

St Vincent's Hospital Melbourne and Goulburn Valley Health

*Improving Follow-Up Care for Patients with
Low-Risk Urological Cancers – a nurse-led clinic
facilitating transition from hospital to
community care*

Project Report

Project Lead: Mr Lih-Ming Wong

Project Manager: Sita Vij

Report Date: March 2017

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WCMICS Funding Program 2015/16 FINAL REPORT

1. Project Details	
Project Title:	Improving Follow-Up Care for Patients with Low-Risk Urological Cancers – a nurse-led clinic facilitating transition from hospital to community care
Tumour Stream:	Genito-urinary
Hospitals involved:	St Vincent's Hospital & Goulburn Valley Health
Date of Final Report:	March 2017
Project Start Date:	February 2016
Completion Date:	February 2017
Project Manager:	Sita Vij
Project Lead:	Mr Lih-Ming Wong

2. Abstract

In order to improve clinic throughput and efficiencies, the Urology units at St Vincent's Hospital and Goulburn Valley Health have collaborated to introduce a Uro-Oncology Nurse Led Clinic within these hospitals. This model of care involves identification of patients with stable, controlled prostate and kidney cancer who can be appropriately managed in General Practice. This cohort of patients was invited to participate in a comprehensive consultation with the Urology Clinical Nurse Consultant in order to facilitate development of an individualised Follow-Up Care Plan and discharge back to the patient's nominated General Practitioner (GP) for ongoing care. Standard review timeframes were mapped at each service and a set of inclusion/exclusion criteria developed in order to provide an alternate model of care focusing on community care for eligible patients. Impacts of this clinic have included improved throughput of the Urology units, improved capacity of Urologists to see more new/high risk patients in clinic and improved handover back to the GP for ongoing care. This, in turn, has improved patient access to holistic care and patient satisfaction in having physical and psychosocial factors addressed in the extended nurse consultation. The nurse-led clinic also enables partnerships with GPs to provide more accessible, ongoing care for patients.

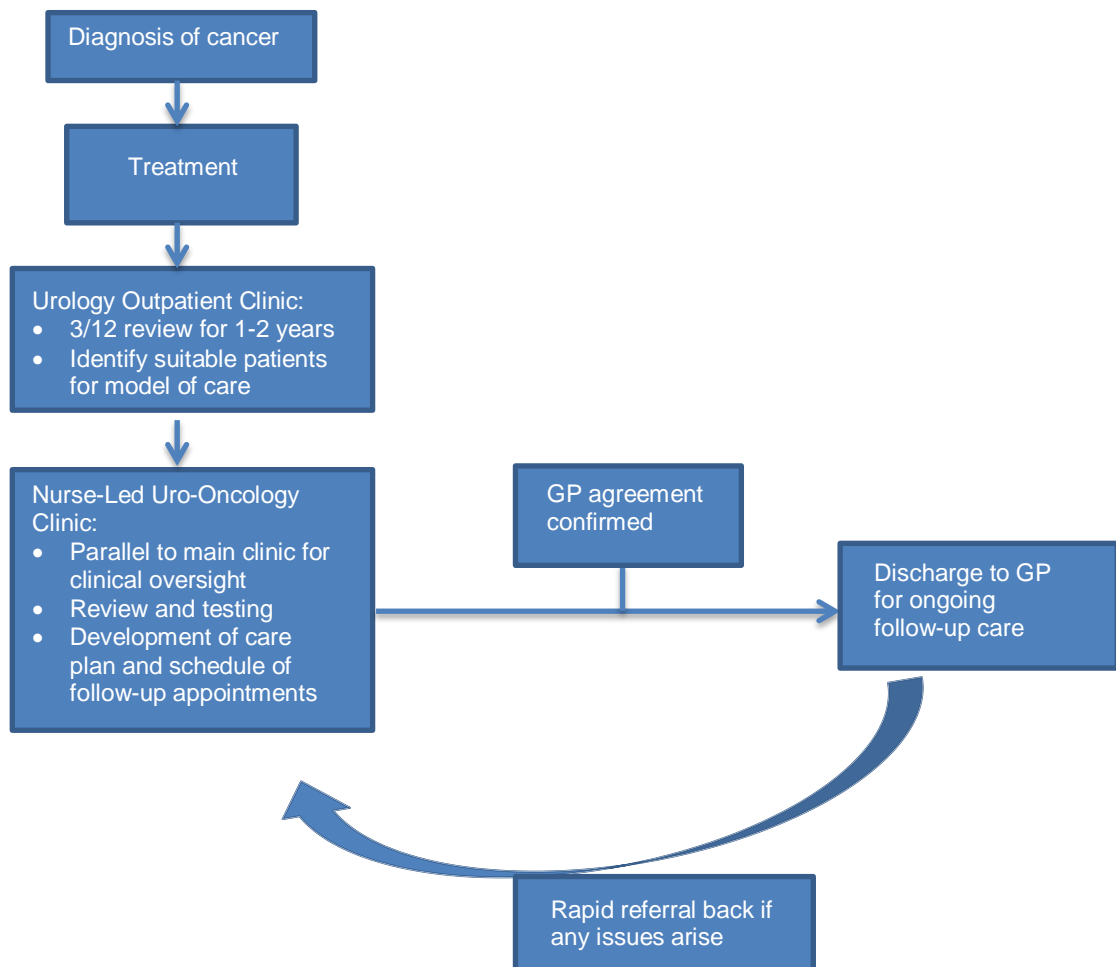
3. Introduction

St Vincent's Hospital (SVH) and Goulburn Valley Health (GVH) Urology departments collaborate closely in the management of uro-oncology patients through fortnightly multidisciplinary meetings and co-appointed urologists. Most patients with low risk prostate and kidney cancer are either disease-free following surgery or are being monitored with stable, controlled disease (Refer to Appendix B: Inclusion/Exclusion Criteria). The implementation of a nurse-led consultation alongside the Urology clinic allows comprehensive review and development of a care plan to facilitate handover back to the GP for ongoing care. The patient has a longer consultation with the nurse (average time of 45 minutes) to discuss treatment, ongoing issues, and plan for follow-up care. GPs are provided with guidance on managing follow-up care and receive support and advice from the Clinical Nurse Consultant as required. A letter of agreement is sent to the GP with an opt-out option to ensure agreement to provide ongoing care. The nurse also phones the General Practice to ensure participation. Rapid re-entry pathways back to the hospital have been established for re-referral and contact pathways for clinical advice/support if required. The aim of the project is to improve follow-up care for patients with low risk urological cancers and enhance productivity of the Urology units at SVH and GVH, allowing Urology specialists to see more new and high risk patients in clinics. This model of care will include transitioning patients back to community care with improved clinical handover and communication with General Practice.

4. Methodology

The Uro-Oncology Nurse-Led Clinic (NLC) facilitates comprehensive review including the administration of screening tools (Distress Thermometer¹ and International Index of Erectile Function²), discussion of ongoing issues and concerns as part of a health and wellbeing assessment/management plan, and individualised care plan development. The prostate/kidney cancer follow-up care plans (Appendix C) include information on diagnosis, history, treatment, investigation results, health and wellbeing assessment, follow-up guidelines for GPs and schedule for visits as well as contact details for advice and rapid access back to Urology if required.

Figure 1: Uro-oncology model of care



Patients were identified by the Urology Clinical Nurse Consultants at SVH and GVH from a list of patients discussed at the urology multidisciplinary meetings. These patients were then assessed for eligibility by the nurse and consultant based on the inclusion/exclusion criteria (Appendix B) and recent pathology. A phone call was then made to the patient outlining the model of care and inviting them to attend a consultation with the Urology Nurse. An appointment letter, along with screening tools, was sent out to the patient and their GP including information about the model of care and an opt-out form if unavailable to take on this patient's care following the consultation. The urology nurses found that booking patients in to be seen on the same day as their review appointment with the Urologist would ensure test results were followed up and patient eligibility could be confirmed before the patient progressed to the NLC. The consultation with the nurse

¹ https://www.nccn.org/patients/resources/life_with_cancer/pdf/nccn_distress_thermometer.pdf

² http://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/iief.pdf

involved discussion of responses to the screening tools and ongoing issues and concerns. The care plan was then populated and individualised for each patient including a comprehensive health and wellbeing assessment outlining psychosocial, urinary/bowel function (prostate cancer only), sexual function (relationships, intimacy), lifestyle and other issues. Referral to community organisations/support services was also discussed during the consult. The completed care plan was then sent to the patient and GP with a letter outlining ongoing care. Patient and GP satisfaction surveys were also posted out as part of the project evaluation in order to obtain feedback on the model of care (Appendix D & E).

5. Project Activities, Findings, Outcomes

Specify any information/tools developed and suitable/applicable for sharing across WCMICS

Project Activities

Processes and resources were developed as part of the project. Process mapping was undertaken upon commencement of the project in order to guide the implementation of process changes and establishment of a new model of care for patients with stable, controlled prostate and kidney cancer. Additional roles were established at both sites including an administrative assistant and clinical nurse consultant to facilitate the uro-oncology nurse-led clinic. This new approach was discussed at the urology multidisciplinary meeting in order to engage clinicians within the units at each site. Patient and GP engagement was an important factor in ensuring success of the clinic with phone calls made to patients and their GPs. This enabled understanding of the model of care to ensure the patients would be followed up within the community. The Urology nurses spent significant time identifying eligible patients for the nurse-led clinic and preparing care plans before the consults. A follow-up appointment was also made with the patient's GP following the consultation with the nurse to facilitate ongoing care.

One of the Urology Nurses at St Vincent's also undertook a nurse fellowship at the Australian Prostate Cancer Centre in order to obtain additional training in the follow-up of uro-oncology patients and gain exposure to similar survivorship projects at other tertiary care centres. The nurses spent an average of 45 minutes with each patient; discussing responses to the screening tools and ongoing physical and psychosocial issues and needs.

Process:

1. Patient identified by Urology Nurse and confirmed by Urologist
2. Phone call to patient to book in appointment
3. Appointment letter and screening tool/s sent to patient (appointment letter also sent to GP with opt-out agreement)
4. Patient reviewed in uro-oncology nurse-led clinic and a care plan developed (phone or Telehealth consults offered if required – especially for country patients and prisoners)
5. Urology nurse phoned General Practice to book in follow-up appointment for the patient
6. Completed individualised prostate/kidney cancer follow-up care plan was sent to the patient and GP with a cover letter outlining model of care and patient/GP satisfaction survey for completion

Resources developed as part of the project included:

- Prostate Cancer Follow-Up Care Plan (site-specific templates)
- Kidney Cancer Follow-Up Care Plan (site-specific templates)

- Patient and GP letters – appointment letters, care plan cover letters, GP opt-out form
- Urology pathways - HealthPathways Melbourne³ developed with project lead and subject matter expert, Mr Lih-Ming Wong and Murray HealthPathways⁴ - currently being developed.

Project Findings

Overall, in regard to the model of care, feedback from patients and GPs was very positive. Patient feedback obtained as part of the project evaluation (refer to section 8) outlined that patients appreciated the opportunity to discuss their treatment, ongoing concerns and plan for follow-up care. One patient outlined “I felt better after having the opportunity to talk through my issues.” Patients also reported reductions in travel time and appreciated the opportunity to participate in the nurse consultation over the phone, saving them time and the hassle of coming in for a hospital appointment. Phone consultations also provided a safety net for patients who had been lost to follow-up or did not want to attend outpatient appointments. In this case, the nurse was able to facilitate local, community care for the patient. All eligible patients were followed up including those who attended review appointments and those who failed to attend.

Feedback from GPs was mixed. All GPs stated that they were happy to provide ongoing care for the patient although one GP did not understand the model of care or use of the care plan. The nurse assisted the patient to find an alternate GP in this case. The Urology nurse phone call assisted to clarify the ongoing role of the GP following discharge from the clinic. The Urology Nurses also phoned certain patients to ensure they had attended their GP appointment if they seemed unsure of the required follow-up. Feedback from the project team outlined the impact the model of care has had on clinic throughput, enabling the urologist to see more new and high risk patients in clinic as well as patient satisfaction with the extended consult. Full details of the project evaluation are outlined below in summary and in full in Appendices D, E, F, G.

Outcomes

The tables below outline the number of patients seen in NLC during the pilot phase. This allowed for collation of data for reporting. The NLC at SVH and GVH have now been embedded into standard practice and have continued on beyond this timeframe.

**Table 1: Number of patients seen in uro-oncology nurse-led clinic at GVH
12 July to 30 November 2016**

Patients seen in GVH NLC	Consult type	Patients declined	Patients FTA	Discharged & care plans sent to patient/GP	GP opt-out letters received	Patients booked in for 2017
Prostate:12 Renal: 10	Face-to-Face:16	1 (deemed ineligible)	4	22	0	24
Total: 22	Phone: 6					

GVH notes: 1 patient passed away during the timeframe of the project (related to another cancer illness). No patients were referred back to Urology by a GP within the timeframe of the project. One patient was deemed ineligible following an appointment with the Urology nurse and was rebooked for Urologist review.

³ <https://melbourne.healthpathways.org.au>

⁴ <https://murray.healthpathways.org.au>

**Table 2: Number of patients seen in uro-oncology nurse-led clinic at SVH
8 July to 25 November 2016**

Patients seen in SVH NLC	Consult type	Patients declined	Patients FTA	Discharged & care plans sent to patient/GP	GP opt-out letters received	Patients booked in for 2017
Prostate: 9 Renal: 21 Total: 30	Face-to-face:21 Phone: 9	1 (followed up at Peter Mac)	5	30	2 (alternate GPs nominated)	45

SVH notes: 3 patients were identified as ineligible for discharge at NLC and will be reviewed by Urology Nurse in 6-12 months. Improvements have been made whereby the Urologist reviews the patient on the same day as NLC to avoid progression to NLC appointment if deemed ineligible.

