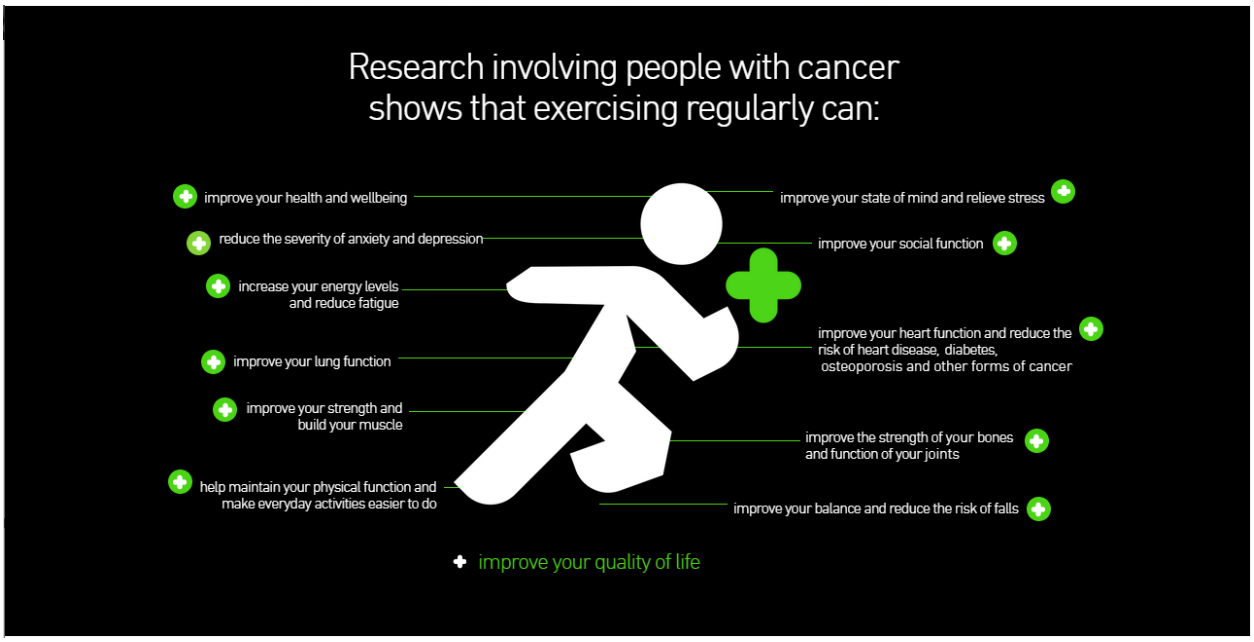


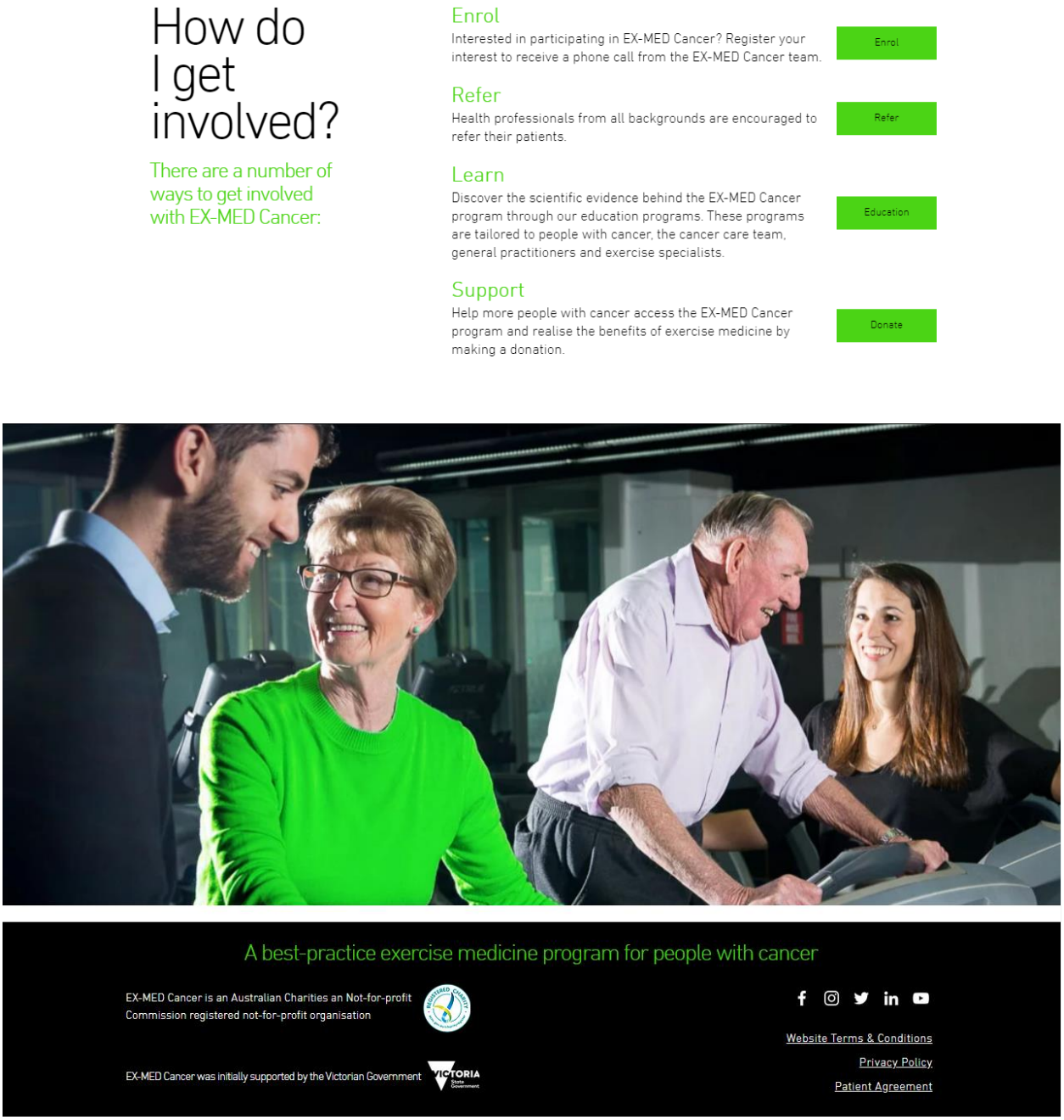
TED Talk – Exercise Medicine for Cancer



Education

Learn about the impact of exercise for people with cancer through the EX-MED Cancer education programs





The content displayed here is from the website home page. Please refer www.exmedcancer.org.au for content on other pages within the website. Please note the website has progressed from the project website to reflect the sustained EX-MED Cancer program delivered by the registered not-for-profit organisation EX-MED Cancer Ltd.

APPENDIX 5 – EX-MED CANCER VIDEOS

PROGRAM OVERVIEW
www.youtube.com/watch?v=WjgPq8ksSj0

WHAT IS EX-MED CANCER
www.youtube.com/watch?v=CG5dtO7EGcs

LAUNCH EVENT
www.youtube.com/watch?v=lUCnGdYZm0Q

1st PATIENTS CELEBRATION EVENT
www.youtube.com/watch?v=QPM_I2zHf5A

IMPACT OF EX-MED CANCER
www.youtube.com/watch?v=FnmENhnw-gw

EX-MED CANCER PATIENT STORIES
www.youtube.com/watch?v=pcSy36asUpU

APPENDIX 6 – PROMOTIONAL MATERIALS

FLYERS


EX-MED cancer
best-practice
exercise medicine program
for people with cancer
www.exmedcancer.org.au
EX-MED cancer
best-practice
exercise medicine program
for people with cancer
Opportunity to take part in
a research study designed to
improve your health and wellbeing
• Receive 3 months of free supervised exercise at fitness centres throughout Melbourne
• Sessions are supervised by qualified exercise physiologists who specialise in exercise for people with cancer
• You'll receive an individualised program specific to you and will be exercising with a small group of other cancer survivors
For more information please contact
T: (03) 9230 8728
E: exmedcancer@exmedcancer.org.au
W: www.exmedcancer.org.au
EX-MED Cancer is supported by the Victorian Government

