




Factors influencing current low-value follow-up care after basal cell carcinoma and suggested strategies for de-adoption: a qualitative study*

S. van Egmond ^{1,2} M. Wakkee ¹ A. van Rengen,³ M.T. Bastiaens,⁴ T. Nijsten ¹ and M. Lugtenberg^{1,2}

¹Department of Dermatology, Erasmus MC Cancer Institute, Rotterdam, the Netherlands

²Department of Public Health, Erasmus MC University Medical Center, Rotterdam, the Netherlands

³Department of Dermatology, Mohs Klinieken, Dordrecht, the Netherlands

⁴Department of Dermatology, Elisabeth-TweeSteden Hospital, Tilburg, the Netherlands

Summary

Correspondence

Marlies Wakkee.

E-mail: m.wakkee@erasmusmc.nl

Accepted for publication

28 December 2018

Funding sources

This project was funded by Citrienfonds (Dutch Ministry of Health, Welfare and Sport).

Conflicts of interest

None to declare.

*Plain language summary available online

DOI 10.1111/bjd.17594

Background Providing follow-up to patients with low-risk basal cell carcinoma (BCC) can be considered as low-value care. However, dermatologists still provide substantial follow-up care to this patient group, for reasons not well understood.

Objectives To identify factors influencing current BCC follow-up practices among dermatologists and suggested strategies to de-adopt this low-value care. In addition, views of patients regarding follow-up care were explored.

Methods A qualitative study was conducted consisting of 18 semistructured interviews with dermatologists and three focus groups with a total of 17 patients with low-risk BCC who had received dermatological care. The interviews focused on current follow-up practices, influencing factors and suggested strategies to de-adopt the follow-up care. The focus groups discussed preferred follow-up schedules and providers, as well as the content of follow-up. All (group) interviews were transcribed verbatim and analysed by two researchers using ATLAS.ti software.

Results Factors influencing current follow-up care practices among dermatologists included complying with patients' preferences, lack of trust in general practitioners (GPs), financial incentives and force of habit. Patients reported varying needs regarding periodic follow-up visits, preferred to be seen by a dermatologist and indicated a need for improved information provision. Suggested strategies by dermatologists to de-adopt the low-value care encompassed educating patients with improved information, educating GPs to increase trust of dermatologists, realizing appropriate financial reimbursement and informing dermatologists about the low value of care.

Conclusions A mixture of factors appear to contribute to current follow-up practices after low-risk BCC. In order to de-adopt this low-value care, strategies should be aimed at dermatologists and GPs, and also patients.

What's already known about this topic?

- Basal cell carcinoma (BCC) is the most common cancer in white individuals, and worldwide incidence rates are increasing.
- Providing follow-up care to patients with low-risk BCC is often not recommended in national guidelines and can be considered as low-value care.
- Currently, dermatologists seem to provide more follow-up care to patients with BCC than recommended, for reasons not well understood.

What does this study add?

- Two main contributing factors reported by dermatologists to provide low-value follow-up care were complying with patient preferences and a lack of trust in general practitioners (GPs) to identify suspicious lesions.
- Patients consulting dermatologists also expressed a lack of trust in GPs, and whereas some of the patients with BCC preferred receiving periodic follow-up care, other patients indicated finding follow-up care unnecessary.
- Several strategies for de-adoption were suggested, of which educating patients was identified as potentially effective by dermatologists and patients.

What are the clinical implications of this work?

- Educating patients with improved disease information and instructions on self-examination may reduce the need for follow-up care among patients, and, in turn, result in the reduction of follow-up visits provided by dermatologists.
- Educating GPs in skin cancer care, as well as realizing appropriate reimbursement, may also be effective in de-adopting low-value follow-up care.

Basal cell carcinoma (BCC) is the most common cancer in white people, and incidence rates are increasing worldwide.¹ It is a slow-growing tumour that seldom metastasizes and is mostly treated by conventional excision.^{2–4} Although patients with BCC have an increased risk of getting a subsequent BCC,¹ several European BCC guidelines recommend identifying high-risk patients for follow-up depending on patient and tumour characteristics.^{5–7} As evidence is lacking that providing follow-up care to patients with (low-risk) BCC leads to improved patient outcomes, BCC guidelines increasingly advise against annual follow-up after treatment of a single ‘low-risk’ BCC (i.e. primary BCC, < 2 cm, located outside the H-zone, with a nodular or superficial subtype).^{5–7}

Due to rising healthcare costs and finite resources, policy-makers focus more on de-adopting low-value care, which concerns healthcare that is of little or no value to the patient and consequently should not be provided routinely.^{8–11} Several initiatives on de-adoption of care have been initiated, resulting in lists of low-value services, such as the ‘Choosing Wisely’ lists, identifying potential candidates for de-adoption.^{8,12–14} As follow-up for patients with low-risk BCC can be considered as low-value care, it was included in the Dutch list of low-value services (manuscript in preparation).