In terms of the ratio of prostate to renal cancer patients, this was due to the timing of review; 122 prostatectomy patients have been identified in total, 40 metropolitan and 82 country patients – the Urology Nurse is still contacting patients regarding a NLC appointment. 27 prostate cancer patients have been deemed eligible for the model of care to date, 9 have attended a NLC appointment, 1 was not suitable, and the remainder have been booked in for review in 2017. There were also quite a few patients who had been lost to follow-up and the Urology Nurse is phoning all of these patients to ensure they have follow-up care booked in with their GP.

In addition to this, there were 2 eligible correctional health patients who were treated at St Vincent's that were followed up. This will be completed via Telehealth or phone consult. During the timeframe of the project, 0 patients were re-referred back to the Urology clinic and 0 deceased.

Table 3: Summary of physical/psychosocial issues - Distress Thermometer
Distress Thermometer completed pre-NLC - 49 responses (94% response rate)

Description	Response (%)
Some level of distress (score 4-10)	29%
Financial problems	67%
Work issues	33%
Problems with pain	48%
Issues with sleep	27%
Problems dealing with partner	56%
Worry	64%
Depression/fears/anxiety/sadness	32%

Table 4: Summary of responses to International Index of Erectile Function (IIEF) completed by patients with prostate cancer - 17 responses (81% response rate)

Description	Response (%)
Rated confidence to keep erection in last 6 months as very low	59%
Almost never or never had erections hard enough for penetration	59%
Could almost never/never maintain erection after penetration	59%
Extremely difficult to maintain erection until completion of intercourse	65%
Rated intercourse as almost never/never satisfactory	56%
Severe erectile dysfunction (ED)	59%
Mild ED	29%

Table 5: Responses to patient satisfaction surveys completed post-NLC – 22 responses (42% response rate)

Question	Response (%)
Attended appointment with Urology nurse	86%
Required an interpreter	5%
Stated no issues still need help with	81%
Received care plan	86%
Found care plan useful	95%
Spoke to urology nurse about needs	100%
Nurse gave suggestions to help manage needs	100%
Nurse provided assistance to access support services	95%
Nurse explained ongoing care with GP	100%
An aspect of care could have been done better	9%
Seen their GP following appointment with urology nurse	95%
Spoke to their GP about the care plan	71%
Had not made lifestyle changes after talking with urology nurse and GP	55%
Received information about support services from the urology nurse	84%
Used phone support and found useful	33%

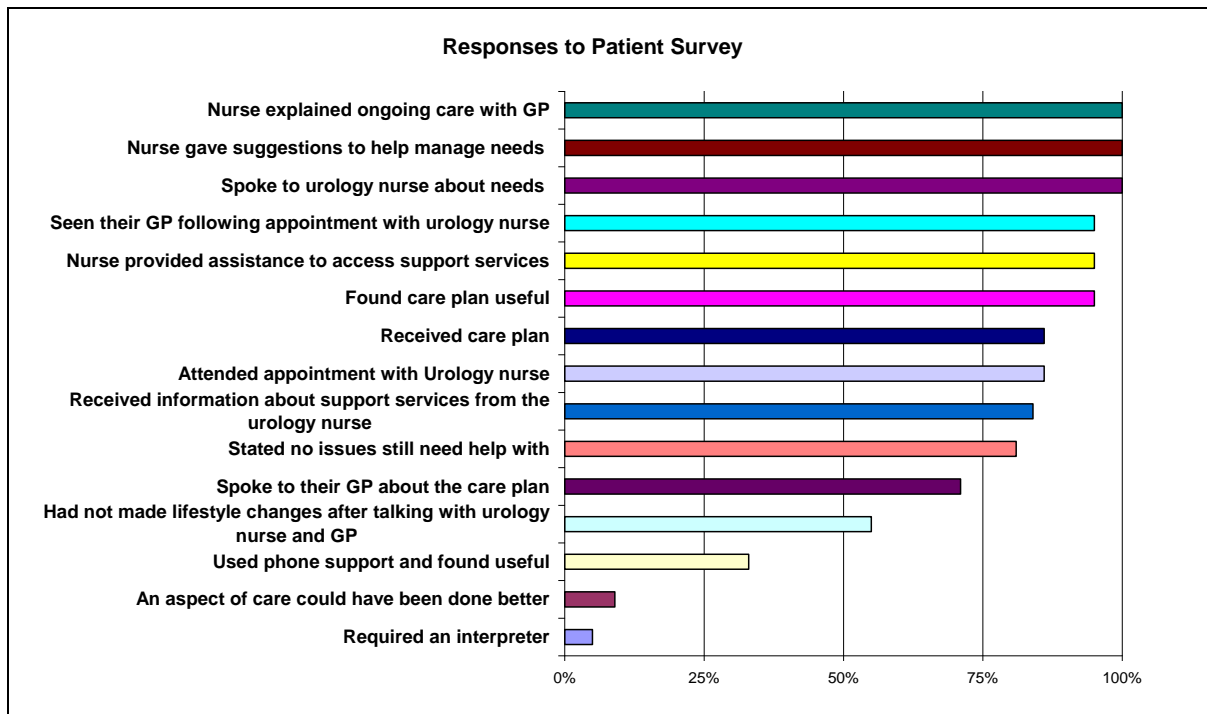
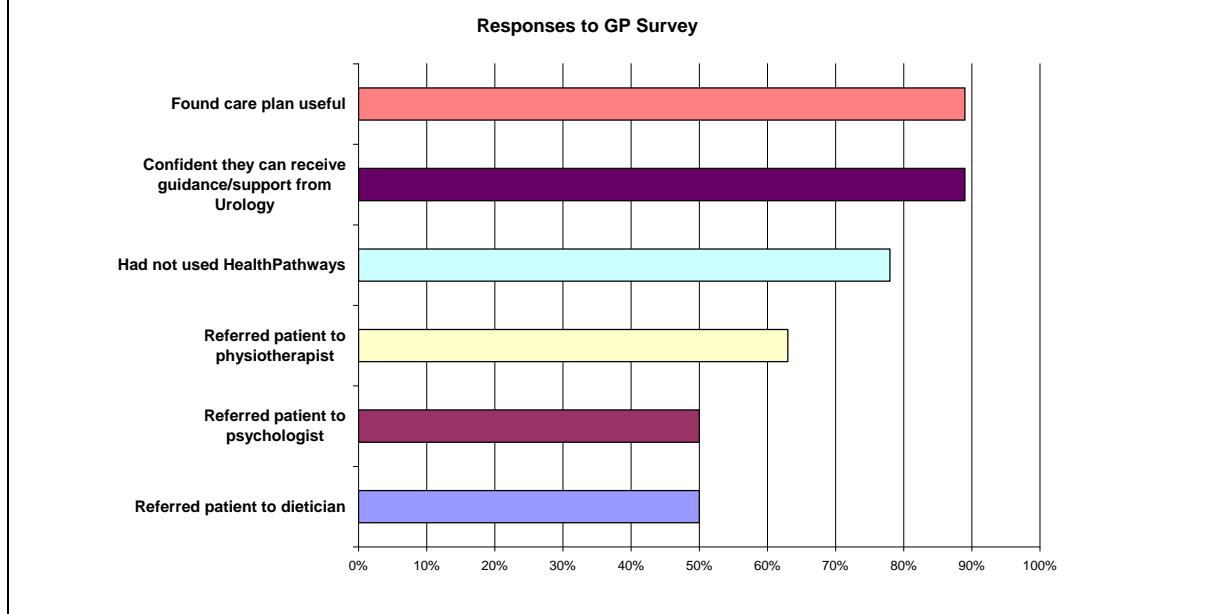


Table 6: Responses to GP satisfaction surveys post-NLC – 19 responses (37% response rate)

Question	Response (%)
Found care plan useful	89%
Referred patient to physiotherapist	63%
Referred patient to psychologist	50%
Referred patient to dietician	50%
Confident they can receive guidance/support from Urology	89%
Had not used HealthPathways	78%



Qualitative data

Qualitative input was obtained from 4 patients and 4 GPs from across sites/practices.

Feedback from patients included:

Patient 1	<i>I felt better after having the opportunity to talk through my issues. It was good to talk to somebody. Good to know that somebody wants to help and that I am not alone.</i>
Patient 2	<i>I understood the care plan, and discussed it with my GP. I tried a couple of things, I tried to quit smoking, I haven't quit, but I have cut down. It's very hard. The quit line rang me and they were good.</i>
Patient 3	<i>The nurse explained the care plan well and yes we discussed issues that were related and are not necessarily related to my past kidney cancer which was helpful.</i>
Patient 4	<i>The GP appeared to have trouble understanding the care plan and what to do for the future e.g. scans etc. But I understood and explained what he was to do! Yes it has helped.</i>

Feedback from GPs included:

GP 1	<i>GPs receive lots of paperwork and there is lots of information in the care plan but some of this is really important such as the recommended follow-up schedule, guideline and contacts. There is quite a lot of information in the care plan such as the results but this is a good summary to have.</i>
GP 2	<i>In terms of follow-up in General Practice, it depends on the patient, type of cancer etc. There are lot of factors to consider but in this case I think it is appropriate for me to review this patient.</i>
GP 3	<i>No concerns at the moment – the patient is doing very well. He has seen a psychiatrist and psychologist and seems happier. Referral to physiotherapy was refused as he says he can do exercise on his own and is doing much better.</i>
GP 4	<i>The care plan made the GP role clear and outlines the schedule for follow-up. It is a good format and easy to follow.</i>

Some patients/GPs reported some issues with uncertainty around schedule of ongoing care and responsibilities. This was clarified by the patient or over the phone by the Urology Nurse. In one case, the GP was uncertain about follow-up requirements and the Urology Nurse assisted the patient to find a new GP for ongoing care. All correspondence sent out to the GPs is scanned onto their system so they have records of all correspondence from the Urology units. It would be useful to have a shared medical record such as My Health Record⁵ or send documents via secure messaging once compatible with hospital systems. In response to this feedback from GPs, the project team have amended the care plan template to include important GP follow-up guidelines and information on the first page of the document to promote clarity around the GPs role in ongoing care.

This model of care seems to improve patient confidence and provides all of the relevant information to enable an understanding of ongoing care. At the time of treatment, patients are often presented with a lot of information and this can be a confusing. The nurse-led clinic aims to clarify this process and ensure patients are empowered to take charge of their healthcare. This ensures that we are giving our patients' hope and informing them of their care, encouraging them to seek help where needed and discuss their follow-up care plan with their GP. The nurses are now also meeting patients at the time of treatment to introduce the prospect of the NLC.

⁵ <https://myhealthrecord.gov.au>

Feedback from project team:

Nurse 1:	<p><i>Prior to project, no pathways in place for finding patients for the Nurse Led Clinic, therefore a lot of time has being required to find the low risk urological cancer patients.</i></p> <p><i>The hour appointments are working well, care plans are completed and follow-up date/time is organised with the patient's GP.</i></p> <p><i>On average, each patient has 4 reviews with the urologist over the 2 years, therefore the 18 patients seen in NLC to date will generate 36 extra appointments per year; this is equivalent to 2-3 extra clinics per year depending on individual doctor's clinic diaries.</i></p> <p><i>Patients would like a phone call after the GP review. One patient called me as the GP did not appear to understand the care plan.</i></p>
Nurse 2:	<p><i>The model of care improves communication with primary care providers, allows psychosocial issues to be discussed and addressed, encourages consultants to discharge low risk patients instead of ongoing, unnecessary review visits.</i></p> <p><i>Have only received positive feedback. Patients have expressed that they have, for the first time, had the time to talk through their life issues following cancer treatment. Patients feel equipped to go to their GP and the care plan supports them through this process. Several patients have gone on to contact the urology nurse post-discharge to discuss their progress or to ask questions. I think this reflects the value of the clinic and that patients feel that they still have a point of contact in the urology unit despite being discharged from the hospital.</i></p>
Nurse 3:	<p><i>The nurse-led clinic allows provision of holistic patient care – having general psychosocial needs acknowledged in addition to urological disease. There is definitely a place for phone consults. We're also arranging a follow-up GP appointment with the patient present, and seeing patients on same day as urology works well too.</i></p> <p><i>Patient satisfaction with reducing the need to come into SVHM clinics – avoids long waiting times, cost of car parking. One patient outlined; 'much easier to attend local GP.'</i></p>
Clerical 1:	<p><i>I think it would be a good idea to introduce the idea of the Urology nurse involvement to the patients at their first or second appointment following surgery. Then they will know that the nurse-led clinic will be a standard part of their 12 month care/follow-up post-surgery (providing they meet the criteria).</i></p> <p><i>When we looked at our waiting list it had reduced by 29 from the 29/08/2016 to 09/11/2016; although it is early days to think that the nurse-led clinic has made such a huge impact is still positive.</i></p>
Clerical 2:	<p><i>Having two appointments one after the other certainly helps with patients' preparedness to come to the appointments for the NLC and there have been a few occasions where patients have been happy to hang around and partake in the appointment with the nurse following a Urology review.</i></p>

Efficiencies

SVH efficiencies are based on the nurse-led clinic pilot phase: 1 July – 30 November 2016. 122 urological cancer patients were discussed at St Vincent's Urology multidisciplinary team meeting (prostate cancer = 36, kidney cancer = 18). During this 5 month timeframe, 189 new patients were seen in Urology clinic and there were 542 review appointments. 30 patients were seen in NLC and discharged back to their GP for ongoing care. As a result of the introduction of the nurse-led clinic, at least 30 appointments have been generated in just 5 months. Standard approach for Urologist review involved quarterly visits for 1-2 years following treatment, twice yearly review years 3-5 and annual review years 5-10. The implementation of the nurse-led clinic enables at least 25% more new/high risk patients to be seen within uro-oncology clinic over a 12 month period with approximately 72 extra appointments generated per year through this model of care. This equates to 576 appointments generated over the standard 8 year review period. These numbers are also expected to increase as more patients are identified. This model of care also prevents unnecessary review by a Urologist for patients with stable, controlled disease.

