A regional programme to improve skin cancer management

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ABSTRACT

BACKGROUND AND CONTEXT: In 2008, public specialist and general practice services in Canterbury were unable to manage demand for skin cancer treatment. Local clinicians decided the solution was to develop a see-and-treat skin excision clinic staffed by plastic surgeons and general practitioners (GPs), and the introduction of subsidised excisions in general practice. This paper describes the collaboration between clinicians, managers and funders and the results and quality management measures of these initiatives.

ASSESSMENT OF PROBLEM: There is an increasing incidence of skin cancer. GPs in Canterbury were unable to meet increasing demand for skin cancer treatment because some lacked confidence and competence in skin cancer management. There was no public funding for primary care management of skin cancer, driving patients to fully funded secondary care services. Secondary care services were at capacity, with no coordinated programme across primary and secondary care.

RESULTS: The programme has resulted in a greater number of skin cancers being treated by the public health system, a reduction in waiting times for treatment, and fewer minor skin lesions being referred to secondary care. Quality measures have been achieved and are improving steadily. Development of the programme has improved working relationships between primary and secondary care clinicians.

STRATEGIES FOR IMPROVEMENT: The strategy was to facilitate the working relationship between primary and secondary care and increase the capacity for skin lesion excisions in both sectors.

LESSONS: Skin cancer management can be improved by a coordinated approach between primary and secondary care.

KEYWORDS: Continuing medical education; general practice; minor surgical procedures; referral and consultation; skin neoplasms

Background and assessment of problem

Cutaneous malignancies are the most common cancers found in primary care.[1] In New Zealand, general practitioners (GPs) have traditionally excised skin cancers in their surgeries, funded largely by patients. Standards are usually not monitored except by audit of individual doctors, with training generally being informal 'peer to peer' learning, with occasional continuing medical education activities.

Studies in New Zealand[2,3] and other countries[4–7] have shown that skin specialists diagnose and excise skin cancers better than GPs. GPs may unnecessarily remove benign lesions or, because of cost barriers for some patients, refer minor lesions to hospital clinics, placing a high demand on these services.

The increasing incidence of skin cancers has led to a greater demand for hospital management.[8,9] By 2008, waiting times for excision of skin cancers at Christchurch Hospital, Canterbury, was 11–12 months and there was no public funding for excision of lesions in primary care.

Strategies for quality improvement/change

The aim of the programme outlined in Table 1 was to increase access to skin cancer management in Canterbury, to overcome barriers to GPs per-

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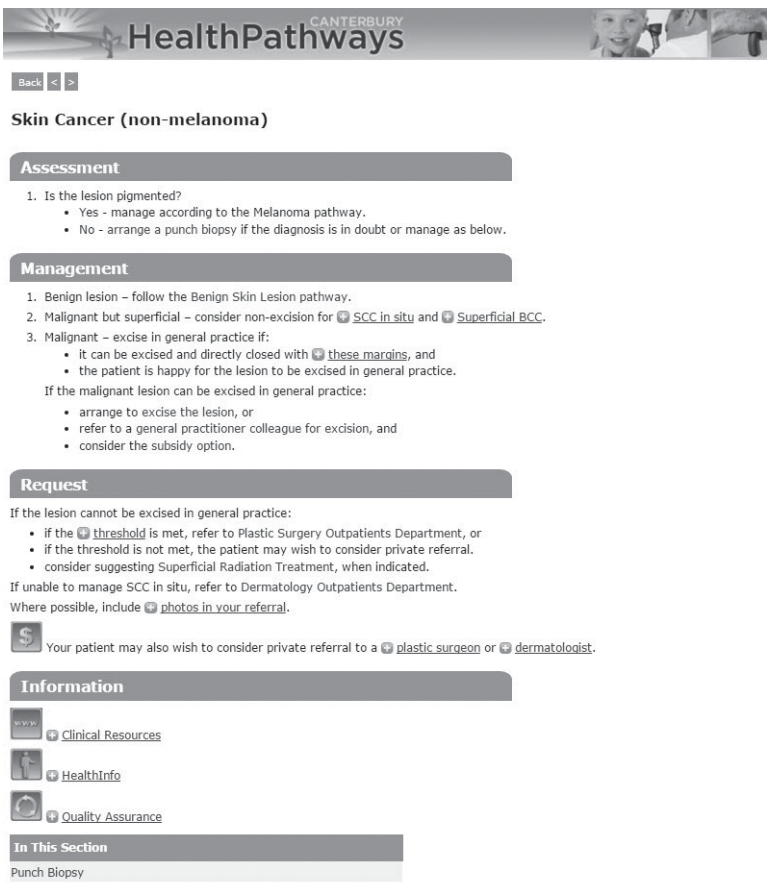
forming skin lesion excisions by increasing theoretical and practical expertise,[10] to provide more public funding for management of skin cancers in primary care, and to increase the capacity for skin cancer excision in secondary care.