Despite several European guidelines not recommending it, dermatologists seem to provide follow-up care to this large patient group. The number of newly diagnosed BCCs in the Netherlands is estimated to exceed 50 000 in 2020,¹ and almost 50% of these can be considered low risk.⁴ A Dutch study showed that patients with low-risk BCC receive, on average, a total of 3.8 follow-up visits in 3 years,⁴ and a study from the U.K. showed that after complete excision of a BCC outside the central ‘T’ area of the face, one-quarter of the dermatologists reviewed it more than once.¹⁵ The underlying

reasons of dermatologists for providing follow-up care to this patient group are thus far poorly understood.

We conducted the present qualitative study as an important first step of an intervention study, which aims to reduce the number of low-value follow-up visits of patients with low-risk BCC by Dutch dermatologists. The aim of this study was to identify factors influencing current low-value BCC follow-up practices among dermatologists and suggested strategies for de-adoption. In addition, views and preferences of patients regarding follow-up care were explored as they are important stakeholders in the de-adoption process.

Patients and methods**Study setting**

In the Netherlands, medical specialists can work either in a partnership within a hospital paid under fee-per-service (54% of specialists in 2015) or on salary (46% in 2015, mostly in academic hospitals). A small minority of physicians also work in an independent-sector treatment centre (ISTC).¹⁶ These different payment systems could lead to different financial incentives for physicians.¹⁷ The average price of a follow-up visit at the dermatologist in the Netherlands in 2018 was €100.¹⁸

Study design and methodological considerations

A qualitative study was conducted consisting of 18 individual semistructured interviews with dermatologists and three focus groups with a total of 17 patients with low-risk BCC (varying from five to six per session). This qualitative design was chosen because it enabled us to obtain information about the behaviour, underlying motivation and needs and preferences of all stakeholders.¹⁹

Selection of participants

Interviews

To select participants, a purposeful sampling method was used,²⁰ in which information-rich dermatologists known by the authors were invited to participate in an interview. Using this method, we strived for maximum variation in terms of the following relevant characteristics of the target group: types of medical centres in which dermatological care is provided in the Netherlands (ISTCs, peripheral hospitals and academic hospitals), gender, knowledge of skin cancer and years of working experience. Initially, five dermatologists were interviewed as part of a pilot. This was ultimately extended to 18 dermatologists in total. Potential participants received an invitation by e-mail, containing an information leaflet about the study. Potential participants could register for an individual interview by contacting the researchers.

Focus groups

One focus group was organized at each of the three types of medical service centres. To select participants, electronic patient records were screened from an ISTC (Mohs Klinieken), a peripheral hospital (Elisabeth-TweeSteden Hospital) and an academic hospital (Erasmus MC). Patients were selected if they were being treated for a low-risk BCC (i.e. nonaggressive subtype, outside the 'H-zone', < 2 cm and primary tumour)²¹ in the past year. Patients with previous skin malignancies and non-Dutch speakers were not invited, and neither were patients who did not seem fit enough to join a focus group based on their age and comorbidities. Invitation letters were sent to their home address, containing an invitation and information leaflet. They were offered a gift voucher of €40 to compensate for participating, as stated in the information leaflet. Patients could sign up for the focus group by contacting the researchers.

Data collection

Interviews

All interviews were conducted by an experienced qualitative researcher (M.L.): 11 were held face-to-face at the healthcare provider's working place and seven were conducted by phone. A predefined topic list was used to structure the interview, consisting of the following main themes: current practices regarding BCC follow-up care, factors influencing providing follow-up care, and suggested strategies to de-adopt low-risk BCC follow-up care (Appendix S1; see Supporting Information). The original topic list also included management of actinic keratosis and squamous cell carcinoma; however, this part falls outside the scope of the current study.

Focus groups

The three focus groups were held at the centres where the patients were treated (Erasmus MC, Elisabeth-TweeSteden

Hospital and Mohs Klinieken). The sessions were moderated by experienced moderators of focus groups (M.L. and S.M.D.; see Acknowledgments) and were co-chaired by a physician independent of the hospitals (S.vE.).

In each focus group session, participants had a semistructured discussion about needs and preferences regarding both BCC treatment and BCC follow-up care. In this study, we focused only on BCC follow-up care. A predefined topic list was used (Appendix S1; see Supporting Information) to structure the discussion, which included the following main themes: general needs and preferences regarding follow-up care, preferred follow-up schedules, preferred types of healthcare providers and areas for improvement of care. To prevent the less confident participants from withholding their opinions, the moderator made sure that everyone was able to say something and explicitly stated that opinions are never right or wrong.

Both the dermatologists and patients provided written informed consent and gave permission for the session to be audiotaped. In addition, they filled out a small questionnaire to collect sociodemographic information (e.g. age and gender).

Data processing and analysis

All interviews ($n = 18$) and focus groups ($n = 3$) were transcribed verbatim. Next, all identifying characteristics were removed from the transcripts and they were imported into ATLAS.ti 8.0, a professional tool designed for qualitative data analysis (ATLAS.ti, Berlin, Germany).

Two researchers (M.L. and S.M.D. or S.vE.) independently studied and coded the first three transcripts (two dermatologist interviews and one patient focus group). Different interpretations of codes were discussed and redefined until agreement was reached, which resulted in a preliminary coding scheme. The remaining 18 transcripts were coded by M.L. or S.vE. and checked by either S.M.D., S.vE. or M.L. Disagreements were discussed until consensus was reached. After 18 interviews with dermatologists and three focus groups with patients, thematic saturation, defined as when little or no changes to the codes were made, was reached for all covered research areas.