At GVH, 27 patients were discussed at the MDT meeting from July to end November 2016 (prostate cancer = 14, kidney cancer = 7). Numbers of patients seen in the Urology clinic at GVH were 145 new and 363 review appointments with a total of 530 patients during this period. 22 patients were seen in NLC and discharged back to their GP for ongoing care. This means that at least 22 appointments have been generated in 5 months and an estimated 416 appointments will be generated over the standard 8 year review timeframe. These numbers are expected to increase as the scope of the clinic is expanded and is expected to generate at least 52 appointments in the next 12 months.

Economic analysis showed transitioning from specialist to GP care equates to an estimated cost savings of \$1082 per patient over ten years. For the full economic evaluation refer to Appendix I and the sustainability plan is detailed in Appendix J.

6. Limitations/Deviations from Project Plan

Inclusion/exclusion criteria refinement

Upon commencement of the project, the inclusion/exclusion criteria was discussed at the Urology clinical team meeting. Initial criteria included prostate, kidney, bladder and testicular cancer patients. Due to level of risk and appropriateness for discharge, bladder and testicular cancer patients were initially excluded from the project cohort. Following implementation of the nurse-led clinic, the project team will explore broadening the scope of the clinic.

Target numbers

Although the initial application and project plan did not include target numbers, these were estimated in order to look at potential number of eligible patients. Targets were based on the total number of urological cancer patients discussed at the multidisciplinary meetings and did not take eligibility into consideration. Due to the time-consuming nature of manually identifying patients retrospectively, and the eligibility of the cohort of patients, the target numbers for the project were revised to a total of 50 patients across SVH and GVH. The pilot timeframe was extended to ensure adequate numbers of patients could be seen and evaluated. There were fewer prostate than kidney cancer patients reviewed in NLC at SVH although these numbers will increase as patients are seen in 2017. 3 patients were deemed ineligible for discharge at that point in time following a phone consult and these patients were rebooked for NLC in 2017 as well. Changes were made to ensure urologist review was completed before patients were seen by the nurse to avoid this issue.

Ratio of prostate/kidney cancer patients

At SVH, 4 prostate cancer patients were seen in nurse-led clinic and 22 patients with kidney cancer. Reasons for this are provided in section 5 below table 2.

iMDT care plan template

Although not included in the project plan, the Urology unit funded the development of a care plan development within iMDT (cancer services software) in order to allow auto-population of fields. Limitations in the development of the template prevented efficient use of the care plan template. In order to improve this, a second phase of development would need to be resourced in order to ensure input/output of data can be improved.

Nurse Practitioner role at SVH

As part of the project, SVH explored the feasibility of introducing a Nurse Practitioner (NP) candidate within the Urology unit. While this was discussed with the executive team, NP candidacy/endorsement was not appropriate at this particular time due to current commitments. This will be explored again later in 2017.

Evaluation Plan

Patient and GP interviews were added to the evaluation plan in order to obtain qualitative data on the model of care. This is in addition to the quantitative data collected through patient and GP surveys. The project evaluation plan is outlined in Appendix L.

7. Consumer Participation Evaluation

How were consumers involved in the project? Which elements of this worked well and which could be improved?

Consumer/GP Representatives – Working Group

Consumer and GP representatives were involved in all project working group meetings and provided input on all resources and processes developed as part of the project. Incorporating consumer and GP perspectives into the development of the project has been essential to ensure appropriateness and usefulness of the model of care. Resources such as the care plan templates, patient/GP satisfaction surveys and letters to patients and GPs have incorporated comments provided by the working group members. Ian Dennis, consumer representative and ICT practitioner, contributed extensively to the project, assisting with the development of iMDT care plan template and collation of the Pearcey Institute economic evaluation incorporated in the project evaluation (Appendix I: Economic Evaluation).

Patients and GPs involved in the project

Following the nurse-led clinic appointment, patients and their GPs were sent a satisfaction survey in order to obtain input on the consultation with the nurse, care plan and model of care in general. This has enabled the project team to revise the processes/resources based on patient and GP input. For a summary of responses to patient and GP satisfaction surveys refer to Tables 5 and 6. The complete set of responses is outlined in Appendices E and F. Overall, feedback from both patients and GPs was very positive in regard to the model of care. Dr Jane Crowe also assisted the project team extensively and was involved in working group meetings.

8. Evaluation and Recommendations

Include a description of how this project will be sustainable and transferable across other tumour streams and health services.

Evaluation:

A summary of evaluation data and results is included in section 5: Outcomes.

Please refer to appendices for detailed evaluation data:

Appendix D: Responses to Patient Satisfaction Survey

Appendix E: Responses to GP Satisfaction Survey
Appendix F: Responses to the Distress Thermometer
Appendix G: Responses to IIEF
Appendix H: GP education evaluation – GVH & SVH
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A summary of the sustainability plan is included in section 9: Implementation. There is scope to roll this mode of care out to other tumour streams and within other health services. There is some interest to implement a colorectal cancer shared care/discharge project at SVH. Other health services such as Peter MacCallum Cancer Centre have already contacted SVH to enquire about project processes and resources. The pilot uro-oncology nurse-led clinics (July-November) set up at SVH and GVH have proven that even within a short timeframe, a small change to the model of care for uro-oncology patients can have a large impact on clinic throughput. This enables more new and high risk patients to have access to Urologist specialist clinic appointments, potentially reducing clinic congestion and long wait times for patients.

Key Recommendations:

- 1) Collaborate with other health services/units implementing similar models of care
- 2) Ensure clinician buy-in prior to commencement of project and discuss discharge guidelines for cohort of patients
- 3) Establish process for identification of eligible patients in preparation for clinic
- 4) Commence nurse-led clinic with well-defined, specific inclusion/exclusion criteria as outlined by clinical team
- 5) Explore broadening the scope of the clinic following pilot phase
- 6) Undertake software development to allow auto-population of care plan templates and compatibility with medical record/hospital/GP systems
- 7) Consider the use of shared medical records e.g. My Health Record
- 8) Initiate phone or Telehealth consultations to improve access for country patients
- 9) Ensure follow-up patient/GP phone calls are made by the nurse following the nurse-led clinic appointment
- 10) Commence sustainability plan early on in project in order to embed model of care into standard practice.

9. Implementation

How will new processes/improvements be sustained? Include budgetary considerations.

Sustainability:

The nurse-led clinics are currently funded up until July 2017. A business case has been developed at SVH in order to sustain the nurse-led clinic beyond the timeframe of the project. A 'new ask' for additional Urology Clinical Nurse Consultant EFT will be submitted for consideration for 2017/18 budgets. Relevant managers and executives have been involved to date in order to support this process. The project findings will also be tabled at the SVH Cancer Executive Committee for discussion and analysed by GVH Quality Unit in order to outline the benefits of the model of care. This will also provide an opportunity for scoping roll-out of the model of care to other units/tumour streams within the hospital. Other health services have already contacted SVH to obtain information on the project and are interested in rolling out a similar model of care within their health service in order to improve clinic throughput and efficiencies. GVH will be doing a comprehensive evaluation of the clinic's viability once a retrospective treatment map of all patients seen in clinic has been completed. This will be done in conjunction with GVH Quality Unit in early 2017. Part of this will look at the waiting list, incoming referral numbers, how the Urologist

Telehealth clinics and the nurse-led clinics allow patients to move from the waiting list to clinic quicker than prior to the establishment of the clinic. General feedback is that the clinic needs to continue, awaiting the benefits in reduction in waiting times for patients, value to the organisation. The plan is to continue the nurse-led clinics and obtain the relevant support and funding to do so.

10. Expenditure Report

Budget item	Original forecast amount	Final amount spent	Comment
Total amount (inclusive GST)	\$91,540	\$91,540	Funds allocated and spent in line with budget – salary costs, partner site funding, GP representative fees, ethics application, CPD activities and administrative costs

11. Project Lead (Applicant) Signature

I declare that this report is a true and proper representation of the activities undertaken in this project



Mr Lih-Ming Wong
Urologist & Project Lead, St Vincent’s Hospital

12. Project Sponsor Signature

I fully endorse this report and its content



Claire Riskovski
General Manager, Specialist and Surgical Services, St Vincent’s Hospital

13. Participating Hospitals Clinical Leads Signatures

I fully endorse this report and its content



Donna Sherringham
Head of Clinical Operations, Goulburn Valley Health

Appendix A: Project Plan

- WCMICS Project Plan -

PROJECT DETAILS

1. Project Title (as per project application)

Improving Follow-Up Care for Patients with Low-Risk Urological Cancers – a nurse-led clinic facilitating transition from hospital to community care

2. WCMICS Hospital/Health Service (Project Site)

St Vincent's Hospital (SVH) and Goulburn Valley Health (GVH)

3. Project Objective & Expected Outcomes (clearly describe the objective of the project and any expected outcomes – less than 300 words)

Our aim is to improve follow-up care for patients with low risk urological cancers and enhance productivity of the Urology units at SVH and GVH. This will include transitioning patients back to community care with improved clinical handover and communication with General Practice.

This will improve access to care for patients and allow Urology specialists to see more new and high risk patients in a tertiary setting.

4. Priority Areas Addressed by Project

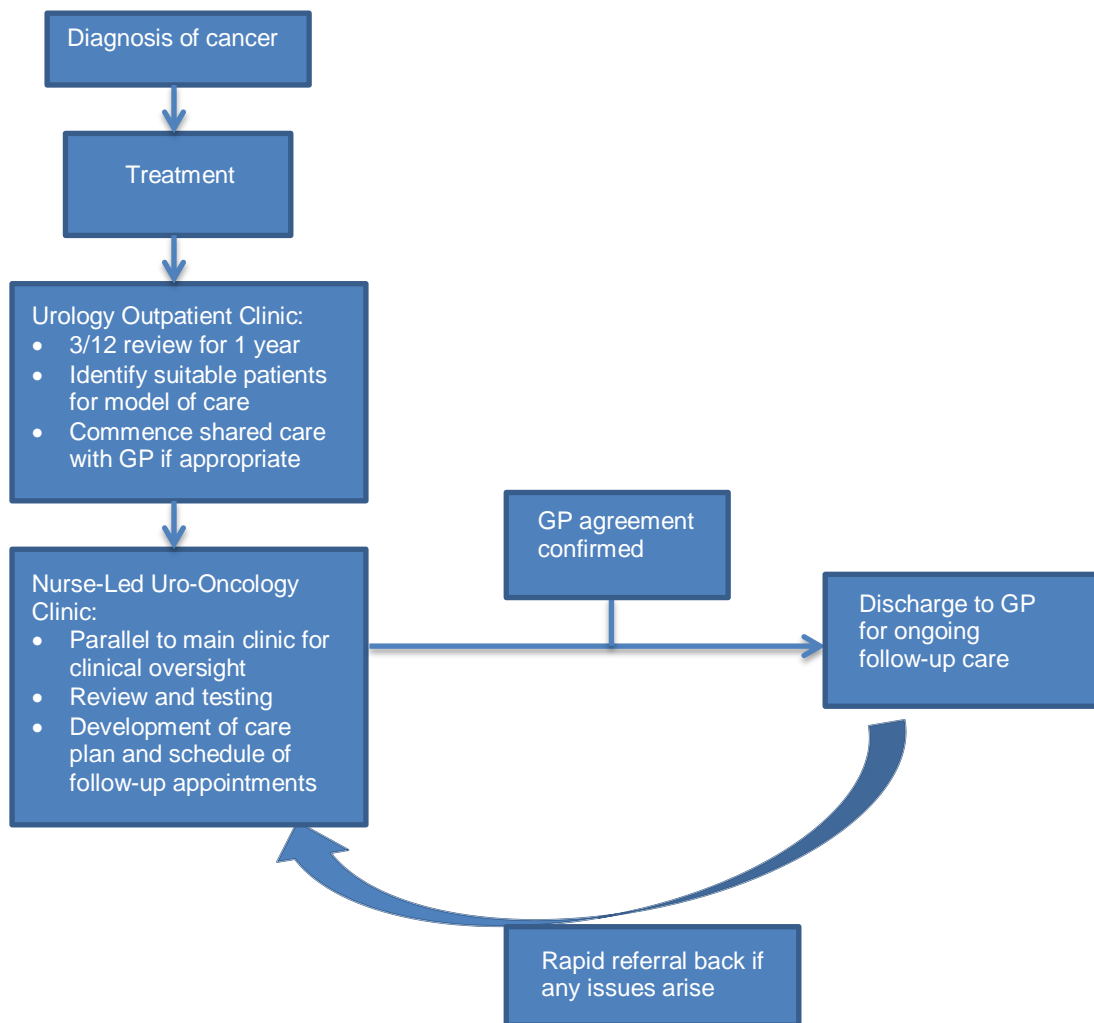
<input type="checkbox"/>	Breast	<input type="checkbox"/>	Central Nervous Systems
<input type="checkbox"/>	Colorectal	<input checked="" type="checkbox"/>	Genito-urinary (Prostate Cancer & Kidney Cancer)
<input type="checkbox"/>	Gynaecology	<input type="checkbox"/>	Haematology
<input type="checkbox"/>	Head & Neck	<input type="checkbox"/>	Lung
<input type="checkbox"/>	Skin/Melanoma	<input type="checkbox"/>	Upper GI
<input type="checkbox"/>	All		

PROJECT METHODOLOGY

5. Project Overview

Background / Overview:

SVH and GVH Urology departments collaborate closely in the management of uro-oncology patients through fortnightly multidisciplinary meetings and co-appointed urologists. Most patients with low risk prostate or kidney cancer are either disease-free post-surgery, or being monitored with stable, controlled disease. The implementation of a nurse-led consultation alongside the urology clinic will allow comprehensive review and development of a care plan and facilitate follow-up with a GP. The patient will have a longer consultation with the nurse to discuss treatment, ongoing issues, and plan for follow-up care. GPs will be provided with guidance on providing follow-up care and will receive support and advice from the nurse as required. A letter of agreement will be sent to the GP with an opt-out option and phone call to ensure agreement to provide ongoing care. Rapid re-entry pathways back to the hospital will also be available if issues arise. The project will also explore phone/telehealth review consultations. Flowchart below outlines proposed model of care.