GPs were given the opportunity to attend a practical training programme at a see-and-treat clinic at a local hospital, which involved performing skin excisions and punch biopsies under the supervision of plastic surgeons. This experience was anticipated to lead to more lesions being excised in primary care, and ultimately to lead to a reduction in the number of minor lesions referred for specialist care. The long-term objective was to have a skilled practitioner in each general practice who could provide advice to GPs in their practice or accept referrals for skin lesion excision from other GPs.

Figure 1. The clinical pathway for excision of skin lesions on the HealthPathways website



Implementation of the programme was facilitated by a group called the Canterbury Initiative.[11,12] Work groups of GPs and plastic surgeons were formed to identify barriers to increased skin cancer management and to develop pragmatic solutions. This included formulation of a clinical pathway for inclusion on a locally developed website called HealthPathways.[13]

This pathway reflected local services and resources and included the following information:

- non-surgical treatment options and biopsies that can be performed in primary care (Figure 1);
- an algorithm for pre-hospital care of non-melanoma skin cancers through to direct closure of excisions by GPs;
- the minimum referral information to allow consistent triage;
- criteria for postoperative follow-up, especially for primary melanoma; and
- step-by-step details, colour photographs and videos of skin cancer excisions.

HealthPathways was developed at the same time as an electronic request management system (ERMS) that transferred structured referral information to a central database and then to community and hospital services. The referral form on the ERMS contains a link to the relevant clinical pathway on HealthPathways containing reminders of key referral criteria. Colour photographs of lesions can be attached to the electronic referral.

The next step in system redesign was development of the see-and-treat clinic. Collaboration between GPs and plastic surgeons was essential for development of this clinic and allayed initial concerns from secondary care that resources would be diverted to primary care. New investment, therefore, focused primarily on community-based services to increase the number of lesions excised in primary care and thus the capacity of the whole system.

A publicly funded subsidy for excision of appropriate skin cancers in primary care was introduced at the same time as development of the see-and-treat clinic. This subsidy was necessary, as a

proportion of patients were referred to secondary care because they could not afford the cost of minor surgery in primary care. The threshold for referral was defined so that management of patients with minor lesions remained with their GP. The subsidy criteria were diagnosis of an invasive skin cancer suitable for standard elliptical excision with suturing, and only for patients who could not afford the fee. For melanomas, this involved GPs excising the lesion and then referring the patient to secondary care. GPs were expected to be able to identify benign lesions not accepted for the subsidy.

Payment for excision of lesions was at a single rate, regardless of the complexity or depth of the excision, with each practice allocated the subsidy at an annual rate of 1 per 200 enrolled patients. As long as the audit performance of the practice was adequate, practices using their allocation were able to claim more subsidies, up to a maximum of 2400 claims each year for the entire Canterbury region. Claims for subsidies were made using an electronic portal linked to the practice management software.

Organisation of the see-and-treat clinic

The training programme put in place was embedded in the daily practice of the see-and-treat clinic and involved guidance on the following procedures: review of referral letters, skin cancer diagnosis and non-surgical management, marking excisions, local anaesthesia, preparation of equipment, excision of lesions, skin closure, wound dressings, and postoperative care.