After the initial coding process the analyses proceeded by the iterative and interpretive process of constant comparison. The final codes were discussed and emerging themes were grouped. The information in each category of factors was reflected on and interpreted jointly. Interobserver reliability was tested by group discussions (on meaning) of codes and relationships between codes. This resulted in the identification of core categories of factors influencing current low-risk BCC care and strategies to de-adopt it. In addition, core themes of patients regarding their needs and preferences on follow-up care emerged.

Ethical considerations

Ethical approval for this study was obtained from the medical ethical committee of the Erasmus MC (MEC-2016-204). The current study has been designed and reported in accordance

with the Standards for Reporting Qualitative Research recommendations.²²

Results

Description of participants

The characteristics of the participating dermatologists and patients with low-risk BCC are displayed in Table 1.

Factors influencing current low-value basal cell carcinoma follow-up practices among dermatologists

Five types of factors emerged as influencing current low-value follow-up care among dermatologists.

Complying with patient preferences and needs

According to the dermatologists, patients visiting their practices often prefer follow-up visits as this is reassuring to them after their skin cancer diagnosis. Another reason, according to dermatologists, is the lack of trust by patients in their GP, as he or she will be the first person of contact for the patient after being discharged from follow-up. Dermatologists indicated complying with these preferences, for example by seeing patients once a year, or providing follow-up visits to the patients until they are confident enough to do the checks on their own. In addition, dermatologists indicated that their predecessor often provided annual follow-up visits to the patients, creating an unnecessary habit. This makes it hard for them to explain to patients that they do not need follow-up visits anymore and they rather avoid these discussions.

There are also people who just think the idea of skin cancer is frightening, and even if you explain it they keep thinking so anyway, and if they then get the choice or propose so themselves, may I come back again, then I say well I would like to see you once a year, and they are completely relieved, I think that's a good thing. (Dermatologist 12)

Yes. And certainly when your predecessors have all said that you have to come back annually. It would be strange if I'd then go and say alright, no, you are now discharged. So I do that with some, but some of them don't accept that yet either. (Dermatologist 9)

Lack of trust in general practitioners to recognize suspicious lesions

Another factor contributing to providing low-value follow-up practices to patients is the lack of trust among dermatologists in GPs to recognize suspicious skin lesions adequately. They believe that GPs lack knowledge of skin cancer and do not see enough skin cancer to establish sufficient experience. The dermatologists indicated that they often receive referrals suggesting poor diagnostic skills of the GPs. As a result, dermatologists indicated that they sometimes prefer to continue providing follow-up to patients with low-risk BCC themselves, rather than making the GP the first person of contact for the patient. However, some dermatologists reported that discharging the patient depends on the expertise of the particular GP.

Yes, we just know the neighbourhood and we know who a good general practitioner is and who isn't, and those who have a good general practitioner [we discharge] and others we keep ourselves for follow-up. (Dermatologist 5)

Beliefs in the usefulness of follow-up visits

As patients have a high chance of a subsequent BCC, follow-up visits are useful, according to some dermatologists. In addition, the usefulness of providing follow-up care to patients was reported for patients who, they believe, are not capable enough to self-examine their skin. Follow-up visits are sometimes provided by dermatologists as a means to educate patients, until they are believed to be capable of performing checks themselves.

Table 1 Characteristics of participating dermatologists and patients with basal cell carcinoma

	Dermatologists (n = 18)	Focus group 1 (n = 5)	Focus group 2 (n = 6)	Focus group 3 (n = 6)
Male, n (%)	10 (56)	1 (20)	2 (33)	3 (50)
Age (years), median (IQR)	45 (38–54)	56 (47–63)	67 (56–68)	72 (62–78)
Setting		Academic	Peripheral	ISTC
Academic	2 (11)			
Peripheral	9 (50)			
ISTC	3 (17)			
Combination of the above	4 (22)			
Professional experience (years), median (IQR)	12 (6–20)			

IQR, interquartile range; ISTC, independent-sector treatment centre.

The reason for me is of course that they have a higher chance of a second basal cell carcinoma in the first two years, that's one reason. (Dermatologist 2)

Yes, it's someone who won't notice it himself as easily, those you'll see sooner than someone that you can instruct well. (Dermatologist 12)

Financial incentives to perform follow-up visits

Generally, dermatologists reported not to be influenced by the financial incentives themselves, but indicated to know other dermatologists who are. Reasons reported were the need to reach certain targets within hospital partnerships and personal gain. Particularly, dermatologists indicated that their predecessors were influenced by financial incentives, but these incentives were thought to be still present today.

Because look, in a lot of hospitals with partnerships and things like that, certain targets have to be met, and if those targets all get dropped, then, ehm, it can all lead to financial problems of a club. (Dermatologist 9)

Those are the perverse financial incentives (laughs) that, eh, that are not beneficial for a lot of colleagues, it seems to me (...) I don't want to knock on my colleagues though, because most are trying their best to adhere to the guidelines of course. (Dermatologist 10)

Force of habit

Providing follow-up care to patients with low-risk BCC used to be standard care, and dermatologists reported that when a guideline changes it is subsequently hard to change common daily practice. They believe this is particularly true for older dermatologists, whereas younger dermatologists generally adhere better to current guidelines.