Improved patient care:

Nurse-led clinics are well established internationally. The literature reports roles in active surveillance⁶ and management of prostate cancer.⁷ The morbidity associated with treatment involves urinary incontinence and erectile dysfunction, areas of existing nursing expertise. Similarly, psychosocial and survivorship issues experienced by young men with testicular cancer is an area identified as perhaps better managed by nurses. A shift from physician to nurse-led care is proven to achieve positive outcomes for patients in the ongoing management of disease and sustainability of model of care.^{8,9}

⁶ Wade, J & Holding PN et al (2015)

⁷ Madsen, LT Craig, C & Kuban, D (2009)

⁸ Martinez-Gonzalez et al. (2015)

⁹ Wong FK & Chung LC (2006)

Capacity gains:

Over the past 12 months at SVH, 305 patients were discussed at the Uro-Oncology Multidisciplinary Meeting. Diagnoses included prostate cancer (n=72), bladder (n=69), kidney (n=37), testicular cancer (n=11). A total of 443 new patients were seen in SVH Urology outpatients in the last year (1595 reviews). Based on the proposed review timeframes for this cohort of patients, at least 207 extra appointments could be generated per year allowing more new and high risk patients to be seen.

Over the past 12 months GVH saw approximately 133 low risk urological cancer patients. A total of 276 new patients were seen in Urology outpatients (654 reviews). This model of care will generate approximately 146 extra appointments per year.

Tools/Resources:

Changes made as part of the project will be implemented into standard practice.

1. Nurse Practitioner (NP):

- This project will also assist to determine the applicability of a Urology NP candidate at SVH. Evaluation will include analysis of value added to the service.

2. Urology HealthPathways:¹⁰

- SVH (Mr Ming Wong) is collaborating with the Primary Health Networks to develop HealthPathways - information for GPs on how to assess, manage and refer. Referral information will be specific to SVH. GVH referral information will be included in the care plan.

3. Care plan

A site-specific follow-up care plan template will be developed and includes information on diagnosis, treatment, medications, ongoing issues, referrals made, guidelines for ongoing care and a schedule of appointments. It will be signed off by the urologist and sent to the patient and nominated GP upon agreement to provide ongoing care.

6. Methodology

The project will be implemented step-by-step developing resources and refining processes along the way to ensure sustainability of the model of care. Initial stages will include recruitment to relevant roles, establishing a project working group, obtaining approval for low risk research activity. The planning stage will include mapping current practices at each hospital, developing exclusion and risk stratification criteria for the project, developing resources such as the care plan template and guidelines for GPs. The planning stage will also involve setting up rapid re-entry pathways and developing an evaluation plan. The implementation phase will see the commencement of the nurse-led clinic and handover back to a patient's nominated GP for ongoing care, as well as comprehensive evaluation activities. Part of the evaluation will include refining processes and resources to ensure sustainability. The nurse-led clinic will continue beyond the project timeframe and be embedded into standard practice.

Stage	Description	Timeline	Outputs	Measures
Initial Working group	Identify key project stakeholders to attend working group meetings including consumer and GP representation	February 2016	Working group	Identified representative group
Planning Mapping	Map current processes at SVH and GVH Urology units	March 2016	Process map	Process flowcharts developed for each site
Exclusion criteria	Develop risk stratification criteria to identify patients suitable for model	March 2016	Criteria	Set of criteria developed for each site
NP at SVH	Explore feasibility for developing Urology NP role at SVH	March 2016	NP role	Process outlined
Resource	Develop project resources	March - April	Resources	Site-specific

¹⁰ HealthPathways Melbourne (2015)

development	including care plan template, evaluation plan	2016		templates developed
Rapid re-entry	Establish rapid access processes - Urology outpatient clinic	March - April 2016	Rapid access	Process established
Recruitment	Recruit project manager, nurse and administrative support	April 2016	Project staff	Recruited to roles at SVH and GVH
Low Risk Research approval	Apply for approval – Low Risk Research <i>*this has been upgraded from QA activity as advised by St Vincent's Quality Unit</i>	April – May 2016	Approval	Obtained approval for implementation
Patient cohort	Identify patients eligible for model of care – include patients who have already commenced review	May-Sept 2016	Patient cohort	Patients identified for each site
Evaluation plan	Development of evaluation activities	May 2016	Evaluation plan	Evaluation activities developed
GP Workshop	Facilitate GP workshops on uro-oncology and HealthPathways (at SVH and GVH)	May/July 2016	Workshop	GP input
Implementation Nurse-led clinic	Commencement of nurse-led clinic at SVH and GVH	July - September 2016	Nurse clinic	Patients completed nurse-led clinic
Handover to GP	Letter of agreement/phone call to GP, care plans sent out	July - September 2016	Handover	Discharged to GP with adequate handover
Interim report	Develop interim report	August 2016	Report	Interim report submitted
Data	Collate data – number of patients involved, GP agreements, rapid access, psychosocial issues etc.	July - Dec 2016	Data	Data collated
NP role	Look at embedding NP role into Urology unit at SVH	Sept – Dec. 2016	NP role	Candidate identified
Refinement	Revise and amend resources and processes developed as part of the project based on feedback from key stakeholders	Sept – Dec. 2016	Resource revision	Revised processes and resources
Evaluation / reporting Surveys	GP survey, patient survey and qualitative feedback from clinical staff	Sept 2016 – Jan 2017	Survey data	Feedback obtained
Sustainability plan	Conduct a cost-benefit analysis of model of care	Jan-Feb 2017	Report	Analysis completed
Initial review	Initial data in post-implementation phase (no. patients referred back, recurrences etc.)	Jan-Feb 2017	Report	Data collated
Final report	Develop final report	March 2017	Report	Final report submitted

7. Project Scope (define the extent and limits of the project)

Inclusions *(Clearly detail what is included as part of the project, including any anticipated improvements/changes in practice arising from the project):*

- Exclusion criteria developed for patient cohort
- Changes to model of care within uro-oncology
- Establish rapid re-entry pathways
- Develop a robust and sustainable model of care
- Explore feasibility of NP at SVH
- Improve clinical handover and coordination of care through discharge back to GP with adequate information – care plan, follow-up schedule, rapid re-entry pathways
- Explore feasibility of adopting a shared care approach in the first year following treatment – this will ensure GP follow-up is established before discharge from outpatient clinics
- GP education - guidelines for GPs on providing follow-up care, access to nurse for advice/support, possible CPD event
- Monitoring outcomes of the project through comprehensive evaluation
- Embed model of care into standard practice beyond timeframe of project

Exclusions *(Clearly detail what will not be included as part of the project):*

- Patients with advanced cancer and those considered high risk
- Patients undergoing active surveillance

8. Changes to Project

The project team will explore the feasibility of implementing a shared care model in the year following treatment. This will allow for the patient and GP to get used to managing ongoing care within the community, and ensure participation/attendance upon discharge from the hospital. This will involve alternating three monthly appointments between the GP and hospital including pathology. This change has been made after consultation with Prof Jon Emery and learnings from the ProCare prostate cancer trial.¹¹

Due to delays in receiving funding, the project timeline has been amended slightly as above. Activities such as recruitment and ethics applications were delayed significantly awaiting funding.

Testicular and bladder cancer patients have been excluded from patient cohort – refer to attached criteria and reasons. This was discussed in detail at the working group meetings. The timing of the nurse-led clinic has also been amended for certain cohorts of patients (1-2yrs post-treatment depending on disease stage and definitive treatment).

9. Communication Strategy/Project Stakeholders

Key project stakeholders include staff within SVH and GVH Urology units and executive sponsors, WCMICS and Hume RICS, GPs, patients and their carers. Key stakeholders will be kept informed about the project through the working group meetings. These monthly meetings will ensure developments, processes and resources are discussed and input obtained. Consumer input will be obtained and a representative will be appointed to the working group. GP Liaison can assist with communicating with GPs and will also appoint a representative to the group. Key staff including nurses, urologists, heads of units and executive level staff will also be appointed to the working group to ensure governance across both sites. The project team at SVH and GVH will collaborate to work closely with WCMICS and Hume RICS to ensure that key stakeholders are kept up-to-date as the project progresses. Project findings will be widely disseminated across the hospitals and via forums such as the annual Victorian Integrated Cancer Services conference.

¹¹ Emery et al. (2014)

10. Evaluation

Surveys will be sent out to GPs and patients following the nurse-led clinic. A review post-implementation will include added value of nurse-led clinic, NP role if established, number of appointments generated. A comprehensive data analysis will also be completed to look at the impact of model of care including cost-benefit analysis and collation of patient demographics (number of patients, referrals made, re-entry back to clinic etc). The project team will look at the proportion of patients included in the model of care and the benefits of these process changes.

11. Consumer Participation

Consumers will be involved throughout the project. A consumer representative will be appointed to the project working group in order to ensure that the consumer perspective is taken into account in the development and implementation of the project. Feedback will be sought from consumers on the project resources such as the consumer survey questions, as well as the care plan template. Comprehensive evaluation will also be undertaken throughout the project to ensure that the model of care is acceptable and appropriate to consumers.

PROJECT MANAGEMENT

12. Project Management Strategy

Clearly detail how the project will be managed, including the role of the Project Manager, WCMICS Directorate, any specifically appointed project staff, and the host hospital and/or Project Advisory Group where applicable.

The project manager will coordinate the planning, implementation and evaluation of the model of care. This will include facilitating process changes within the Urology units and developing project resources. The nurse and administrative support at GVH will assist with data collection and facilitating changes within GVH. The project working group will include all key staff members from SVH and GVH. The group will meet monthly to provide governance and input on project resources and processes.

13. Project Manager

Name	Position	Telephone	E-mail
Sita Vij	Project Manager / GP Liaison Coordinator	9231 4781	sita.vij@svha.org.au

14. Project Team

Name	Position	Contact Details
Ming Wong	Urologist / Project Lead SVH & GVH	9419 5290 lih-ming.wong@svha.org.au
Jeremy Goad	Director of Urology SVH	9419 4715 jeremy.goad@svha.org.au
Donna Sherringham	Executive Director of Clinical Operations GVH	5832 2947 donna.sherringham@gvhealth.org.au
Belinda Smith	General Manager of Specialty Services SVH	belinda.a.smith@svha.org.au
Molly Trethewey	Urology Nurse SVH	molly.trethewey@svha.org.au
Mia Percy	Urology Nurse SVH	mia.percy@svha.org.au
Linden Hortle / Bradley Schuurmann	Admin assistant SVH	
Sonia Strachan / Nicole Lewis	Urology Nurse GVH	sonia.strachan@gvhealth.org.au
Cheryl Lancaster	Admin assistant GVH	cheryl.lancaster@gvhealth.org.au
Anne Robinson	Divisional Operations Director GVH	anne.robinson@gvhealth.org.au

References:

1. Wade J & Holding PN et al. (2015). Establishing nurse-led active surveillance for men with localised prostate cancer: Development and formative evaluation of a model of care in the ProtecT trial. *BMJ Open* 2015:5. <http://bmjopen.bmj.com/content/5/9/e008953.full.pdf>
2. Madsen, LT Craig, C & Kuban, D (2009). A multidisciplinary prostate cancer clinic for newly diagnosed patients: Developing the role of the advanced practice nurse. *Clinical Journal of Oncology Nursing*, 13(3), 305-9. <http://search.proquest.com/docview/222751458?accountid=462183>
3. Martínez-González, N.A, Tandjung, R, Djalali, S & Rosemann, T (2015). The impact of physician–nurse task shifting in primary care on the course of disease: a systematic review. *Human Resources for Health*, 13, 55. <http://doi.org/10.1186/s12960-015-0049-8>
4. Wong, FK & Chung, LC (2006), Establishing a definition for a nurse-led clinic: structure, process, and outcome. *Journal of Advanced Nursing*, 53: 358–369. <http://www.ncbi.nlm.nih.gov/pubmed/16441541>
5. Melbourne Primary Care Network & Eastern Melbourne Primary Health Network (2015), HealthPathways Melbourne. <https://melbourne.healthpathways.org.au>
6. Emery J, Doorey J, Jefford M, et al. Protocol for the ProCare Trial: a phase II randomised controlled trial of shared care for follow-up of men with prostate cancer. *BMJ Open* 2014; 4. <http://bmjopen.bmj.com/content/4/3/e004972.full.pdf+html>

Conditions of Funding:

Funding will be allocated to successful applicants on the basis that:

- The project has been approved for funding by a panel comprising of CMAC and Governance Committee representatives, with any specific conditions specified by the review panel having been met;
- The project has tumour group wide and/or hospital wide support and has been endorsed by Heads of Department, Line Manager, tumour group lead clinicians (for tumour group projects) and the CEO on behalf of their organisation (for hospital based projects)
- The project will be conducted in accordance with the methodology and timelines stated within the application and the conditions stipulated in the WCMICS 2015/16 Funding Guidelines. Any deviation in the project from the original submission must be discussed with, and agreed to by, the panel and the WCMICS Directorate;
- A detailed project plan will be submitted to the WCMICS Directorate within **six weeks** of the project commencement;
- The project's outcome measures recorded on commencement and completion of the project will be submitted to WCMICS, together with agreement that these measures can also be taken again at a suitable timeframe (e.g. 12 months after the projects completion, by the service or WCMICS). This will determine the initiatives longer term sustainability.
- Ethics applications (where necessary) are submitted by the Project Manager in line with local requirements;
- A project update report will be provided by the Project Manager as per the agreed project plan, and upon request to the WCMICS Directorate for communication to the WCMICS Governance Committee;
- An **Interim Progress Report** and **Final Report** (including evaluation outcomes and expenditure report) will be submitted to the WCMICS Directorate at the project mid-point and completion, respectively; and
- Information on the project, including any tools/resources developed, will be made available on request to the WCMICS Directorate to enable promotion of the Funding Program and information sharing with other organisations.