The clinics used a consultant-led system, in which plastic surgeons triaged patients and carried out the first assessment. Lesions requiring surgery under local anaesthesia were marked by plastic surgeons and patients were then assigned to a surgical registrar or GP. This allocation was based on the complexity of the required procedure and the clinician's level of surgical expertise. Plastic surgeons were available to provide advice or guidance in any of the adjacent procedure rooms.

The expertise of the GPs in diagnosing and managing skin lesions was expected to be broader than their surgical expertise, with the level of training they needed dependent on their previous experience. The GPs attended six half-day clinical sessions over a three-month period, and performed excisions at their level of confidence and competence. There was no expectation of reaching a specific level of competence, nor any formal assessment. The training process was facilitated, where possible, by the GPs working with the

WHAT GAP THIS FILLS

What we already know: Hospital services alone cannot meet the increasing demand for skin cancer management. Previous studies have questioned the quality of general practice skin cancer management.

What this study adds: General practitioners were able to better manage patients with skin cancers in their own practices after carrying out skin lesion excisions and receiving training on surgical techniques with plastic surgeons at see-and-treat clinics. This programme led to more skin lesions being excised in general practice, a reduction in referral of minor skin lesions for specialist care, a decrease in hospital waiting times, and the added benefit of better working relationships between primary and secondary care clinicians.

Table 1. Components required for development of the skin lesion excision programme

Component	Details
Clinical pathway for skin cancer on HealthPathways	Developed by clinical work group
Online education resource on skin lesion excision	HealthPathways
Electronic referral with photographs	ERMS
Triage to GP excision, see-and-treat clinic or traditional outpatient clinic	Carried out by secondary care clinicians
Secondary care–based see-and-treat clinic	Joint staffing between primary and secondary care
GP education at see-and-treat clinic	Practical supervision provided by plastic surgeons
Publicly subsidised primary care excision of skin cancer	Administered by the Canterbury Initiative and Planning and Funding, Canterbury District Health Board
Establishment of a GP liaison	Continuous audit, feedback and programme support
Audit and feedback of histology	Carried out by the Canterbury Initiative and GP liaison
Follow-up of all primary skin cancer in general practice	Agreed follow-up schedules on HealthPathways

ERMS Electronic request management system

GP General practitioner

Figure 2. Time-related changes following introduction of the subsidy programme: (a) the number of lesions excised; and (b) the complete excision rate of all lesions and malignant lesions treated

Figure 2a

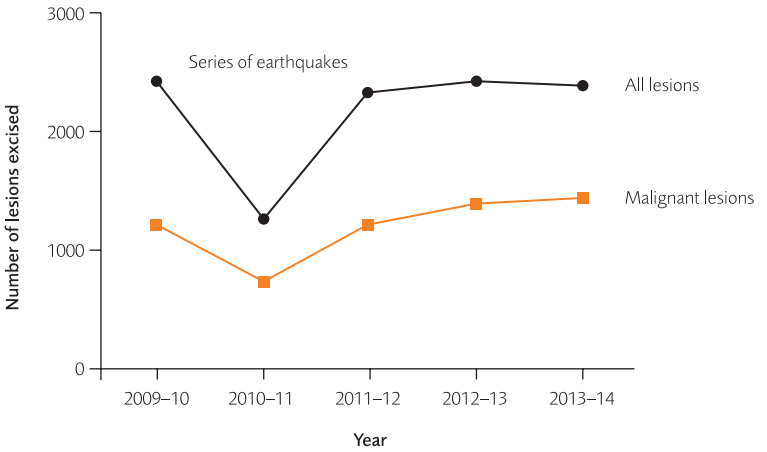
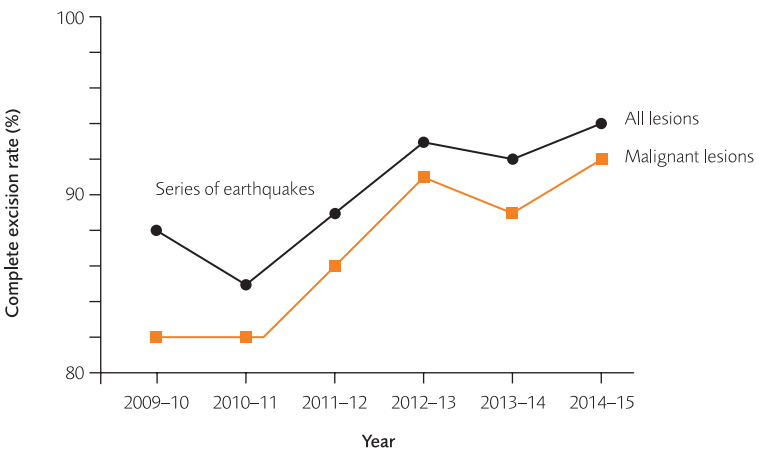