And that's not unwillingness, but it's just that it's the same when you have been eating broccoli on your birthday for years and then if you suddenly can't eat broccoli you are deeply sad. That's just in your system. (Dermatologist 13)

Patient views and preferences regarding basal cell carcinoma follow-up care

Three main themes emerged from the focus groups with patients with low-risk BCC concerning follow-up care.

Varying needs with regard to regularity of follow-up care and skin examination

Some patients with low-risk BCC, who were all treated by a dermatologist in secondary care, reported a preference for

yearly follow-up visits. They indicated that – after being shocked to hear their diagnosis – a yearly check-up would reduce their anxiety. They prefer appointments to be prescheduled, to reduce the threshold to contact their dermatologist. In addition, initiating an appointment makes some patients feel like a nag. In terms of content of the follow-up visits, these patients indicated they would like to receive a full-body skin examination (FBSE) during the follow-up visit. They find it hard to self-examine their skin, and FBSEs performed by dermatologists give them more confidence about their skin.

However, some patients indicated they find follow-up care not necessary. As a result of the very low chance of a BCC to metastasize, they believe self-examination of their skin is sufficient. They stated that regular follow-up visits should not be imposed on patients and are not worth the associated costs.

They have indeed said that whenever there's something please come back, but yes, when is there something? I feel like there is always something, so then you could say once a year, yes, well, then rather once every six months, but maybe even once a month actually. You know, for me it's never often enough. (Patient focus group 1)

That eh skin cancer really is something that doesn't proliferate so much, so then I think, I think yeah (...) then [follow-up] is not really necessary I think. Then I'll keep a bit of a close eye on it myself. (Patient focus group 2)

Overall preference for a dermatologist to perform the follow-up visits

Patients in a secondary-care setting overall prefer a dermatologist to perform follow-up visits because of their specialization, whereas they consider the GP to be a generalist. As a result, patients have more confidence in dermatologists and also believe that dermatologists take them more seriously than GPs.

However, some patients stated that follow-up visits could also be performed by GPs as long as they have received appropriate skin cancer education, know their limits and refer to dermatologists when needed. In addition, some patients reported to prefer the GP to perform the follow-up visits. They mentioned that GPs are closer to home and more accessible than dermatologists.

I really don't question the qualities of my general practitioner, but I think it's a bit safer here, more professional as well of course. With a general practitioner, yes, if he'd had a refresher course it would be different. (Patient focus group 3)

What I just said, that they see me coming at dermatology every time like there she is again with her spots,

but then the general practitioner is a bit more accessible. (Patient focus group 1)

Need for improved written information provision

In general, patients reported to be satisfied with the information on skin cancer and self-examination they received – mostly orally – from the dermatologist. However, patients indicated a need to receive more written handouts with information about skin cancer and self-examination, as they find it hard to remember everything the dermatologist has said during consultation. They also indicated that it may be useful to provide pictures of skin cancer on handouts to improve the instructions on self-examination. They prefer to receive specific information from dermatologists rather than having to search the internet themselves for more information, as this often scares them.

That there are also pictures included, that there are several of them. Looking at what it looks like when it's calm and when it eh, yeah, gets malicious, what are the differences? The skin around it, does it get red, does it get white, does it contract, how does that that birthmark develop, that kind of stuff. You read it sometimes but then you think oh, you know, I don't have it so, eh, don't look at it any more. But if you do have it that you can check back and then you think God, have to be alert eh... (Patient focus group 2)

You're also going to Google for yourself like is it, eh, and whether you run a risk that it can spread for example. Well that has been confirmed hasn't it, that it's rare in any case, but even that has lingered somewhat with me; is it never or is it rarely? It has been a bit of a thing. (Patient focus group 1)

Suggested strategies to de-adopt low-value follow-up care by dermatologists

Four types of strategies suggested by dermatologists emerged from the data to de-adopt low-value follow-up care.

Educating patients with improved information

According to dermatologists, explaining to patients that follow-up care is not needed and explaining how to self-examine their skin will reduce their anxiety and need for follow-up care. Dermatologists suggested that this could be achieved by expanding information and explanation to patients during consultation. Improved handouts for patients with more information about skin cancer and self-examination were reported to make it easier for them to discharge patients from follow-up.

Well, here also I think make more, eh, patients aware of ehm, of what a basal cell carcinoma can look like, so that they can recognize it faster, say. Then you have, so

that you don't need to check too often out of fear. (Dermatologist 14)

I think a nice handout would be handy because I think that many people, if you just have a good handout with which people can be discharged, then it is also much easier to discharge people. (Dermatologist 9)

Educating general practitioners to increase trust of dermatologists and patients

Educating GPs in skin cancer care was also suggested as a strategy by dermatologists to facilitate the de-adoption of low-value follow-up care. Increasing the trust of both dermatologists and patients in GPs will ease discharging patients from follow-up. Dermatologists reported that, in particular, the diagnostic accuracy of the GPs should be improved, for example by taking more biopsies in order to learn from the histology report. They also mentioned that GPs should work more like a dermatologist, by always performing an FBSE and by using dermoscopy.