Appendix B: Inclusion/Exclusion Criteria

General exclusion criteria:

- Patients without a GP – every effort will be made to ensure all patients have a nominated GP for ongoing care. The GP Liaison Unit will also assist with this. Some patients may be unable to find a GP in which case the patient will continue to be seen by the hospital until such time that a GP can be arranged
- Ongoing issues or comorbidities requiring tertiary care
- Advanced cognitive impairment

Criteria specific to urological cancers:

Prostate Cancer	
<p>Inclusion Criteria</p> <ol style="list-style-type: none"> 1. Patients who have undergone curative treatment (i.e. radical prostatectomy or radiotherapy) who are disease free after 1-2 years of urological follow-up <ul style="list-style-type: none"> • Patients will be stratified into: <ol style="list-style-type: none"> a) Gleason sum $\leq 4+3$, organ confined disease ($\leq pT2$) <ul style="list-style-type: none"> - These patients will be discharged via the nurse-led clinic (NLC) after 12 months urology follow-up b) Gleason sum $\geq 4+4$, pT stage ≥ 3 <ul style="list-style-type: none"> - These patients will be discharged via the NLC after 24 months urology follow-up 	<p>Exclusion Criteria</p> <ul style="list-style-type: none"> • Patients on active surveillance. These patients require urological follow-up with repeat prostate biopsy and MRI • Patients with metastatic disease. These patients have the potential for rapid disease progression and require close follow-up to decide when further treatment is required • Patients with biochemical recurrence post radical treatment without evidence of metastasis: <ol style="list-style-type: none"> a) Rising PSA: These patients will eventually develop metastatic disease b) Stable PSA: If PSA remains stable for 2 years, as the NLC develops, it is envisaged that these patients would be suitable for this model of care
Kidney Cancer	
<p>Inclusion Criteria</p> <ol style="list-style-type: none"> 1. Patients who have undergone curative treatment (i.e. radical nephrectomy, partial nephrectomy, radiofrequency ablation) who are disease free after 1-2 year of urological follow-up <ol style="list-style-type: none"> a) Patients will be stratified into: <ol style="list-style-type: none"> a) Fuhrman grade 1-2, pT stage ≤ 2 <ul style="list-style-type: none"> - These patients will be discharged via the NLC after 12 months urology follow-up b) Fuhrman grade 3-4, pT stage ≥ 3 <ul style="list-style-type: none"> - These patients will be discharged via the NLC after 24 months urology follow-up 2. Patients on active surveillance for small renal masses ≤ 3cm in maximal diameter that have been stable in size for ≥ 2 years 	<p>Exclusion Criteria</p> <ul style="list-style-type: none"> • Patients with metastatic disease. These patients have the potential for rapid disease progression and require close follow up to decide when further treatment is required

Bladder Cancer	
<p>Inclusion Criteria Patients with bladder cancer will no longer be included in the patient cohort for this project (reasons outlined)</p>	<p>Exclusion Criteria</p> <ul style="list-style-type: none"> • Muscle invasive bladder cancer - patients who have had radical cystectomy or radiotherapy: <ul style="list-style-type: none"> - The risk of disease recurrence/metastasis is higher than other urological cancers (most series reviewed consistently suggest 5 year recurrence free survival (RFS) between 48-68%, disease specific survival (DSS) between 60-74% and overall survival (OS) 53-60%) - Radical cystoprostatectomy is associated with a higher risk of surgical complications and requires urological follow-up for a longer period of time. As the NLC develops, it is envisaged that patients might be discharged to primary care after 5 years of urology follow-up without evidence of surgical complication or disease recurrence (studies focused on recurrence consistently demonstrated median time to recurrence of 10 months [27-30] for both local and distant recurrences) • Non-muscle invasive bladder cancer: <ul style="list-style-type: none"> - pTa: patients are surveyed by regular flexible cystoscopy and thus not suitable for discharge to primary care - pT1: patients are at high risk of developing muscle invasive disease, are surveyed by regular flexible cystoscopy and thus not suitable for discharge to primary care
Testicular Cancer	
<p>Inclusion Criteria Patients with testicular cancer will no longer be included in the patient cohort for this project (reasons outlined)</p>	<p>Exclusion Criteria</p> <ul style="list-style-type: none"> • Stage 1 (no metastasis): <ul style="list-style-type: none"> - Patients are managed either by surveillance or chemotherapy, in a shared care model with medical oncology. This is because the treatment for those on surveillance for recurrence is chemotherapy - As follow-up is not predominantly managed by urology, this cohort has been excluded from the NLC - Furthermore, a team of medical oncologists have submitted an application for funding for a survivorship project via DHHS Victorian Cancer Survivorship Program (project manager has been involved in this application)

Appendix C: Follow-Up Care Plans – Prostate and Kidney Cancer

Prostate Cancer Follow-Up Care Plan

Health Care Team

General Practitioner	Name: Practice:
Urology Nurse Consultant	
Urologist	Mr Lih-Ming Wong

Diagnosis and History Summary

Diagnosis Date:

Type	
Stage	T: N: M:
Gleason Score	
Family history of prostate cancer	
Referral for genetic testing	<input type="checkbox"/> Yes <input type="checkbox"/> No

Treatment Summary

Date	Treatment	Details
	Surgery	Operation: Surgeon: Complications
	Chemotherapy	Drug: Number of cycles:
	Radiotherapy	Field: Dose:
	Hormonal therapy	Drug:

PSA History

Date	PSA Result (ng/ml)

Health and Wellbeing Assessment and Management Plan

Date of Urology Nurse Consultation:

Domain	Issues/Symptoms	Recommendation
Psychosocial	Distress thermometer score (0-10): Problems identified:	
Urinary function	<input type="checkbox"/> Continent <input type="checkbox"/> Incontinent Number of pads/day: Pad size: <input type="checkbox"/> Large <input type="checkbox"/> Small Urinary flow: <input type="checkbox"/> Strong <input type="checkbox"/> Weak	
Bowel function		
Sexual function (relationships, intimacy, erectile function)	Index of Erectile Function score: PDE5I tablets: Intracavernosal injection:	
Lifestyle	Physical activity: Nutrition: Smoking: Alcohol consumption:	
Other		

Referrals to consider

Service	Contact Details

Note: This service agrees to be involved in appropriate team care arrangements, for example to contribute to a care plan for the patient under MBS item 721 (GP management plan), 723 (team care plan) or 2700–2717 (GP mental health care plans).

Guideline for GP

Recommended Follow-Up Schedule

Method	Up to 5 years	After 5 years
Clinical assessment and PSA test	Every 6 months	Every 12 months

Consider setting up recall/reminders

Clinical assessment required	Guideline	Action by GP
Evidence of disease progression as measured by PSA test	Definition of PSA progression: <ol style="list-style-type: none"> 1. Post-radical prostatectomy: 2 consecutive values of >0.2ng/ml 3 months apart 2. Post-radiation: Rise of 2ng/ml above the post-treatment PSA-nadir (lowest value) 	Rapid referral back to Urology
Evidence of metastasis (lost to PSA follow-up)	PSA > 20 Patient unwell, bone pain or fracture, abdominal pain	Rapid referral back to Urology
Assess for treatment-related complications	<ul style="list-style-type: none"> - Urinary dysfunction - Sexual dysfunction - Bowel problems (post-radiation) - Examine wound for hernia 	Referral to Urology: <ul style="list-style-type: none"> - Worsening urinary function/obstruction Referral to General Surgery: <ul style="list-style-type: none"> - Incisional hernia, PR bleeding
Psychosocial issues	<ul style="list-style-type: none"> - Depression and anxiety - Lifestyle factors (e.g. nutrition, physical activity) 	Refer as appropriate

Urology Nurse Consultant

Name:

Signature:

Date:

To access The Urology Unit at St Vincent's Hospital***Rapid referral back to Urology (appointment within 2 weeks):***

Phone: 9231 2898

FAX: 9231 2910 (mark as urgent)

Routine referrals to Urology:

FAX: 9231 3489

Urgent clinical advice:

Contact the Urology Registrar via switchboard

Phone: 9231 2211

Non-urgent clinical advice:

Urology Nurse Consultant

Phone: 9231 3737

Email: svhm.urologynurse@svha.org.au**For more information on Prostate Cancer Follow-Up Care:*****HealthPathways Melbourne – Urology Pathways for GPs***<https://melbourne.healthpathways.org.au>

Username: connected / Password: healthcare

Cancer Council Victoria – Optimal Care Pathways: Prostate Cancer<http://www.cancervic.org.au/for-health-professionals/optimal-care-pathways>

Kidney Cancer Follow-Up Care Plan

Health Care Team

General Practitioner (GP)	Name: Practice:
Urology Nurse Consultant	
Urologist	Mr Lih-Ming Wong

Diagnosis and History Summary

Diagnosis Date:

Stage	T:	N:	M:
Histology	<input type="checkbox"/> Clear cell	<input type="checkbox"/> Papillary cell	
	<input type="checkbox"/> Chromophobe	<input type="checkbox"/> Other	
Fuhrman Grade			
Family history of kidney cancer			
Referral for genetic testing	<input type="checkbox"/> Yes	<input type="checkbox"/> No	

Treatment Summary

Date	Treatment	Details
	Surgery	Operation: Surgeon: Complications:
	Targeted therapy	Drug: Number of cycles:
	Radiotherapy	Field: Dose:
	Chemotherapy	Drug: Number of cycles:

Investigations

Date	Type	Result

Health and Wellbeing Assessment and Management Plan

Date of Urology Nurse Consultation:

Domain	Issues/Symptoms	Recommendation
Psychosocial	Distress thermometer score (0-10): Problems identified:	
Sexual function (relationships, intimacy, erectile function)		
Lifestyle	Physical activity: Nutrition: Smoking: Alcohol consumption:	
Other		

Referrals to consider

Service	Contact Details

Note: This service agrees to be involved in appropriate team care arrangements, for example to contribute to a care plan for the patient under MBS item 721 (GP management plan), 723 (team care plan) or 2700–2717 (GP mental health care plans).

Guideline GP

Recommended Follow-Up Schedule

Method	Up to 5 years	After 5 Years
<ul style="list-style-type: none"> ➤ Clinical assessment ➤ CT chest - abdo & pelvis (Replace with CXR/abdominal and renal ultrasound if unable to have intravenous contrast) ➤ UECr/eGFR 	Every 12 months	<ul style="list-style-type: none"> ➤ Fuhrman Grade 1-2: No review required ➤ Fuhrman Grade 3-4: Every 2 years

Consider setting up recall/reminders

Clinical assessment required	Guideline	Action by GP
Evidence of disease progression	Clinical evidence of local recurrence and/or metastatic disease - confirmed by radiology	Rapid referral back to Urology
Assess for treatment-related complications	<ul style="list-style-type: none"> - Check wound(s) for chronic pain/hernia - Monitor renal function: Encourage prevention and manage medical causes of kidney disease 	Referral to Urology: <ul style="list-style-type: none"> - Wound hernia - Severe wound pain Referral to Nephrology: <ul style="list-style-type: none"> - Worsening renal function
Psychosocial issues	<ul style="list-style-type: none"> - Depression and anxiety - Lifestyle factors (nutrition, physical activity) 	Refer as appropriate

Urology Nurse Consultant

Name:

Signature:

Date:

To access The Urology Unit at St Vincent's Hospital

Rapid referrals to Urology (appointment within 2 week):

Phone: 9231 2828

FAX: 9231 2910 (mark as urgent)

Routine referrals to Urology:

FAX: 9231 3489

Urgent clinical advice:

Contact the Urology Registrar via switchboard

Phone: 9231 2211

Non-urgent clinical advice and information on hospital care:

Urology Clinical Nurse Consultant

Phone: 9231 3737

Email: svhm.urologynurse@svha.org.au

For more information:

HealthPathways Melbourne – Urology Pathways for GPs

<https://melbourne.healthpathways.org.au>

Username: connected / Password: healthcare

Appendix D: Responses to Patient Satisfaction Survey

Q1: Hospital responsible for your care:

Answer Choices	Responses	
St Vincent's Hospital	59.09%	13
Goulburn Valley Health	40.91%	9
Total		22

Q2: Did you attend an appointment with the urology nurse at the hospital?

Answer Choices	Responses	
Yes	86.36%	19
No	13.64%	3
Total		22

Q3: If you needed an interpreter at your appointment was one provided for you?

Answer Choices	Responses	
Yes	4.55%	1
No	22.73%	5
I didn't need an interpreter	72.73%	16
Total		22

Q4: Overall, do you have any issues you feel you still need help with?

Answer Choices	Responses	
Yes	19.05%	4
No	80.95%	17
Total		21

Q5: Did you receive the follow-up care plan sent by the hospital after your appointment?

Answer Choices	Responses	
Yes	86.36%	19
No	13.64%	3
Total		22

Q6: Did you find the care plan useful?

Answer Choices	Responses	
Yes	95.45%	21
No	4.55%	1
Total		22

Q7: Please rate each of the following after talking to the Urology Nurse at the hospital:

	Strongly Disagree	Disagree	Agree	Strongly Agree	Total
I spoke to the urology nurse about my needs	0.00% 0	0.00% 0	40.91% 9	59.09% 13	22
The nurse gave me suggestions to help me manage my personal needs	0.00% 0	0.00% 0	50.00% 11	50.00% 11	22
The nurse helped me work out where I can go to access support services	0.00% 0	4.55% 1	50.00% 11	45.45% 10	22
The nurse explained that I will now see my GP instead of coming back to the hospital	0.00% 0	0.00% 0	47.62% 10	52.38% 11	21

Q8: Is there anything about your care that you think could have been done better?

