

## Quality Improvement Report

# Teleoncology for Indigenous patients: The responses of patients and health workers

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### Abstract

**Problem:** Townsville Cancer Centre provides video-consultation (VC) services to patients in rural/remote regions of North Queensland in order to improve access to specialist cancer care. The experience and responses of indigenous patients using this service have not been studied. Our objective is to assess the level of satisfaction and the responses of Indigenous patients, their families and health workers (HWs) to VC and such teleoncology service.

**Design:** Descriptive study, using semistructured interviews.

**Setting:** Tertiary referral centre (Townsville Cancer Centre) and various rural and remote towns in Queensland.

**Key measures for improvement:** Satisfaction levels of Indigenous patients, their family members and Indigenous HWs with various aspects of the teleoncology service.

**Lessons learnt:** Our evaluation suggests that teleoncology is an acceptable model of care for Indigenous patients, with high levels of satisfaction expressed from patients, families and HWs. Health professionals involved with providing this service need to be adaptive to the needs of individual patients and local communities in order to provide culturally appropriate care. Formal skills training for staff, effective communication between specialist and local HWs, and informed consent procedures are essential to maintain safety of practices. Strategies for change are:

- Mandatory informed consent procedure for all patients offered with VC.

- Formalised competency training for staff in skills essential to maintain safe practices in teleoncology.
- Clear clinical documentation to facilitate improved communication in patient management between medical staff at main centre and distant sites.
- Further efforts in promotion, education and support for staff to participate in telemedicine.

**KEY WORDS:** cancer care, health services access, Indigenous health, rural/remote service, telehealth/telemedicine.

### Context

In Australia, poorer survival outcomes for Aboriginal and Torres Strait Islander (hereafter referred to as Indigenous) people with cancer compared with their non-Indigenous counterparts have been well documented.<sup>1–3</sup> Indigenous people with cancer are likely to have less cancer treatment, more delays to surgery and interrupted treatment patterns.<sup>4</sup> They have lower survival, even after adjustment for cancer stage at diagnosis and greater rate of co-morbidities.<sup>4</sup> Additionally, poorer cancer survival has been linked to rural and remote areas of Queensland.<sup>5,6</sup>

Reduced access to and utilisation of medical services by Indigenous cancer patients, especially those living in rural and remote areas, have been implicated as some of the reasons for their poorer survival.<sup>7–9</sup> One method that could be used to overcome these issues is the telemedicine model. This model has the potential to enhance access to specialist medical care by overcoming geographical barriers, as well as possibly improve clinic attendance rates and treatment adherence.

The Townsville Cancer Centre provides video-consultation (VC) services to patients in rural and remote regions of North Queensland and the Gulf of Carpentaria in order to improve access for these areas to specialist cancer care.<sup>10</sup> In addition, chemotherapy can be administered to patients at rural hospitals that have

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appropriate staff and facilities under distant supervision of the medical oncologist at the main Townsville centre. Family members, Indigenous health worker (HW), nurse or local medical officer usually accompany the patient at the remote site during VC. VCs might be for new referrals, reviews, monitoring of treatment or routine follow-up.

Previous studies have established the benefits and satisfaction from patients and HWs of using such models of teleoncology.<sup>11-14</sup> One study from our own centre reported high levels of satisfaction among 50 patients and 18 HWs who participated in VCs with the oncology service.<sup>11</sup> Another study from Canada compared patient satisfaction with VC versus face-to-face (F2F) consultation and found no difference.<sup>13</sup> However, no Indigenous patients were included in these studies, and responses or experiences of Indigenous patients using VC models have so far not been described. Because cultural factors are known to influence the way in which Indigenous patients use mainstream health services,<sup>15</sup> acceptance of the teleoncology model by non-Indigenous populations cannot be extrapolated to Indigenous groups.

## Outline of the problem

We set out to assess the satisfaction level and perspectives of Indigenous patients, their families and HWs working with Indigenous patients on VC and the teleoncology service.

## Key measures for improvement

The following factors are seen to be essential in maximising satisfaction of patients and HWs using a teleoncology service:<sup>16</sup> (i) efficient coordination of clinics; (ii) smooth functioning videoconferencing equipment and connectivity; and (iii) Adequate nursing, medical and psychosocial support for patients at distant sites.