I think that GPs should have a lower threshold to perform biopsies, because when you perform a biopsy you also learn from that, right, you have a suspicion of a spot and you get a result so then you know am I okay or not, so I think that, I think that that's one of the most important, maybe even more than skills. (Dermatologist 4)

Well there's a lot of discussion about dermoscopy in primary healthcare, eh, I think that, say, dermoscopy, say, not so much for melanoma, but for skin cancers is helping the GP. I also think that the GP (...), I think it also comes from research, right, that they can especially better recognize benign skin abnormalities with it. (Dermatologist 11)

Realizing appropriate financial compensation and consultation times

Realizing appropriate financial compensation and consultation times was also suggested as a strategy to de-adopt follow-up care. One way to realize this, as indicated by dermatologists, is to increase the time of the consultation for high-risk oncology patients in dermatology. Currently, dermatologists generally have 10 min per patient, without discriminating between low-risk and complex oncology patients. As a result, they currently use the leftover time of low-risk oncology patients for more complex patients. By increasing planned consultation time for complex oncology patients, the quality of care for complex patients can be maintained, making it more attractive to de-adopt the low-risk low-value care.

Dermatologists also mentioned tackling financial incentives by penalizing dermatologists who provide low-value care, for example by only reimbursing high-value care and not covering

the low-value follow-up visits. In addition, using a macro budget (i.e. budget restriction on national healthcare expenditure)²³ was suggested as an option to overcome this problem.

If, for example, patients go to the GP more often, perhaps the time for the complex dermatological patient should, perhaps they should also get more time, so that they are better looked at, and that it in any case doesn't lead to losses. (Dermatologist 9)

It is like if you run a red light and you don't get a ticket you keep running red lights, and if you are not punished for it, you just keep doing your own thing. (Dermatologist 13)

Informing dermatologists on the low value of follow-up care

Providing dermatologists with adequate information and convincing them about the low value of follow-up visits was also suggested as a strategy to de-adopt this care. This way, unfounded fears regarding the risks of discharging patients from follow-up could be eliminated. According to dermatologists, this could be achieved by increasing awareness among dermatologists about the current BCC guidelines, which restrict follow-up care to high-risk patients. It was also proposed to visualize the (low) risks of de-adopting this care for patients on a piece of paper. In addition, the costs associated with providing this care on a yearly basis could be added.

Yes, then they just have to follow the guideline better, more familiarity with the guidelines, so they follow the guideline, in principle yes. (Dermatologist 14)

Yes, they should actually know that, of course. Look, every dermatologist always wrestles with yes, thirty, forty percent chance that a second one develops, but yes, also a sixty, seventy percent chance of it not. And baso is not generally a serious tumour, and usually very easy to see. (Dermatologist 18)

Do you know what also really works, very simple, give them a paper and show them what it means for the costs of the health-care if you see someone every three months and make it visual with a little pie chart or with a, you know, just very simple, and these are the healthcare costs if you see someone once a year. (Dermatologist 13)

A complete overview of all illustrative quotations for each theme, including additional quotations, can be found in Table S1 (see Supporting Information).

Discussion

The current study has identified factors contributing to low-value follow-up care by dermatologists after low-risk BCC and

suggested strategies for de-adoption. In addition, the views of patients regarding follow-up care were explored.

Consistently with previous studies, complying with patient preferences was reported as a main reason to provide low-value follow-up care.^{24–26} In a U.S. study, 51% of physicians reported ordering unnecessary tests to keep the patient happy or because the patient insists on getting them.²⁷ As for the patients in our study, we found that some of them indeed preferred receiving periodic follow-up care, mainly to reduce their anxiety. However, some patients indicated finding periodic follow-up care unnecessary. Educating patients has been proven to be useful,²⁸ as it may reduce patients' anxiety and, as a consequence, their need for periodic follow-up.^{29,30} A recent review on BCC care emphasizes the importance of counselling patients about self-screening.³¹ Providing more, and preferably written, information to patients therefore seems a useful and feasible strategy to de-adopt low-value follow-up care. As this strategy was suggested by both dermatologists and patients with BCC, the likelihood of success of such an intervention is increased.^{11,32}

A lack of trust in GPs to identify suspicious lesions adequately was also identified by dermatologists as a reason to provide low-value follow-up care to patients with BCC. Even though follow-up care is to be de-adopted and not to be substituted by GPs, a lack of trust in GPs by both dermatologists and patients plays an important role, as the GP will be the first healthcare provider of contact for the patient after being discharged. Trust has been found to be an important factor, not only between patients and physicians, but also between GPs and specialists, as higher trustworthiness improves the communication between physicians.^{33–35} Improving GPs' education in skin cancer may increase the level of trust between physicians, and that of patients, and may therefore reduce the perceived need to keep patients under dermatological follow-up.³⁶ A first step to improve the skin cancer knowledge of GPs is to improve the exposure to dermatology in the medical curriculum, as it is currently underexposed not only in the Netherlands, but also internationally.^{37–40} However, it is also important to note that specialists and patients in secondary care are more likely to be negatively biased towards GPs due to selection bias. In addition, it could be argued that dermatologists should support the position of GPs towards patients to increase the level of trust between patients and their GPs.