Answer Choices	Responses	
Yes	9.09%	2
No	90.91%	20
Total		22

Q9: Have you seen your GP since your appointment with the Urology Nurse?

Answer Choices	Responses	
Yes - continue to next question	95.45%	21
No - skip to question 10	4.55%	1
Total		22

Q10: Did you talk to your GP about your care plan?

Answer Choices	Responses	
Yes	71.43%	15
No	28.57%	6
Total		21

Q11: Have you made any lifestyle changes after talking with your GP or the hospital nurse e.g. increasing physical activity, quitting smoking?

Answer Choices	Responses	
Yes	45.45%	10
No	54.55%	12
Total		22

Q12: How have you found out information about support services?

Answer Choices	Responses	
From the Urology Nurse	84.21%	16
From my specialist	10.53%	2
From my GP	36.84%	7
Through the internet	5.26%	1
Over the phone	5.26%	1
I haven't found out any information	5.26%	1
Other (please specify):	10.53%	2
Total Respondents: 19		

Q13: What support services have you used?

Answer Choices	Responses	
Cancer Council Victoria	0.00%	0
Support Groups	6.67%	1
Phone support	33.33%	5
Others (please specify):	60.00%	9
Total Respondents: 15		

Q14: Have these services been useful?

Answer Choices	Responses	
Yes	100.00%	12
No	0.00%	0
Total		12

Appendix E: Responses to GP Satisfaction Survey

Q1: Hospital responsible for patient's care:

Answer Choices	Responses
St Vincent's Hospital	63.16% 12
Goulburn Valley Health	36.84% 7
Total	19

Q2: Did you find the enclosed care plan useful to facilitate a discussion with your patient, plan for future visits, develop your own management plans etc?

Answer Choices	Responses
Yes	88.89% 16
No	11.11% 2
Total	18

Q3: Did you refer your patient to any of the following:

Answer Choices	Responses
Physiotherapy	62.50% 5
Exercise Physiology	12.50% 1
Dietician	50.00% 4
Psychologist	50.00% 4
Total Respondents: 8	

Q4: Are you confident that you can receive timely guidance and support from the Urology unit?

Answer Choices	Responses
Yes	88.89% 16
No	11.11% 2
Total	18

Q5: Have you used HealthPathways Melbourne for the assessment and management of your patients or to obtain hospital or community service referral information?

Answer Choices	Responses
Yes	22.22% 4
No	77.78% 14
Total	18

Appendix F: Responses to the Distress Thermometer

Q1: Hospital responsible for patient's care:

Answer Choices	Responses	
St Vincent's Hospital	55.10%	27
Goulburn Valley Health	44.90%	22
Total		49

Q2: Date of completion – N/A

Q3: Please circle the number (0-10) that best describes how much distress you have been experiencing in the past week including today

Answer Choices	Responses	
10 extreme distress	2.04%	1
9	0.00%	0
8	2.04%	1
7	4.08%	2
6	10.20%	5
5	8.16%	4
4	2.04%	1
3	14.29%	7
2	14.29%	7
1	4.08%	2
0 no distress	38.78%	19
Total		49

Q4: Please indicate if any of the following has been a problem for you in the past week including today: PRACTICAL PROBLEMS

Answer Choices	Responses	
Child care	0.00%	0
Housing	11.11%	1
Insurance/financial	66.67%	6
Transportation	22.22%	2
Housework	22.22%	2
Work/school	33.33%	3
Treatment decisions	0.00%	0
Total Respondents: 9		

Q5: PHYSICAL PROBLEMS

Answer Choices	Responses	
Appearance	3.03%	1
Bathing/dressing	0.00%	0
Breathing	6.06%	2
Changes in urination	9.09%	3
Constipation	6.06%	2
Diarrhea	6.06%	2
Eating	9.09%	3
Fatigue	12.12%	4
Feeling swollen	0.00%	0
Fevers	6.06%	2
Getting around	6.06%	2
Indigestion	12.12%	4
Lack of energy	12.12%	4
Memory/concentration	9.09%	3
Mobility	9.09%	3
Mouth sores	0.00%	0
Nausea	3.03%	1
Nose dry/congested	6.06%	2
Pain	48.48%	16
Sexual	21.21%	7
Skin dry/itchy	6.06%	2
Sleep	27.27%	9
Sustance abuse	3.03%	1
Tingling in hands/feet	9.09%	3
Total Respondents: 33		

Q6: FAMILY PROBLEMS / COMMUNICATION / RELATIONSHIPS

Answer Choices	Responses	
Dealing with children	11.11%	1
Dealing with partner	55.56%	5
Ability to have children	0.00%	0
Family health issues	22.22%	2
Carer strain	33.33%	3
Total Respondents: 9		

Q7: EMOTIONAL PROBLEMS

Answer Choices	Responses	
Depression	32.00%	8
Fears/anxiety	32.00%	8
Fluctuating emotions	12.00%	3
Nervousness	16.00%	4
Sadness	32.00%	8
Worry	64.00%	16
Loss of interest in usual activities	20.00%	5
Total Respondents: 25		

Q8: SPIRITUAL/RELIGIOUS CONCERNS

Answer Choices	Responses	
Spiritual/religious concerns	0.00%	0
Total		0

Appendix G: Responses to IIEF

Q1: Hospital responsible for patient's care:

Answer Choices	Responses	
St Vincent's Hospital	29.41%	5
Goulburn Valley Health	70.59%	12
Total		17

Q2: Date of completion – N/A

Q3: Over the past 6 months: How do you rate your confidence that you could keep an erection?

Answer Choices	Responses	
Very low (1)	58.82%	10
Low (2)	5.88%	1
Moderate (3)	11.76%	2
High (4)	11.76%	2
Very high (5)	11.76%	2
Total		17

Q4: When you had erections with sexual stimulation, how often were your erections hard enough for penetration?

Answer Choices	Responses	
Almost never or never (1)	58.82%	10
A few times (much less than half the time) (2)	0.00%	0
Sometimes (about half the time) (3)	5.88%	1
Most times (much more than half the time) (4)	17.65%	3
Almost always or always (5)	17.65%	3
Total		17

Q5: During sexual intercourse, how often were you able to maintain your erection after you had penetrated your partner?

Answer Choices	Responses	
Almost never or never (1)	58.82%	10
A few times (much less than half the time) (2)	5.88%	1
Sometimes (about half the time) (3)	5.88%	1
Most time (much more than half the time) (4)	23.53%	4
Almost always or always (5)	5.88%	1
Total		17

Q6: During sexual intercourse, how difficult was it to maintain your erection to completion of intercourse?

Answer Choices	Responses	
Extremely difficult (1)	64.71%	11
Very difficult (2)	0.00%	0
Difficult (3)	0.00%	0
Slightly difficult (4)	5.88%	1
Not difficult (5)	29.41%	5
Total		17

Q7: When you attempted sexual intercourse, how often was it satisfactory for you?


Answer Choices	Responses	
Almost never or never (1)	56.25%	9
A few times (much less than half the time) (2)	12.50%	2
Sometimes (about half the time) (3)	6.25%	1
Most times (much more than half the time) (4)	12.50%	2
Almost always or always (5)	12.50%	2
Total		16

Q8: Total score

Answer Choices	Responses	
1-7: Severe Erectile Dysfunction (ED)	58.82%	10
8-11: Moderate ED	5.88%	1
12-16: Mild-Moderate ED	0.00%	0
17-21: Mild ED	29.41%	5
22-25: No ED	5.88%	1
Total		17

Appendix H: GP Education Evaluation
Goulburn Valley Health GP Forum – 16 May 2016
(Completion rate: 100.0%)

Profession

Response	Chart	Percentage	Count
Doctor		100.0%	27
Practice Nurse		0.0%	0
Practice Manager		0.0%	0
Pharmacist		0.0%	0
		Total Responses	27

How to assess for disease progression

	Not Met	Partially met	Entirely met	Total Responses
	0 (0.0%)	3 (11.1%)	24 (88.9%)	27



Identification and management of treatment-related complications

	Not Met	Partially met	Entirely met	Total Responses
	0 (0.0%)	3 (11.1%)	24 (88.9%)	27

Psychosocial assessment and referrals

	Not Met	Partially met	Entirely met	Total Responses
	0 (0.0%)	8 (29.6%)	20 (74.1%)	27

	Not met	Partially met	Entirely met	Total Responses
Did the session content meet your learning requirements?	0 (0.0%)	4 (14.8%)	23 (85.2%)	27
Did the presenters deliver the session to your expectations?	0 (0.0%)	3 (11.1%)	24 (88.9%)	27
Were you satisfied with the opportunity for participation interaction?	0 (0.0%)	2 (7.4%)	25 (92.6%)	27
Did this session provide useful information?	0 (0.0%)	3 (11.1%)	24 (88.9%)	27

Response	Chart	Percentage	Count
Not relevant		0.0%	0
Partially relevant		25.0%	6
Entirely relevant		75.0%	18
		Total Responses	24

St Vincent's Hospital GP Forum - 5 July 2016

Evaluation Summary: Urological cancer follow-up in General Practice: GP role in a new model of care

8 Evaluation forms completed out of 14 attendees (57%)

Please rate to what degree the learning objectives were met	Not Met	Partially Met	Entirely Met
By the end of this session I am able to:			8 (100%)
<ul style="list-style-type: none"> • Assess for disease progression 			8 (100%)
<ul style="list-style-type: none"> • Identify and manage treatment-related complications 			8 (100%)
<ul style="list-style-type: none"> • Complete psychosocial assessment and referrals 		1 (12%)	7 (88%)
Rate to what degree this workshop was relevant to your practice		1 (12%)	7 (88%)
Rate to what degree your learning needs were met			8 (100%)
Please rate the overall quality of the workshop	Not True	Partly True	True
The speakers communicated effectively with the group			8 (100%)
There was plenty of time for active participation		1 (12%)	7 (88%)
The venue and location were good		1 (12%)	7 (88%)
What was the most useful aspect of the workshop? <ul style="list-style-type: none"> • Assessing for disease progression • Psychological assessment and referral • How to follow up • Discussion about prostate cancer • There were many, informative on clinical care, monitoring and complications, psychological effects and management, advice – continence and ED • Support for patients with prostate or kidney care • Communicating plan of hospital • Learned about the current treatment and management of prostate and kidney cancers, and the new model of care to cancer survivor patients (the role of General Practice) 			

Pearcey Institute

An Economic Analysis of the use of Nurse-led Clinics for Patients with low-risk urological cancer.

Study based upon a Western Central Melbourne Integrated Cancer Services (WCMICS) supported project in 2016/17 at St.Vincent's Hospital, Melbourne (SVH) and Goulburn Valley Health (GVH)

Lead researcher: Ian Dennis, FACS, FAIM, FAICD

November 2016

Background to the Project



In March 2016, a project was established, with support from Western Central Melbourne Integrated Cancer Services, with the task of improving follow-up care for patients with low-risk urological cancers. The project aimed to improve follow-up care for patients with low risk urological cancers and enhance productivity of the Urology units at St Vincent's Hospital (SVH) and Goulburn Valley Health (GVH). This will include transitioning patients back to community care with improved clinical handover and communication with General Practice. This was to be achieved through trialling the provision of Nurse-led clinics supported by (partially) automated tailored patient care-plans, and coordinated services provided by the patient's GP, rather than more routine appointments with urologists and/or other specialists. A Project Working Group was formed to provide input and advice on project processes, resources and strategies, and to provide support, guidance and advice on the planning, implementation and evaluation of the project.

The clinical and patient outcomes of the project are reported on through WCMICS. As consumer representative, Ian Dennis offered the services of the Pearcey Institute to the Project to conduct an independent analysis of generic economic benefits that might accrue from the adoption of the nurse-led clinic approach and the use of IT supported care-plans.

Disclaimer

This report therefore represents the Pearcey Institute analysis alone, and is not necessarily representative of the viewpoint of WCMICS, St. Vincent's Hospital, Goulburn Valley Health, or of any individual member of the Project Group.

Project Working Group Membership

Ming Wong (Chair)	Project Lead / Urologist, St Vincent's Hospital
Anne Robinson	Operations Director, Goulburn Valley Health
Belinda Smith	Manager Operations Specialist Clinics, St Vincent's Hospital
Bradley Schuurman/Linden Hortle	Admin Assistant, St Vincent's Hospital
Cheryl Lancaster	Project Officer, Goulburn Valley Health
Dave Isaac	GP Liaison Consultant, St Vincent's Hospital
Donna Cowan	Cancer Research Nurse Coordinator, St Vincent's Hospital
Elizabeth Johnson	Tumour Stream Manager, Victorian Comprehensive Cancer Centre
Fiona Healy	Nurse Unit Manager Specialist Clinics St Vincent's Hospital
Ian Dennis	Consumer Representative
Jane Crowe	GP Representative, Deepdene Surgery, Balwyn
Jeremy Goad	Director of Urology, St Vincent's Hospital
Jon Emery	Herman Professor Primary Care Cancer Research, University of Melbourne
Linley Smith	Nurse Unit Manager, Oncology, Goulburn Valley Health
Lesa Stewart	Group Manager Cancer & Palliative Care Services, St Vincent's Hospital
Mia Percy	Urology Nurse, St Vincent's Hospital
Michelle Judd	Hume RICS
Michael Barton	WCMICS Representative
Molly Trethewey	Urology Nurse, St Vincent's Hospital
Nicole Lewis	Urology Nurse, Goulburn Valley Health
Sita Vij	Project Coordinator / GP Liaison, St Vincent's Hospital
Sonia Strachan	Urology Nurse, Goulburn Valley Health

Methodology

In order to ensure that this economic review has a wider relevance, it was decided that, rather than basing economic analysis on the specific costs relevant to the two trial sites (St. Vincent's and Goulburn Valley Health), that a cost base with relevance throughout Australia be used.

Accordingly data was obtained from the Australian Tax Office on the latest available (2013-14) actual pre-tax income for over 300,000 individuals at various grades of health professional relevant to this study.