POSTERS


EX-MED cancer
Best-practice exercise medicine program for people with cancer
As a participant you will receive an individualised program involving 3 months of free, supervised, exercise at various exercise clinics throughout Melbourne.
www.exmedcancer.org.au
T: (03) 9230 8728
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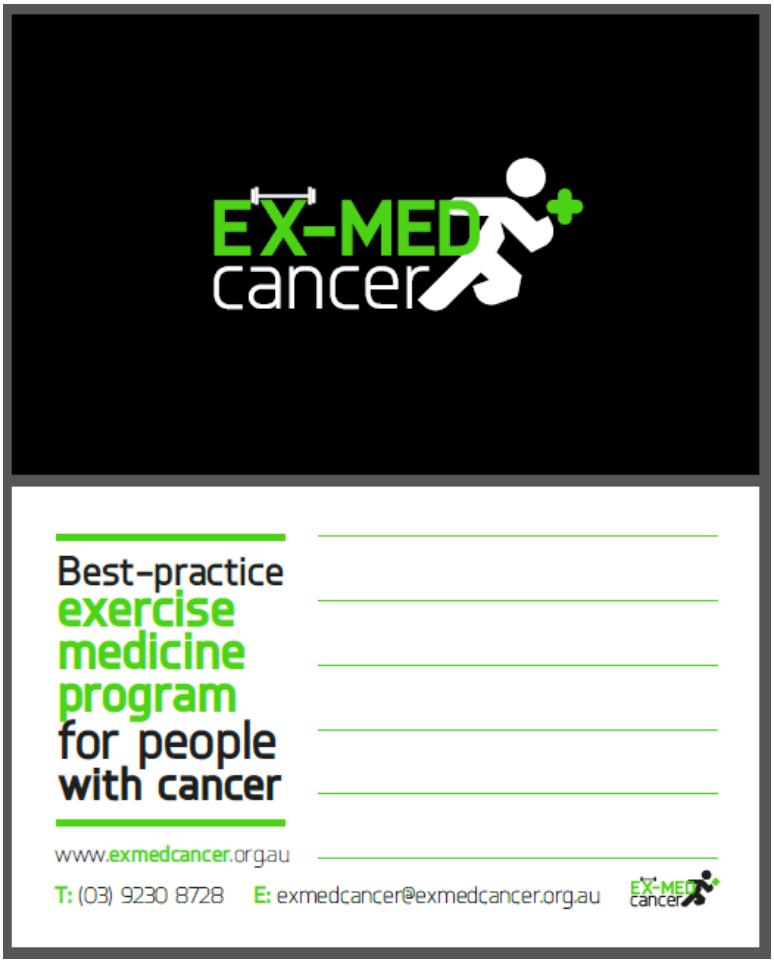
EX-MED Cancer is supported by the Victorian Government