The Dutch BCC guideline changed its recommendation in 2007, from providing follow-up care to all patients with BCC for at least 5 years, to restricting follow-up to patients with high-risk BCC.^{41,42} Although over 10 years have passed since this adjustment, dermatologists still indicated providing follow-up care to be a force of habit, particularly for older dermatologists. In line with this, physicians who have been in practice longer are found to be at risk for decreased guideline adherence and providing lower-quality care.^{43,44} Also, it is known that implementation of changes in practice can take many years, and de-adoption processes take even longer.^{45–48} Merely giving the care time to change may therefore by itself be effective in diminishing this low-value care, particularly as

new dermatology residents are adopting current guidelines. To accelerate this process, interventions such as new funding models that promote behavioural change could be useful.^{49,50}

Finally, in accordance with previous studies, dermatologists also stated being influenced by reimbursements.^{51–53} In order to reduce ineffective care, macro-level financial strategies enacted by the government or national institutes may be appropriate.⁵⁴ A particularly effective option could be to increase compensation for the first consultation after treatment, while lowering compensation for additional follow-up visits. The benefits of this differential compensation are: (i) dermatologists have more time in the initial consultation after treatment to provide patients with adequate information; (ii) financial incentives to provide low-value follow-up care are removed; and (iii) this does not negatively influence the financial state of the partnership or department. This financial intervention is worth considering because changes to policy and/or funding models are among the most successful interventions in de-adoption.^{11,51,55}

A strength of this study is that we explored factors influencing current low-value BCC follow-up care, as well as strategies to de-adopt this care from the perspectives of the stakeholders. Interventions are commonly created on the basis of theory and evidence, and in practice often depend on the experiences and preferences of researchers.^{56,57} As acceptance of the target group is an essential step for initiating change,^{11,32} integrating the preferences of the stakeholders in an intervention is likely to improve the success of an intervention.⁵⁷ In addition, by conducting a comprehensive qualitative study that also includes the perspective of patients, we were able to gain a more complete overview of both the contributing factors and strategies that have the highest potential to be effective in the de-adoption process. The used methodology can be used as an example for studies aimed at reducing low-value care concerning other medical conditions. Moreover, the results of this study may be used in other countries dealing with a high incidence of BCCs and pressure on their healthcare system. This may particularly apply to countries with a GP gatekeeper system or fee-for-service reimbursement systems, such as most Western countries.^{58,59}

A limitation of this study is that we invited only patients treated by dermatologists to participate in our focus groups. Although the focus of our study was on the key stakeholders in the de-adoption process (i.e. the dermatologists and the patients treated by dermatologists), future studies could also include the views of GPs and of patients solely treated by GPs. In contrast to a previous study of patients with high-risk BCC,⁶⁰ some patients with low-risk BCC in the current study actually preferred the GP over the dermatologist, as the GP is closer to home and more easily accessible. Gaining insight into this subgroup of patients who trust the GP could provide valuable information to facilitate the de-adoption process further.

In conclusion, this study provides insight into current practices regarding low-risk BCC follow-up regimens through the eyes of dermatologists and patients, and offers suggestions to de-adopt this low-value care. It shows that the needs of patients and complying with them, a lack of trust in GPs, and

financial incentives are mainly responsible. Furthermore, educating patients and GPs, as well as realizing appropriate financial compensation, are suggested to be particularly effective in de-adopting the low-value follow-up care. The effect of one strategy, educating patients with low-risk BCC with improved patient information containing personalized information, is currently being tested.⁶¹ This and the other proposed strategies may be implemented on a larger scale in the future to stimulate the de-adoption of low-value follow-up care after low-risk BCC.

Acknowledgments

The authors would like to thank S.M. Droger for her contribution to moderating the focus groups and analysing part of the data.