Accordingly, we sought to assess levels of satisfaction and feedback from Indigenous patients, their family members and HWs on these aspects of our teleoncology service via an interview and questionnaire process.

## Processes of gathering information

Indigenous patients who had participated in VC with a medical oncologist between January 2007 and July 2011 were identified via Townsville Cancer Centre's oncology information management database. These patients, their nominated family member/s and HWs who had accompanied them during VCs were invited to take part in semistructured interviews using a mix of open-ended and graded-responses questions. Interviews were conducted F2F via telephone or videoconference according to feasibility and interviewee preference. All

interviews were conducted by a single interviewer to ensure uniformity of questioning. Patients and family members were asked to record responses on a 5-point scale of agreement to statements relating to four themes: quality of VC (theme 1), rapport with specialist (theme 2), benefits of VC over F2F consultation (theme 3), and satisfaction with overall care received via teleoncology model (theme 4). Interviewees were also given the opportunity to provide open responses to each theme.

Responses from patients and family members were analysed and presented together because of small numbers. Types of response (do not agree to strongly agree on a 5 point Likert scale) for all questions within a theme were totalled to calculate an overall percentage of agreement for each theme.

Interviews with HWs consisted of seven open-ended questions. Responses from HWs were analysed separately by two investigators performing thematic analysis and then combined to develop an overall interpretation of the data.<sup>17</sup>