PULL-UP BANNERS

APPOINTMENT CARDS

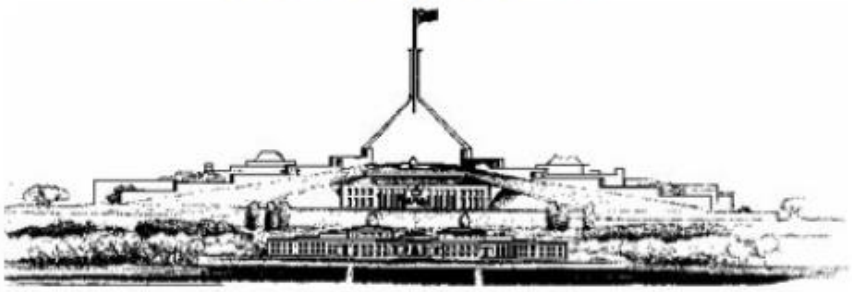


STICKER

APPENDIX 7 - Federal Parliament Speech on EX-MED Cancer

COMMONWEALTH OF AUSTRALIA

PARLIAMENTARY DEBATES



THE SENATE

PROOF

ADJOURNMENT

EX-MED Cancer

SPEECH

Wednesday, 20 June 2018

BY AUTHORITY OF THE SENATE

SPEECH

Date	Wednesday, 20 June 2018	**Source**	Senate
Page	108	**Proof**	Yes
Questioner		**Responder**	
Speaker	Bilyk, Sen Catryna	**Question No.**	

Senator BILYK (Tasmania) (19:41): As many in this place know, I'm a passionate advocate for cancer patients and their families. We need to find better ways to prevent, diagnose and treat cancers of all kinds. I want to speak tonight just quickly about EX-MED Cancer, a best-practice exercise program for people with cancer.

As you can imagine, cancer has a serious impact on the health and wellbeing of cancer patients. The impacts include fatigue, cognitive impairment, accelerated bone loss, incontinence, dysfunction of other sorts and many others. For example, I personally have developed a bit of a hearing disability since my brain cancers. Years of scientific research has established that exercise is an invaluable medicine in the management of cancer, and evidence shows that exercise helps cancer patients counteract their cancer related fatigue and tolerate their treatments. Exercise minimises functional impairments, relieves stress and mental distress and is safe during and after treatment.

The Clinical Oncology Society of Australia, or COSA, is calling for exercise to be embedded as part of standard practice in cancer care. Currently approximately 60 to 90 per cent of patients do not meet the recommended exercise guidelines of 150 minutes of moderate exercise a week, and this is perfectly understandable. Cancer can be a tough, horrible disease. Exercise is not naturally something that people with cancer generally want to do, particularly if the disease is causing them pain, discomfort or fatigue.

Recently, as I said, I've met with Associate Professor Prue Cormie and Nicole Cooper from EX-MED Cancer. Associate Professor Cormie is an accredited exercise physiologist and researcher whose work focuses on the application of exercise as medicine for the management of cancer. EX-MED Cancer is a not-for-profit entity dedicated to ensuring cancer patients receive best-practice exercise medicine. It is a partnership between a number of organisations, including the Peter MacCallum Cancer Centre, the Australian Catholic University, the University of Melbourne, Ovarian Cancer Australia and others. EX-MED Cancer provides the following services: coordinating the referral pathway from medical professional to patient and on to qualified practitioner; managing the delivery of a structured personalised exercise program; collating data for ongoing research; engaging with the multidisciplinary medical teams involved in cancer care to improve engagement and the delivery of exercise prescriptions; and delivery of education to cancer care practitioners responsible for the delivery of exercise medicine. Their goal is the improved health and wellbeing of all Australians with cancer.

Currently, there are approximately 138,000 cancer diagnoses every year in Australia, and it's expected to reach 150,000 by 2020. So far EX-MED has had around 500 patient inquiries across a broad spectrum of cancers and over 200 inquiries from members of the medical profession. People with cancer can enrol themselves through EX-MED Cancer, or they can be referred by any member of the healthcare team or by community based organisations like the Cancer Council. After enrolling, EX-MED will provide information about the service and an information pack. Patients will be registered for the next EX-MED Cancer term at a site closest to their home. Patients can access information through the EX-MED Cancer Hub, a central point of contact and information, which patients and health professionals can access at any point throughout the program.

After a GP has assessed that the patient is well enough to exercise, the exercise physiologist will do some simple physical assessments in order to tailor the exercise prescription. After an instructional exercise session, in which the exercise physiologist will teach them the exercises involved, the patient will then attend three one-hour exercise sessions for three months in a group of 10 people with cancer. The exercise sessions will be supervised by their EX-MED Cancer exercise physiologist, who will instruct them to complete their personalised exercise prescription. Finally, the exercise physiologist will reassess the patient's health status and provide feedback on their progress following the completion of the EX-MED Cancer program. The exercise physiologist will re-evaluate their personalised exercise prescription in light of their progress and develop a plan for them to continue exercising.