Figure 2b



same consultant. Payment for work at the clinic was at a set rate, with The Royal New Zealand College of General Practitioners' Management of Professional Standards (MOPS) points being awarded at the completion of training.

Audit of the programme and feedback to general practices

The subsidised service has been audited annually, with a focus on patient outcomes. A GP liaison was appointed to provide feedback to individual practitioners on referral quality and the outcome of their excisions within the subsidy programme. GPs were advised of their individual results, relative to target levels and levels recorded for all GPs in the Canterbury region. The GP liaison contacted GPs who had provided insufficient referral information or where there was an opportunity to improve their surgical practice.

Changes in skin cancer management since introduction of the programme

Since its establishment in November 2008, 197 GPs have attended the see-and-treat clinic. This represents approximately 40% of GPs in the region, with at least one from most practices. The number of GPs claiming the subsidy has increased gradually, from 300 in 2009 to 348 in 2013 (70% of GPs), while 52 GPs now accept referrals from their colleagues in other practices. GPs who have not attended further training are achieving equal patient outcomes, supporting our approach of not accrediting doctors who already had good skills and experience.

Historically, the number of non-melanoma and melanoma skin cancers requiring treatment in Canterbury each year is approximately 7000 and 220, respectively. The total number of lesions excised annually under the subsidy has increased gradually to over 2400, with a small increase in the proportion of malignant lesions excised (Figure 2a) and improvements in the complete excision rate of all lesions and malignant lesions (Figure 2b).

Clinical audits have shown that since the introduction of the programme, GPs refer fewer patients to secondary care with lesions in non-sensitive areas suitable for excision and closure. This has resulted in increased complexity of the case-mix, with a greater proportion of referrals now being for skin cancers of the head and neck, or those requiring reconstruction. The decreased demand for secondary care treatment has resulted in a marked reduction in waiting times, from 11–12 months in 2008 to 3–4 months in 2014. Treatment by a GP is generally within one week. Use of HealthPathways for clinical guidance on skin cancers or as an educational tool in the training programme has increased steadily (Figure 3).

Lessons and messages

The lessons gained from development of the skin excision programme can be viewed from several different perspectives. From the perspective of health care delivery, the programme has increased the capacity to treat skin cancers in the Canterbury region and has resulted in upskilling of GPs in management of these malignancies. The quality of referrals to secondary care has improved as a consequence of the educational and training programme and feedback on referral quality. This has resulted in more transparent triage of cases, so only patients requiring specialist services are treated in secondary care. A comparison of the subsidised programme and the see-and-treat clinic in terms of the types of lesions excised, complete excision rates, and cost-effectiveness is not possible because of the different size and site of the cancers and the complexity of management of patients attending the clinic.