References

- 1 Flohij SC, Koljenovic S, de Haas ER *et al.* Cumulative risks and rates of subsequent basal cell carcinomas in the Netherlands. *Br J Dermatol* 2011; **165**:874–81.
- 2 Hoorens I, Vossaert K, Ongenaes K *et al.* Is early detection of basal cell carcinoma worthwhile? Systematic review based on the WHO criteria for screening. *Br J Dermatol* 2016; **174**:1258–65.
- 3 Ferrandiz L, Ruiz-de-Casas A, Trakatelli M *et al.* Assessing physicians' preferences on skin cancer treatment in Europe. *Br J Dermatol* 2012; **167** (Suppl. 2):29–35.
- 4 de Vries E, Misirli Y, Nijsten T *et al.* Treatment and frequency of follow-up of BCC patients in the Netherlands. *J Eur Acad Dermatol Venereol* 2018; **32**:e351–4.
- 5 Telfer NR, Colver GB, Morton CA. Guidelines for the management of basal cell carcinoma. *Br J Dermatol* 2008; **159**:35–48.
- 6 Nederlandse Vereniging voor Dermatologie en Venereologie (NVDV). Evidence-based richtlijn. Basaalcelcarcinoom. Available at: https://www.nvpc.nl/uploads/stand/150414DOC-MB-Definitieve_richtlijn_Basaalcelcarcinoom_2014_goedgekeurd_ALV_14_april_2015154.pdf (last accessed 11 February 2019).
- 7 Trakatelli M, Morton C, Nagore E *et al.* Update of the European guidelines for basal cell carcinoma management. *Eur J Dermatol* 2014; **24**:312–29.
- 8 Wammes JJ, van den Akker-van Marle ME, Verkerk EW *et al.* Identifying and prioritizing lower value services from Dutch specialist guidelines and a comparison with the UK do-not-do list. *BMC Med* 2016; **14**:196.
- 9 Morgan DJ, Dhruva SS, Wright SM *et al.* 2016 update on medical overuse: a systematic review. *JAMA Intern Med* 2016; **176**:1687–92.
- 10 Gnjdic D, Elshaug AG. De-adoption and its 43 related terms: harmonizing low-value care terminology. *BMC Med* 2015; **13**:273.
- 11 Niven DJ, Mrklas KJ, Holodinsky JK *et al.* Towards understanding the de-adoption of low-value clinical practices: a scoping review. *BMC Med* 2015; **13**:255.
- 12 Garner S, Docherty M, Somner J *et al.* Reducing ineffective practice: challenges in identifying low-value health care using Cochrane systematic reviews. *J Health Serv Res Policy* 2013; **18**:6–12.
- 13 Elshaug AG, Watt AM, Mundy L *et al.* Over 150 potentially low-value health care practices: an Australian study. *Med J Aust* 2012; **197**:556–60.
- 14 Mitera G, Earle C, Latosinsky S *et al.* Choosing Wisely Canada cancer list: ten low-value or harmful practices that should be avoided in cancer care. *J Oncol Pract* 2015; **11**:e296–303.