Patients are responding positively to this program. While EX-MED is currently based in Melbourne, it aims to expand internationally in the future. I would like to finish my contribution tonight with one final thought from EX-MED. They said to me when they came to see me:

If the effects of exercise could be encapsulated in a pill it would be prescribed to every person with cancer.

Even if this pill had just a fraction of the positive health benefits exercise provides it would be viewed as a miracle drug in the fight against cancer.

APPENDIX 8 - EXAMPLE FEEDBACK FROM PARTICIPANTS

People who have participated in EX-MED Cancer have provided extensive commentary on the positive impact the program has had on their lives. While there are many, many quotes available from the over 200 participants involved in this project, here we provide a snapshot from some of the participants:

- “Amazing program! I feel as if I am gaining control of my life again as well as being fitter than I have ever been before. Best thing I've ever done.” – Catherine
- “My experience of this program has only been positive. The personal interest in every participant, with detailed attention to the specific needs of each case, means that the program is sure to be beneficial; I have already proved it so.” – Malcolm
- “I've discovered I'm capable of so much more than I thought. My strength and stamina have improved and, most importantly, my mood has lifted. Another step in kicking cancer to the curb.” –Julia
- “It’s incredible! I have a million comments I could make. Four weeks in and it’s made a huge difference. I’m not as tired. I feel stronger. The support and enthusiasm from [the exercise physiologist] bolsters me every week.” – Anna
- “I have found EX-MED Cancer a motivating and empowering initiative. I am already feeling physically stronger and have noticed improvement in my emotional resilience. I am certain I will have all the motivation I need to continue under my own steam.” – Andrew
- “Tell everyone who is having cancer treatment to do EX-MED Cancer. Every gym in Australia should be running this program.” - Silvana
- "I am finding the experience with EX-MED a fabulous opportunity to become more active and explore the opportunity to use gym equipment safely under expert supervision. I would recommend the program to everyone as it is tailored for each person’s individual needs." – Debbie
- “Absolutely love the program. Enjoying it much more than I thought I would. I'm much happier and healthier and the program has helped with my fatigue.” – Tim
- “I was a bit worried before starting as I wasn't sure what to expect but once I started I found the program was achievable and flexible enough for me. I feel stronger both physically and emotionally. I really recommend this program to others, for people that are reluctant exercises like me this program is ideal" – Robyn
- "The thing I have enjoyed the most about my time with EX-MED is the comfort zone I feel doing the course with people that have experienced similar problems health-wise as myself. It makes the whole process more rewarding because we are all in the same boat! And having all our exercises supervised also makes it easier to train in a relaxed atmosphere." – Patrick
- "On the weekend we played a game of cricket and after smashing a couple of 6s the kids were so excited and shouting 'Mum you really are getting stronger!' Thinking back to just a few weeks ago I could barely lift a bat, let alone smash a 6! It's half way through and already I'm seeing the results and feeling better thanks to EX-MED!" – Evaline
- I feel very privileged to be a part of this program. In a short space of time I saw

improvements in my energy levels, I can now do more in my day. My mood changes and anxiety levels have settled down and I generally am happier. I like the friendly welcoming environment the gym is not impersonal which can be overwhelming when you are not well." – Aysen