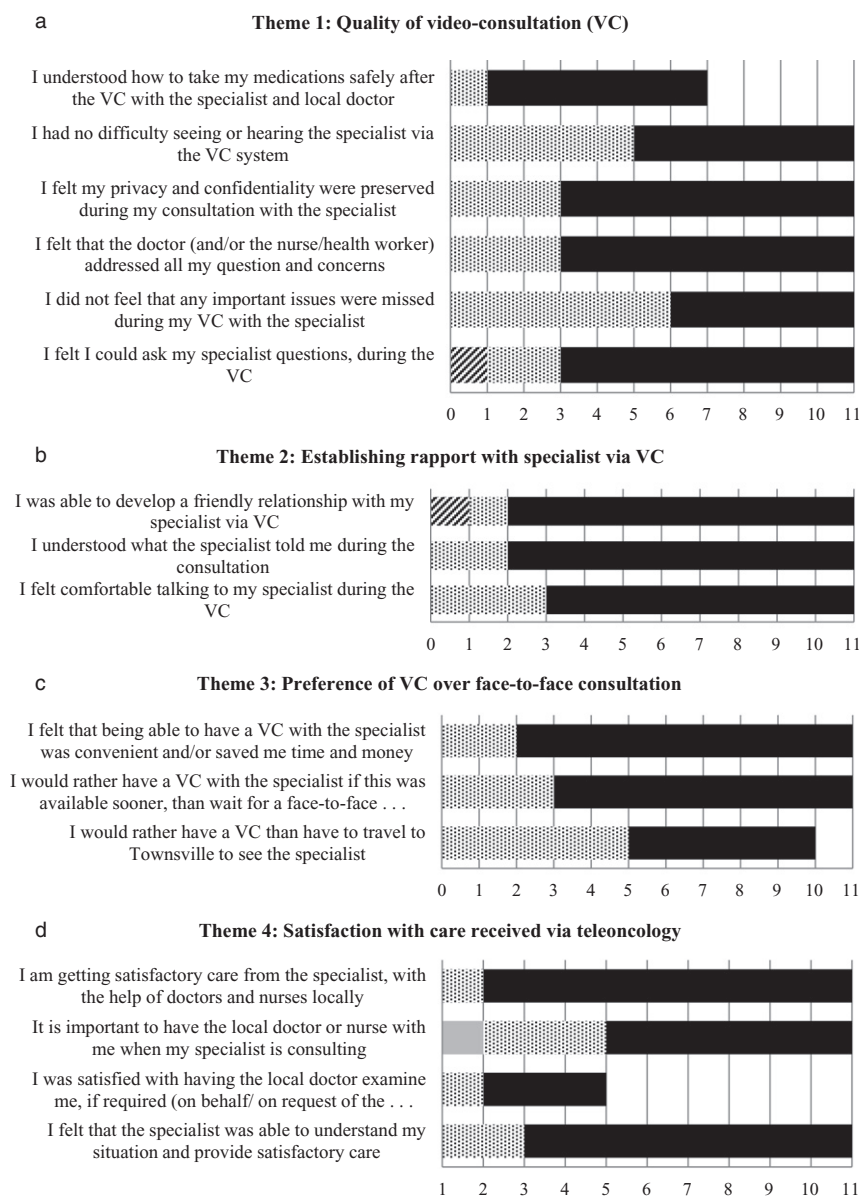
## Analysis

Twenty-three Indigenous patients participated in VC between 2007 and 2011. At the time of the evaluation, 13 were deceased, 9 were interviewed, and 1 could not be contacted. Only two family members were interviewed, as the majority declined or could not be contacted. All six HWs who were identified were interviewed. They consisted of: one doctor, one clinical nurse consultant, two registered nurses, one Indigenous liaison officer and one senior support officer.

Patient and teleoncology characteristics are presented in Table 1.

TABLE 1: Patient and teleoncology characteristics

Patient and teleoncology service characteristics	
Median age (range)	59.3 (44–69)
Sex ( <i>n</i> , %)	
Men	3 (33)
Women	6 (66)
Indigenous status ( <i>n</i> , %)	
Aboriginal	7 (77)
Torres Strait Islander	2 (22)
Median distances (range, km)	
From place of residence to Townsville	800 (65–1286)
From place of residence to nearest video-conference unit	9 (1–383)
Teleoncology service features: ( <i>n</i> , %)	
Patients who also received chemotherapy at distant centre	4 (44)
Patients who have also had a face-to-face consultation	7 (77)



**FIGURE 1:** Responses to individual questions according to each theme. (x-axes show cumulative number of responses to total n = 11). (■) strongly disagree; (▒) disagree; (▤) neutral; (▥) agree; (■) strongly agree.

### Responses from patients and family members

The responses of patients and family members to questions within the four themes are presented in Figure 1. The percentage of responses rating agreement (strongly agree or agree) to themes 1, 2, 3 and 4 were 96%, 97%, 97% and 87%, respectively.

One family member reported dissatisfaction with the care provided by the medical staff at their local site (Fig. 1d). Two patients reported that it was not important to have a local doctor/nurse sit in with them at their local site during the VC (Fig. 1d).

In response to an open-ended question regarding receiving or discussing bad news (in relation to their cancer), all interviewees indicated that they had no preference whether this occurred via VC or F2F consultation.

All interviewees indicated that they were satisfied with VC overall and would be happy to have it again.

### Responses from HWs

Summary of responses from HWs are recorded in Table 2. HWs described benefits of VC and teleoncology not only for patients and their families but also in adding educational value for themselves and in fostering closer working relationships with the specialist team.

### Overall responses

All groups interviewed indicated an overall preference for VC over F2F consultation, with reasons quoted including reduced waiting time, cost, burden of travel and removal from local supports.