Taxation statistics 2013–14 Individuals: Selected items, by occupation, gender and taxable income, 2013–14 income year

Occupation ¹	No of tax returns	Average gross income
2535 Surgeons	3688	\$521,002.21
2531 Generalist Medical Practitioners	27691	\$181,653.45
2543 Nurse Managers	4098	\$99,202.44
2544 Registered Nurses	288000	\$66,442.56

Estimates were then made of the impact on the costs of “deliverable hours”¹² of statutory superannuation and the normal associated wage costs common to all employment, in order to arrive at a median cost per hour for each grade of health professional, that could be used together with time allocations to calculate likely costs for the personnel cost of patient services within the study, and their alternates. Allowance has also been made for the impact on working hours of statutory annual leave, but no provision has been made for anomalies related to shift loadings etc., as it is assumed that the impact of these variations have been incorporated into median actual gross salaries received and reported in tax returns.

No provision has been made for any variation by speciality (e.g. oncologist v urologist), as this data was not available.

It was also assumed, for the purpose of the exercise, that accommodation and equipment costs would not be likely to have varied significantly regardless of who was providing such services, so any variation in facilities relevant to the patient services have been ignored.

Based upon this assessment the estimated median cost (to the health system) per hour for personnel is shown below. All calculations following are based on current cost, with no allowance for inflation or cost variation.

Occupation ¹³	Estimated cost per hour
2535 Surgeons	\$408.58
2531 Generalist Medical Practitioners	\$142.46
2543 Nurse Managers	\$77.80
2544 Registered Nurses	\$52.11

¹² Actual hours available to work during the normal working year

¹³ ANZSCO level 4

Discussions were held with practitioners conducting the nurse-led clinics, and other experienced personnel, to determine average consultation and preparation/admin/conclusion times relevant to this assessment.

From this it was determined that, whilst a consultant urologist might spend an average of 15 minutes per consultation, with a similar time spent reading and writing clinical notes, a nurse-led clinic was more likely to expend 40 minutes on the consultation with between 30 minutes and an hour on preparatory work to develop the care-plan, with the variation primarily dependant on the level to which the care-plan could be produced automatically from existing data-bases.

Proof of Concept

The project did not have adequate funds to provide a full test of care-plan automation. Accordingly a “proof-of-concept” approach was taken to produce MSWord based partially populated care-plans from the St. Vincent’s IMDT system. These were then to be populated with additional data by the nurse prior to the clinic.

Variation in the quality and quantity of the patient data held in the originating system was identified during the trial. This has been coupled with some minor difficulties in formatting the resultant word documents, (partially occasioned by the use of a “generic” care-plan in the test approach, rather than a “tumour-specific” approach with tailored data formats that would be more logical in an operational process).

The net effect has been that, during this trial, the amount of data needing to be added, together with adjustments for formatting problem during this process, has meant that the time saving has been negated, and it has in the opinion of the senior staff concerned been more efficient to create the care-plan document instead from a blank MSWord template, rather than to use the computer produced care-plans for the trial.

Based upon the efficacy of those data-rich care-plans requiring little or no additional data, it is estimated that a saving of 20 minutes per consultation, from the current 40 minutes, could be achieved should a fully operational, properly populated, data set be available from the originating patient data-base, and a more effective MSWord or PDF format interface for the production of the care-plan be developed.

Naturally, such saving would only occur in the preparation time prior to the first appointment, as subsequent appointments would draw upon the existing care-plan data. (It should also be noted that as Goulburn Valley Health use a different IT system to St. Vincent’s, no such saving was applicable to their patients during the trial, reinforcing the cost-efficiency concerns expressed below).

Capital cost

The above approach does not address the issue of the capital cost of the software concerned, and the issue that such cost would need to be repeated for each idiosyncratic hospital record system, if this approach were to be adopted by other hospital to improve patient care.

The provision of operational care-plans for the St.Vincent's system per above has been estimated at a capital cost of approximately \$20,000, with additional costs for the tailoring of specific additional tumour streams as they might be brought online.

We consider that to repeat this cost in all relevant hospitals to achieve the desired objectives would be both poor economics and poor ICT professional practice.

A better technical approach

It is worthwhile to consider, therefore, rather than what can be achieved by building on existing legacy systems in hospitals, what the optimum system to support truly portable care-plans might look like, and be most cost-effectively supported.

In this context a minor adaptation of already available and proven cloud-based clinical record systems would appear to offer a much better technical approach than piece-meal, hospital by hospital, tailored solutions requiring separate ongoing maintenance.

Consideration could be given to an interface with the national "My Health Record" system, which, seems to offer such a facility, however there are both serious concerns within the ICT profession as to its technical efficacy and design, and a low level of take-up by both patients/consumers and medical practices.¹⁴

It is reported that, as at March 2016, there were only 78,000 consumers and few practitioners using the "My Health Record" system.¹⁵

However since the adoption by the Government of an "opt-out" system, under which patients are enrolled unless they specifically refuse to do so, significant numbers of people have been enrolled (4.2 million by Nov 2016)¹⁶. No data has been released, to our knowledge, on whether practitioner take-up has increased accordingly.

The largest provider of independent cloud-based practice systems in Australia (Healthkit),¹⁷ launched in 2012 already operates in over 16,000 practices in Australia, (150,000 worldwide), operates in 40 countries, is headquartered in Melbourne, and includes the capacity for access by patients and to the patients clinical record via a simple interface from any PC with network capability by other approved health practitioners, such as the patients GP. This system is already available, free, to individual patients.

¹⁴ Final Review of PEHCR –Dec 2113, released May 2014 – Australian Department of Health

¹⁵ News Corp March 2015

¹⁶ Financial Review Nov 6th, quoting secretary of the Department of Health, Martin Bowles,

¹⁷ HealthKit is a global platform for patients and practitioners around the world, providing revolutionary clinical software tailored to the needs of practitioners of any profession in any country, along with services for patients tools to track your health.

We consider that adding the care-plan information to such a record would appear to offer a simpler ICT solution, with less upfront and ongoing cost, and one that would also be immediately available to any other hospitals trialling similar patient support approaches.

We make no judgement in this report on whether this would best be done in Victoria by using what some have described as a “cumbersome” Australian Government provided facility, judged by some ICT experts as out-of-date, now being mandated to encourage usage.

The alternative might be to consider using a private, award winning locally developed system, which has seen enthusiastic adoption by health practitioners world-wide.

As neither approach was able to be trialled properly during this project, it has, of course, been excluded from our calculations of potential benefit, other than as our estimation.

Cost equations

Time and cost estimates					
	Minutes				
Time	Initial visit admin/overhead	Subsequent visit admin/overhead	Consultation	Total for first consultation	Total for subsequent consultations
2535 Surgeons	15	15	15		
2531 Generalist Medical Practitioners	15	15	20		
Nurse led Clinic (manual careplan)					
2543 Nurse Managers	60	15	40		
2544 Registered Nurses	60	15	40		
Nurse-led Clinic, (automatic care-plan)					
2543 Nurse Managers	30	15	40		
2544 Registered Nurses	30	15	40		
Cost					
2535 Surgeons	\$102.15	\$102.15	\$102.15	\$204.29	\$204.29
2531 Generalist Medical Practitioners	\$35.61	\$35.61	\$47.49	\$83.10	\$83.10
Nurse led Clinic (manual careplan)					
2543 Nurse Managers	\$77.80	\$19.45	\$51.86	\$129.66	\$71.31
2544 Registered Nurses	\$52.11	\$13.03	\$34.74	\$86.84	\$47.76
Nurse-led Clinic, (automatic care-plan)					
2543 Nurse Managers	\$38.90	\$19.45	\$51.86	\$90.76	\$71.31
2544 Registered Nurses	\$26.05	\$13.03	\$34.74	\$60.79	\$47.76

The above table takes the median hourly costs by occupation from the ATO and consultation/admin overhead timings provided by health practitioners to this study, to calculate the median operational cost of initial and subsequent consultations by occupation of the service provider.

Structure of the service

The number of appointments for each patient, assuming survival, is structured as below, where “Standard” means the service is provided solely by the specialist, “Current” applies to the methodology currently used by the health providers in this trial, and “Alternative” means the theoretical “best-practice” approach advocated by the project steering committee.

Number of Appointments													
	Year												
	1	2	3	4	5	6	7	8	9	10	Total	Contact hours	
Standard													
Specialist	4	4	2	2	1	1	1	1	1	1	18	4.50	
NLC													
GP													
												4.50	
Current													
Specialist	4	4									8	2.00	
NLC		1									1	0.67	
GP			2	2	1	1	1	1	1	1	10	3.33	
												6.00	
Alternative													
Specialist	1										1	0.25	
NLC	3	4									7	4.67	
GP			2	2	1	1	1	1	1	1	10	3.33	
												8.25	

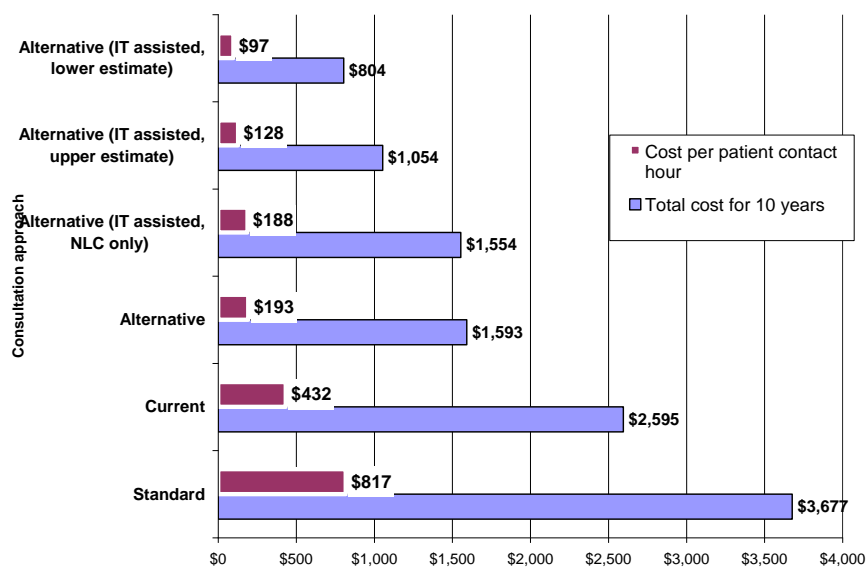
For economic purposes, the “Alternative” approach costing has also been calculated to reflect the initial use of computer generated care-plans, or the use of manual care-plans.

As no data was available, the value of the computer assisted ICT careplan in reducing overhead for specialists and GP’s, and for NLC after the first appointment, has not been included in the table following. It is estimated, however that a further ten year saving of \$500-750 could be anticipated, mainly from reducing the time for admin overhead for the personnel concerned.

We have reflected this estimate in the chart.

Detailed Cost of Appointments												
	Year											
	1	2	3	4	5	6	7	8	9	10	Total	Cost per Patient hour
Standard												
Specialist	\$817	\$817	\$409	\$409	\$204	\$204	\$204	\$204	\$204	\$204	\$3,677	\$817
NLC												
GP												
											\$3,677	\$817
Current												
Specialist	\$817	\$817									\$1,634	\$817
NLC		\$130									\$130	\$194
GP			\$166	\$166	\$83	\$83	\$83	\$83	\$83	\$83	\$831	\$249
											\$2,595	\$432
Alternative												
Specialist	\$204										\$204	\$817
NLC	\$272	\$285									\$558	\$119
GP			\$166	\$166	\$83	\$83	\$83	\$83	\$83	\$83	\$831	\$249
											\$1,593	\$193
Alternative (with IT assisted careplan)												
Specialist	\$204										\$204	\$817
NLC	\$233	\$285									\$519	\$111
GP			\$166	\$166	\$83	\$83	\$83	\$83	\$83	\$83	\$831	\$249
											\$1,554	\$188

Economic evaluation
Shared care Nurse-led clinic approach for Low risk urological patient post-operative



Conclusions

Economic value to the Health System

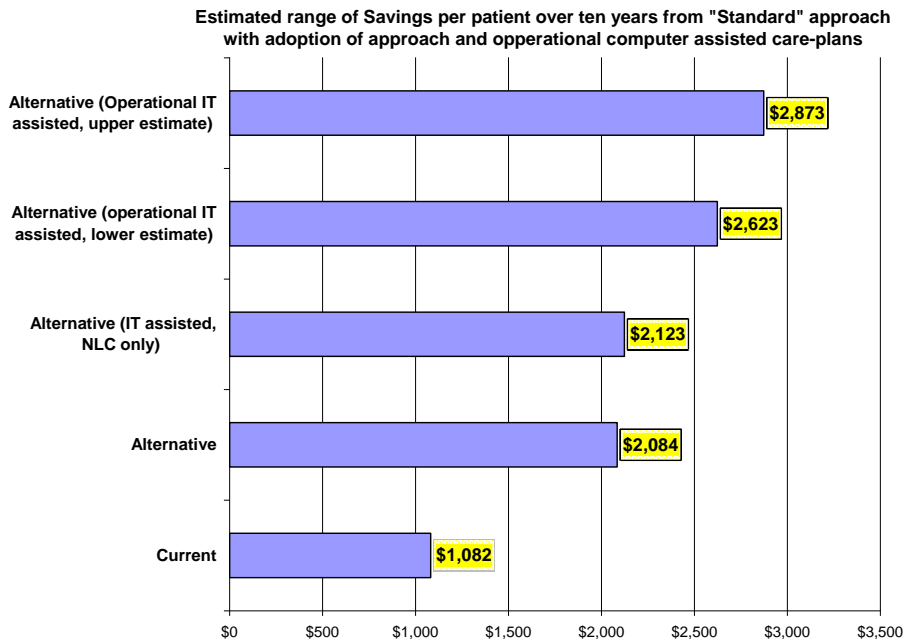
Clinical outcomes resulting from the adoption of Nurse-led clinics approach are outside the scope of this report, however it appears that the economic benefits of this approach are clear, and that the wider adoption of this approach incurs a number of ongoing fiscal savings.