- "The EX-MED Program is individually tailored to each participants needs and goals. Personally I am seeing great improvements in my neuropathy and I'm feeling fitter and stronger week by week. My waistline is reducing and I feel great - thinking more clearly." – Lea
- "Who'd have thought that hard work in the gym would have been something to look
- forward to at 65?! I'm feeling the benefits of the workouts, both physically and mentally, and being with people who've been in a similar situation to me is no doubt a part of that benefit. The encouragement from [exercise physiologist] and the constant feedback, is of great benefit. I'd personally be lost without it and it has already given me the confidence to think about what I'll do, once the program is complete." – Mike
- "It's a very positive environment and great to do it with the same group of people who have had similar experiences. I'm feeling fitter and healthier and happy to be doing something positive and constructive for myself now and for the future. Really empowering!" – Cath
- "I think this is a very good initiative for cancer patient to be active and exercise. It is a great way to gain your health back on track. Definitely a huge benefit!" - Michael
- "I improved my health, I'm stronger in the body, much more flexible in joints and had bit of weight loss. I'm happier and I believe in myself. I can walk longer distance without stopping for rest." – Antonie
- "The structured program was tailored to my needs. The physical benefits of feeling stronger and completing everyday activities with less stress on the body was great. I have the motivation to continue and long term support from the EX-MED team to assist in the continuation program." - Peter
- "I'm grateful for the opportunity to participate. I had been searching for a way to return to exercise and this is the perfect stepping stone for me. [My exercise physiologist] was very patient, understanding, supportive and encouraging along the way. Please make this program accessible to more people and at more gyms." – Narelle
- "Overall positive impact on physical appearance and strength, improved energy levels, improvement on mental health (anxiety, stress) and connecting with other people socially. I wish it went longer!" – Lou
- "Absolutely fabulous to get cancer patients out in the real world and show them they CAN do it. On my own I would have been too scared to join a gym because of the cancer and explaining it to staff. This programme started us exercising with someone who knew about us and could get us going with care and supervision. Inspired us to now join the gym on our own because we know we can do it. Hooray!" – Barbara
- "EX-MED Cancer has transformed me from a depressive cancer patient to a person that is thriving in all facets of life. I now have the energy for a busier social life and deeper engagement with family. I'm 54 and have more energy than I had prior to a health scare that has turned out to be my beginning, rather than my end." - Andrew

APPENDIX 9 - EXAMPLE FEEDBACK FROM ONCOLOGY HEALTH PROFESSIONALS

Health professionals who referred patients to EX-MED Cancer have provided very positive feedback about the value of the service. Here are a range of example written feedback formally provided by oncology health professionals:

- "There is no doubt that cancer destroys your quality of life. EX-MED Cancer gives it back to patients. This is a fantastic program that has a massive impact on peoples lives."
- "This program has been a massive success and hoping that it can continue to benefit the cancer patients of Victoria."
- "This is a tremendous programme."
- "Great program – love that I can recommend it to patients"
- "I hope the funding continues so the great work can go on and patients make their best life possible!"
- "Thanks for a great program. The patients love it."
- "I think everyone should get referred to EX-MED Cancer. I think private health should cover it or it would be good if it was fully funded by the government"
- "It's a fantastic initiative and it gives patients the opportunity to get more involved in exercise rather than having to do their own thing and figure it out for themselves."
- "There was a great initial marketing and information about EX-MED."
- "Great program, need more of it."
- "Thank you for your hard work around the program, it has helped a lot of patients already."
- "Keep building please, we need more patients in this program."
- "Great service!"
- "Helpful that there are a few sites and good to know that patients are seeing an EP – so feel it is a safe program."
- "Relatively low cost access to exercise. Easy to promote to clients."
- "Fantastic program which empowers patients to take their rehabilitation seriously."
- "Excellent care and specialist knowledge."
- "All patients I asked were universally happy with the service that they got"
- "Tailored exercise to suit needs, group based, organised program so patients are more likely to go along as opposed to exercising on own."
- "I think that it's something that is beneficial to everybody. I don't think there are any negative consequences for it as it's done in a structured environment so that people don't hurt themselves. There are no drawbacks to it."
- "Feedback received from patients is always positive. They had a sense of control over an aspect of their cancer care which helped with emotional well being during a stressful life occurrence."
- "I've got a lot of positive feedback when I talk about it."
- "It'd be amazing if it was available to everybody – why shouldn't it be?"
- "I've literally heard all good things from the patients."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