**TABLE 2:** Responses of health workers (HWs) involved with video-consultation (VC) for Indigenous patients

Questions	Summated points from HWs' responses
How do you feel about safety of chemotherapy delivery at a distant site, in the teleoncology model of care?	<ul style="list-style-type: none"> <li>• Most felt that administering chemotherapy at their local site was safe</li> <li>• Regular and effective communication (via written correspondence, email, phone calls) ensured HWs felt well supported by the specialist at main site</li> <li>• Skills and competency training for nurses in administering chemotherapy are important</li> </ul>
How do you feel about VC compared with F2F consultation?	<ul style="list-style-type: none"> <li>• All felt that VC was a very valuable service as it saved time and costs of travel for the patient, their family and the health system</li> <li>• VC allowed local family members to be involved in the specialist consultation</li> </ul>
What are the benefits for patients in the teleoncology model of care?	<ul style="list-style-type: none"> <li>• VC allowed patients to receive treatment close to home without being removed from their community and family supports</li> <li>• HWs reported good rapport established between the patient and the specialist despite initial patient 'shyness' at first VC episode.</li> </ul> <p>(Responses from two questions combined because of overlap and similarities in responses)</p>
What are the benefits for local HWs in the teleoncology model of care?	<ul style="list-style-type: none"> <li>• Educational benefits and opportunity for HWs to acquire new skills</li> <li>• HWs felt actively involved in the patient's care</li> <li>• Fostered a closer working relationship between HWs and specialist enabling a collaborative approach in caring for the patient</li> </ul>
What are the problems faced/potential problems you perceive with this model of care?	<ul style="list-style-type: none"> <li>• Most report no problems (one centre had initial IT operational problems that were soon rectified)</li> <li>• Some commented that other HWs' (who have not experienced using VC) attitudes of 'resistance to new technology and a novel way to care for patients' might limit the adoption of this model of care</li> </ul>
Do you feel there are any medicolegal concerns with this model of care?	<ul style="list-style-type: none"> <li>• Most reported no concerns</li> <li>• Comments obtaining informed consent from patient and clear guidelines for when to transfer patient to main centre are important</li> </ul>
Should this model of care continue to be provided for Indigenous cancer patients?	<ul style="list-style-type: none"> <li>• All responded 'yes'</li> <li>• All agree that it is an appropriate model that is well received by Indigenous patients</li> </ul>

F2F, face-to-face; IT, information technology.

## Interpretation/lessons learnt

While acknowledging the limitations of our evaluation's small sample size not being entirely representative, it is the first to report responses of Indigenous patients, their families and their HWs to VC and teleoncology service. Furthermore, it is the first to describe VC combined with chemotherapy treatment for patients at a distant site within a comprehensive teleoncology model of care.

Our evaluation has found high levels of satisfaction with VC in oncology similar to other studies examining this in non-Indigenous cohorts.<sup>11-14</sup> Our results indicate that teleoncology can be an effective tool to reach Indigenous communities who traditionally have been distanced from specialist medical services because of geographical or cultural barriers.

Not all patients felt that it was important to have a doctor/nurse sit in with them at the local site during VC with the specialist. One patient specifically

requested not to have a local HW sit in during the VC in order to preserve privacy. On the other hand, all HWs interviewed felt their role in the VC helped the patient's understanding of the discussion with the specialist. This highlights the issues surrounding informed consent and patient confidentiality in the practice of telemedicine. Furthermore, the differential responses from patients and HWs on this issue serve as a reminder to health care professionals to avoid succumbing to assumptions and biases associated with treating Indigenous patients.

Another benefit of the teleoncology model demonstrated by our evaluation was in enhancing partnership between local HWs and specialist teams. The promotion of this shared-care model optimally delivered quality care to Indigenous cancer patients 'at their doorstep'. Formal skills training and effective communication between specialist and local HWs are essential to maintain safety of practices.

Medicolegal concerns and lack of experience with VC methods might be factors causing hesitancy of physicians to participate in this model of care. The fact that none of the HWs in our evaluation experienced or identified any medicolegal issues in their involvement with teleoncology might serve as reassurance to other physicians.

## Strategy for change/next steps

This small evaluation suggests that our model of teleoncology is acceptable to Indigenous patients, with high levels of satisfaction expressed from patients, families and HWs. To further improve the acceptability and satisfaction with this service, we propose the following in the future:

1. All patients offered VC should be consented to the process of VC, the presence of any third parties during the VC, the recording of images or audio content (if needed), and the option to request a F2F consultation at any stage.
2. All physicians and health staff participating in VC and the teleoncology service should undergo formal competency training in communication skills, basic operational skills for VC equipment and cultural awareness.
3. Dedicated staff member (telehealth coordinator) to ensure efficient operation of teleoncology clinics and coordination between main centre and distant sites.
4. Clinical documentation including summary of assessment and management plan after each VC episode need to be recorded and kept at both distant and main sites.
5. Further efforts in promotion, education and support for physicians are needed to overcome physician barriers in participating in telemedicine.

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