From the patient perspective, the programme has increased access to care on a more equitable basis and reduced waiting times and the number of visits to hospital. From the perspective of GPs, the programme has provided practical training on minor surgical techniques and online information on skin cancer management relevant to their daily clinical practice. These initiatives have overcome many of the barriers GPs may have previously experienced when excising skin lesions. For plastic surgeons, the programme has optimised the triage process, with fewer benign and pre-invasive skin lesions now being sent for specialist care. This has freed-up clinical capacity to treat more serious skin cancers. An added benefit has been the improvement in working relationships between primary and secondary care clinicians, as a result of collaboration in drafting the clinical pathways and working together at the see-and-treat clinic.

Comparison with similar initiatives

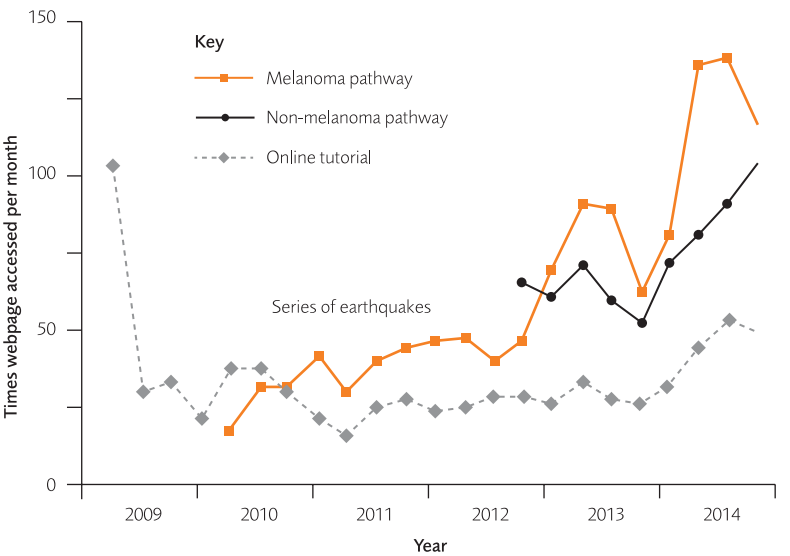
How has the programme in Canterbury compared with similar initiatives in other centres? The see-and-treat approach to clinical care is an efficient management option for selected patients of appropriate complexity with a single hospital attendance.[14] A literature search identified only four reports of see-and-treat clinics for skin cancer excisions.[15–18] All these clinics were described as efficiently using limited resources and as being convenient for patients. Unlike the situation in Canterbury, GPs did not participate in the clinics reported in the literature. Our annual audits show inclusion of a training programme within a see-and-treat clinic, combined with a quality assurance programme, has improved clinical competence for skin lesion excision in primary care.

The programme has similarities with the entity of GP(s) with special interests (GPwSI),[19–21] but differs in that its main objective was to increase the overall competency of skin lesion excision in primary care, rather than establishing a select group of specialised GPs. This general upskilling of GPs has achieved a comparable standard of excisions to those reported for several GPwSI services.[22–24] The advantage of our programme is that it provides a wider base of competent practitioners, more convenient access to care for patients, and avoids the costs of accrediting doctors.

Challenges in implementation

As with all new initiatives, the programme experienced several challenges, the most difficult

Figure 3. Time-related changes in access of sites on HealthPathways related to skin lesion excision. The time points represent the mean number of visits per month over a three-month period



being redistribution of services between primary and secondary care and re-setting of hospital triage levels. The training sessions proved time-consuming for plastic surgeons, while the ability of rural GPs to participate in the clinics has proved difficult. The number of patients referred to a GP in another practice has remained low at 3.5% of total referrals for skin excision.

Key principles underpinning success

What were the key principles for the success of the programme? Most importantly, the programme was patient focused and initiated by consensus of primary and secondary care clinicians, with the support of hospital management and funders. This collaboration led to improved working relationships between health care sectors. Practical training on skin cancer management and an ongoing audit and quality improvement programme was necessary to achieve and maintain standards. We consider this ongoing feedback as possibly of equal or greater benefit than the training programme for achieving clinically acceptable standards for skin excisions. HealthPathways, by acting as a change management tool, was another major driver for development of the programme.

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COMPETING INTERESTS
None declared.