The most significant cost-factors are

- a) the adoption of Nurse-led clinics as the primary approach to post-operative care (Alternative option)
- b) The availability of fully operational, portable, digital care-plans and supporting patient clinical records. (Alternative with IT assisted care-plans)

Overall total estimated cost savings over ten years from the “Standard” approach range from approximately \$2000-\$2700 per patient, and from the “Current approach” range from \$1000 to \$1700 per patient, dependant on the factors above.

In addition to these reduced costs of health provision, the approaches trialled allow for more time to be spent with patients, and arguably, a better use of the time of specialists by reducing their involvement in work that could be undertaken by Nurses and GP’s.



Economic Value to the Patient

For the patient, whilst the cost differentials above do not directly convey benefit, the additional consulting time contact hours provided to them, may allow more in-depth discussion, and thus more effective information on their post-operative needs.

In addition it is likely that patient waiting times for consultations may be reduced, as NLC appointments are specific to them, and the involvement of their local GP may also reduce travel time for them to attend consultations.

About the Pearcey Institute

Under its former name, CIIER, the Pearcey Institute was formed in 2004-5, with support from the Government of Victoria, to create a repository and think-tank for competently researched, up-to-date, and analysed data on employment, markets, revenue streams, R&D, processes and management methods, specifically focused on high technology, innovative, and emerging industries ICT and biotechnology.

The organization has conducted detailed analysis and reporting on Information Technology, and Reports on other high technology industries, for Government and industry bodies for over ten years.

The Pearcey Institute operates as a not-for-profit body, and is accordingly registered with the ATO and ACNC as a bona-fide tax-free research body. Its funds are allocated to continued research into the improvement of trend, forecasting, and indicative analysis for innovative industries and the digital economy.

From July 1st 2016, in recognition of the pioneering contribution to innovation made by the late Professor Trevor Pearcey, the formal name of the Association was changed to Pearcey Centre for Innovative Industry Economic Research Inc. also known as the Pearcey Institute.

About the lead researcher



Ian Dennis has served the IT industry for nearly forty years, in his roles as a software developer, software company and consulting company director, and through his various honorary positions. These include Chairman, Australian Computer Society – Victoria, National Director, Economic and Industry Policy, Australian Computer Society, and National Chairman, Pearcey Foundation Inc.

- He was awarded an Australian Design Award for software in 1987 and was made a Life Member of the Software and Services Industry Federation in 1989 for his services to industry.
- He served continuously on Federal or State boards of Information Technology trade bodies from 1981 to 1996, including serving as President of both the Australian Software Houses Associations and the Software and Services Industry Federation, and Director of the AIIA
- In 1993 he was awarded the Institute of Chartered Accountants in Australia - Microsoft Excel Award.
- In 1997 he was elected an honorary Fellow of the Australian Computer Society for significant contributions to the Australian information technology industry.
- In 1998 he founded, and is now Emeritus Chair of, the Pearcey Foundation.
- Ian is a United Nations approved International Trade consultant (UNCTAD/GATT) International Trade Centre, and a member of the Roster of Experts in Technical Consultancy Services, and
- A Registered Expert in Information Technology, Research Directorate DGXII, European Commission.
- And an accredited Gateway Team Leader for major Government ICT reviews
- He is Chairman and Executive Director of the Pearcey Centre for Innovative Industry Economic Research, (Pearcey Institute).
- He was the lead researcher and editor of the ACS ICT Statistical Compendium from 2008 to 2013 and is acknowledged as an expert on ICT economic statistics.

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Appendix J: Sustainability Plan

Sustainability Plan

Uro-Oncology Nurse-Led Clinics at St Vincent's Hospital and Goulburn Valley Health

Background

At St Vincent's Hospital Melbourne (SVH) and Goulburn Valley Health (GVH), the Uro-Oncology Nurse-Led Clinics (NLC) are one of the first nurse-led discharge clinics to be set up within these hospitals as part of a Western & Central Melbourne Integrated Cancer Service funded project. The clinic, run by a Urology Clinical Nurse Consultant, provides a comprehensive review of clinically stable prostate and kidney cancer patients including the development of a follow-up care plan to facilitate handover back to the patient's nominated GP for ongoing care. A rapid referral pathway has been established in order to ensure patients and their GPs have rapid access back to the Urology clinic if problems arise that cannot be managed within General Practice. The aim of the clinic is to discharge eligible patients with stable, controlled prostate and kidney cancer. Discharging this cohort of patients enables ongoing care to be undertaken within the community ensuring more accessible, holistic healthcare. It also enables more new and high risk patients to be seen by a Urologist in clinic, reducing patient wait times for an appointment. Patients seen in the nurse-led clinic are given more time to discuss ongoing issues and concerns with the Urology Clinical Nurse Consultant including the development of a comprehensive care plan for ongoing management and referral within the community. Majority of feedback received from patients and their GPs involved in the model of care has been positive as outlined in responses to the patient and GP satisfaction surveys and qualitative interviews conducted across SVH and GVH. Refer to the final project report for further details.

Efficiencies/Capacity Gains

SVH efficiencies are based on the nurse-led clinic pilot phase: 1 July – 30 November 2016. 122 urological cancer patients were discussed at St Vincent's Urology multidisciplinary team (MDT) meeting (prostate cancer = 36, kidney cancer = 18). During this 5 month timeframe, 189 new patients were seen in Urology clinic and there were 542 review appointments. 30 patients were seen in NLC and discharged back to their GP for ongoing care. As a result of the introduction of the nurse-led clinic, at least 30 appointments have been generated in just 5 months. Standard approach for Urologist review involved quarterly visits for 1-2 years following treatment, twice yearly review years 3-5 and annual review years 5-10. The implementation of the nurse-led clinic enables at least 25% more new/high risk patients to be seen in clinic over a 5 month period with an estimated potential 72 extra appointments generated per year through this model of care. This equates to 576 appointments generated over the standard 8 year review period. These numbers are also expected to increase as more patients are identified. This model of care prevents unnecessary review by a Urologist for patients with stable, controlled disease, shifting patient care back to GPs for ongoing monitoring and holistic care.

At GVH, 27 patients were discussed at the MDT meeting from July to end November 2016 (prostate cancer = 14, kidney cancer = 7). Numbers of patients seen in the Urology clinic at GVH were 145 new and 363 review appointments with a total of 530 patients during this period. 22 patients were seen in NLC and discharged back to their GP for ongoing care. This means that at least 22 appointments have been generated in 5 months. These numbers are expected to increase as the scope of the clinic is expanded and is expected to generate at least 52 appointments in the next 12 months and 416 appointments generated over the standard 8 year review timeframe.

Sustainability

A business case has been developed at SVH in order to sustain the nurse-led clinic beyond the timeframe of the project. A 'new ask' for additional Urology Clinical Nurse Consultant EFT will be submitted for consideration for 2017/18 budgets. Relevant managers and executives have been involved to date in order to support this process. The project findings will also be tabled at the SVH Cancer Executive Committee for discussion and analysed by the GVH Quality Unit in order to outline the benefits of the model of care and ensure sustainability. This will also provide an opportunity for scoping roll-out of the model of care to other units/tumour streams within the hospital. Other health services have already contacted SVH to obtain information on the project and are interested in rolling out a similar model of care within their health service in order to improve clinic throughput and specialist clinic efficiencies.

GVH will be conducting a comprehensive evaluation of the clinic's viability once a retrospective treatment map of all patients seen in clinic has been completed. This will be done in conjunction with GVH Quality Unit in early 2017. Part of this will look at the waiting list, incoming referral numbers, how the Telehealth clinics and the nurse-led clinics allow patients to move from the waiting list to clinic more efficiently compared to prior to the establishment of the clinic. General feedback from clinical teams, patients, GPs is that the clinic needs to continue, awaiting the benefits in reduction in waiting times for patients adding value to the organisation.

Budget

Project funding from Western & Central Melbourne Integrated Cancer Service will ensure continuation of the nurse-led clinic until the start of July 2017. Ongoing funding will need to be secured in order to ensure sustainability of the clinic beyond this timeframe. This includes salary costs for a one day a week Clinical Nurse Consultant position costed at approximately \$22,000 per health service. A proposal for a 'new ask' will be submitted at budget time in 2017. A matter for decision will also be tabled at the St Vincent's Hospital Finance and Investment Committee meeting in February 2017.

Recommendations

As part of the evaluation of the clinic, the project team will be looking at expanding the scope of the clinic to increase the number of patients seen and ensure specialist clinic efficiencies are maximised. Ideally, the clinic will continue to run weekly at St Vincent's Hospital and fortnightly at Goulburn Valley Health. Patients with stable, controlled kidney/prostate cancer can be well managed by GPs within the community with support from the hospital. This model of care enables improved patient access to care and clinical handover, and improves urologist capacity to see more new and high risk patients within specialist clinics. There is also potential for the model of care to be rolled out to other tumour streams within the hospital (e.g. colorectal/breast cancer).

Appendix K: Project Working Group Membership

Ming Wong (Chair)	Project Lead / Urologist, SVH
Anne Robinson	Operations Director, GVH
Belinda Smith	Manager Operations Specialist Clinics, SVH
Linden Hortle & Bradley Schuurman	Administrative Assistant, SVH
Cheryl Lancaster	Project Officer, Goulburn Valley Health
Dave Isaac	GP Liaison Consultant, SVH
Donna Cowan	Urology Cancer Nurse Coordinator, SVH
Elizabeth Johnson	Tumour Stream Manager, Victorian Comprehensive Cancer Centre
Fiona Healy	Nurse Unit Manager Specialist Clinics SVH
Ian Dennis	Consumer Representative
Jane Crowe	GP Representative, Deepdene Surgery, Balwyn
Jeremy Goad	Director of Urology, SVH
Jon Emery	Primary Care Cancer Research, University of Melbourne
Lesia Stewart	Group Manager Cancer & Palliative Care Services, SVH
Linley Smith	Nurse Unit Manager, Oncology, GVH
Mia Percy	Clinical Nurse Consultant, Urology, SVH
Michelle Judd	Project Officer, Hume RICS
Michael Barton	WCMICS Representative
Molly Trethewey	Clinical Nurse Consultant, Urology, SVH
Nicole Lewis	Uro-Oncology Clinic Nurse, GVH
Sita Vij	Project Manager / GP Liaison, SVH
Sonia Strachan	Prostate Cancer Specialist Nurse, GVH

Appendix L: Evaluation Plan

Improving Follow-Up Care for Patients with Low-Risk Urological Cancers Evaluation Plan

1. Engagement with GPs consumers

Dimensions of interest	Data collation / methods	Timeframe
Involvement of GP and consumer representatives	<ul style="list-style-type: none"> GPs/primary care organisations involved Consumers involved in the project to obtain feedback on processes and resources 	Data collation throughout project and report back to working group and WCMICS

2. Assessment of usefulness, effectiveness and appropriateness of model of care for key stakeholders

Dimensions of interest	Data sources / methods	Timeframe
Assess patient satisfaction in terms of quality of care, model of care and resources	<ul style="list-style-type: none"> Patient satisfaction survey (Survey Monkey) Survey to be sent out with care plan Phone calls to patients/GPs to ensure follow-up & 2 in-depth interviews conducted by Urology Nurse Collation of responses 	Data collation throughout project and report back to working group and WCMICS
Identify GP perceptions of the model of care, project resources and processes	<ul style="list-style-type: none"> Survey to be sent out with care plan/Survey Monkey Phone interviews with 4 GPs for qualitative feedback – conducted by Project Manager Collation of responses 	Data collation throughout project and report back to working group and WCMICS
Obtain feedback from clinicians and admin staff on model of care and project resources and processes	<ul style="list-style-type: none"> Informal input via face-to-face meetings/email Set of questions to obtain feedback 	Data collation throughout project and report back to working group and WCMICS
GP education and feedback	<ul style="list-style-type: none"> GP evaluation from CPD workshop facilitated as part of the project to improve GP knowledge and understanding of aspects of follow-up cancer care Development of suite of Urology HealthPathways including prostate cancer follow-up pathway 	Data collation throughout project and report back to working group and WCMICS

3. Nurse-led clinic, ongoing issues, use of rapid access pathway and staff capacity to manage queries

Dimensions of interest	Data sources / methods	Timeframe
Collation of patient data: Number of patients seen in nurse-led clinic, interpreters required, discharged back to GP, GP opt-out letters received, care plans sent etc.	<ul style="list-style-type: none"> Data collection by project administrative assistants at each site 	Data collation throughout project and report back to working group and WCMICS
Number of patients referred back to the Urology Unit following discharge from specialist clinic	<ul style="list-style-type: none"> Data available within timeframe of project 	Data collation throughout project and report back to working group and WCMICS
Collation of patients' ongoing physical/psychosocial issues	<ul style="list-style-type: none"> Collation of responses to screening tools administered at time of nurse-led clinic Distress Thermometer International Index of Erectile Function (prostate cancer only) 	Data collation throughout project and report back to working group and WCMICS
Nurse capacity to manage GP/patient queries and clinic workload/development of care plans	<ul style="list-style-type: none"> Obtain feedback from project team 	Data collation throughout project and report back to working group and WCMICS

4. Impact on Urology clinic throughput

Dimensions of interest	Data sources / methods	Timeframe
Economic evaluation - impact of model of care on Urology clinic throughput at SVH and GVH	<ul style="list-style-type: none"> Baseline data – GVH/SVH Estimates of nurse/specialist time saved Data on median nurse/specialist cost saved Feedback from patients and GPs 	Data collation throughout project and report back to working group and WCMICS
Sustainability Plan	<ul style="list-style-type: none"> Ensure model of care is embedded into standard practice beyond timeframe of project Business case to executive committees at SVH and GVH 	Data collation throughout project and report back to WCMICS