- 15 Bower CP, Lear JT, de Berker DA. Basal cell carcinoma follow-up practices by dermatologists: a national survey. *Br J Dermatol* 2001; **145**:949–56.
- 16 Mossialos AD, Osborn R, Sarmak D. *International Profiles of Health Care Systems*. New York: The Commonwealth Fund, 2017.
- 17 Gosden T, Forland F, Kristiansen IS *et al.* Capitation, salary, fee-for-service and mixed systems of payment: effects on the behaviour of primary care physicians. *Cochrane Database Syst Rev* 2000: CD002215.
- 18 Nederlandse Zorgautoriteit. DIS open data: 1 or 2 follow-up outpatient visits/consultations costs. Available at: <http://www.opendisdata.nl/msz/zorgproduct/029499039> (last accessed 11 February 2019).
- 19 Mays N, Pope C. Rigour and qualitative research. *BMJ* 1995; **311**:109–12.
- 20 Patton MQ. *Qualitative Research and Evaluation Methods*, 3rd edn. Thousand Oaks, CA: Sage Publications, 2001.
- 21 Kirkup ME, De Berker DA. Clinical measurement of dimensions of basal cell carcinoma: effect of waiting for elective surgery. *Br J Dermatol* 1999; **141**:876–9.
- 22 O'Brien BC, Harris IB, Beckman TJ *et al.* Standards for reporting qualitative research: a synthesis of recommendations. *Acad Med* 2014; **89**:1245–51.
- 23 Krabbe-Alkemade YJFM, Groot TLCM, Lindeboom M. Competition in the Dutch hospital sector: an analysis of health care volume and cost. *Eur J Health Econ* 2017; **18**:139–53.
- 24 Fenton JJ, Kravitz RL, Jerant A *et al.* Promoting patient-centred counseling to reduce use of low-value diagnostic tests: a randomized clinical trial. *JAMA Intern Med* 2016; **176**:191–7.
- 25 Rosenbaum L. The whole ball game – overcoming the blind spots in health care reform. *N Engl J Med* 2013; **368**:959–62.
- 26 Tilburt JC, Wynia MK, Sheeler RD *et al.* Views of us physicians about controlling health care costs. *JAMA* 2013; **310**:380–9.
- 27 PerryUdem Research/Communication. Unnecessary tests and procedures in the health care system. Available at: <http://www.choosingwisely.org/wp-content/uploads/2015/04/Final-Choosing-Wisely-Survey-Report.pdf> (last accessed 11 February 2019).
- 28 Tannenbaum C, Martin P, Tamblyn R *et al.* Reduction of inappropriate benzodiazepine prescriptions among older adults through direct patient education: the EMPOWER cluster randomized trial. *JAMA Intern Med* 2014; **174**:890–8.
- 29 Nijkamp MD, Ruiter RAC, Roeling M *et al.* Factors related to fear in patients undergoing cataract surgery: a qualitative study focusing on factors associated with fear and reassurance among patients who need to undergo cataract surgery. *Patient Educ Couns* 2002; **47**:265–72.
- 30 de Jong JR, Vlaeyen JWS, Onghena P *et al.* Fear of movement/(re)injury in chronic low back pain: education or exposure in vivo as mediator to fear reduction? *Clin J Pain* 2005; **21**:9–17.
- 31 Kim JYS, Kozlow JH, Mittal B *et al.* Guidelines of care for the management of basal cell carcinoma. *JAMA Dermatol* 2018; **78**:540–59.
- 32 Henshall C, Schuller T, Mardhani-Bayne L. Using health technology assessment to support optimal use of technologies in current practice: the challenge of 'disinvestment'. *Int J Technol Assess Health Care* 2012; **28**:203–10.
- 33 Absolom K, Eiser C, Michel G *et al.* Follow-up care for cancer survivors: views of the younger adult. *Br J Cancer* 2009; **101**:561.
- 34 Birkhäuser J, Gaab J, Kossowsky J *et al.* Trust in the health care professional and health outcome: a meta-analysis. *PLOS ONE* 2017; **12**: e0170988.
- 35 Hollins J, Veitch C, Hays R. Interpractitioner communication: telephone consultations between rural general practitioners and specialists. *Aust J Rural Health* 2000; **8**:227–31.
- 36 Somerset M, Faulkner A, Shaw A *et al.* Obstacles on the path to a primary-care led National Health Service: complexities of outpatient care. *Soc Sci Med* 1999; **48**:213–25.
- 37 Shah H, Pozo-Garcia L, Koulouroudias M. Dermatology – a compulsory part of the UK medical school curriculum? *Med Educ Online* 2015; **20**:30212.
- 38 Hu A, Vender R. Undergraduate dermatology education in Canada: a national survey. *J Cutan Med Surg* 2018; **22**:31–7.
- 39 Gupta A, Chong AH, Scarff CE *et al.* Dermatology teaching in Australian medical schools. *Australas J Dermatol* 2017; **58**:e73–8.
- 40 Poelmann TA, van der Heide WK, Berendsen AJ. Skin tumours underexposed in general practice. *Ned Tijdschr Geneesk* 2012; **156**: A5279 (in Dutch).
- 41 Nederlandse Vereniging voor Dermatologie en Venereologie (NVDV). Richtlijn behandeling van patiënten met een basaalcelcarcinoom. Available at: https://richtlijndatabase.nl/richtlijn/basaalcelcarcinoom/basaalcelcarcinoom_-_korte_beschrijving.html (last accessed 11 February 2019).
- 42 Nederlandse Vereniging voor Dermatologie en Venereologie. Evidence-based richtlijn. Behandeling van het basaalcelcarcinoom. Available at: https://www.nvpc.nl/uploads/stand/071220DOC-MO-473d_Richtlijn_BCC_herziene_versie_20122007169.pdf (last accessed 11 February 2019).
- 43 Choudhry NK, Fletcher RH, Soumerai SB. Systematic review: the relationship between clinical experience and quality of health care. *Ann Intern Med* 2005; **142**:260–73.
- 44 Zerr DM, Del Beccaro MA, Cummings P. Predictors of physician compliance with a published guideline on management of febrile infants. *Pediatr Infect Dis J* 1999; **18**:232–8.
- 45 Niven DJ, Rubinfeld GD, Kramer AA *et al.* Effect of published scientific evidence on glycemic control in adult intensive care units. *JAMA Intern Med* 2015; **175**:801–9.
- 46 Stafford RS, Radley DC. National trends in antiobesity medication use. *Arch Intern Med* 2003; **163**:1046–50.
- 47 Schwartz AL, Chernew ME, Landon BE *et al.* Changes in low-value services in year 1 of the Medicare pioneer accountable care organization program. *JAMA Intern Med* 2015; **175**:1815–25.
- 48 Roman BR, Asch DA. Faded promises: the challenge of deadopting low-value care. *Ann Intern Med* 2014; **161**:149–50.
- 49 Niven DJ, Leigh JP, Stelfox HT. Ethical considerations in the de-adoption of ineffective or harmful aspects of healthcare. *Health Manage Forum* 2016; **29**:214–17.
- 50 Rosenberg A, Agiro A, Gottlieb M *et al.* Early trends among seven recommendations from the choosing wisely campaign. *JAMA Intern Med* 2015; **175**:1913–20.
- 51 Chaix-Couturier C, Durand-Zaleski I, Jolly D *et al.* Effects of financial incentives on medical practice: results from a systematic review of the literature and methodological issues. *Int J Qual Health Care* 2000; **12**:133–42.
- 52 Hillman AL, Pauly MV, Kerstein JJ. How do financial incentives affect physicians' clinical decisions and the financial performance of health maintenance organizations? *N Engl J Med* 1989; **321**:86–92.
- 53 Kouides RW, Bennett NM, Lewis B *et al.* Performance-based physician reimbursement and influenza immunization rates in the elderly. *Am J Prev Med* 1998; **14**:89–95.
- 54 Verkerk EW, Tanke MAC, Kool RB *et al.* Limit, lean or listen? A typology of low-value care that gives direction in de-implementation. *Int J Qual Health Care* 2018; **30**:736–9.
- 55 Montini T, Graham ID. 'Entrenched practices and other biases': unpacking the historical, economic, professional, and social resistance to de-implementation. *Implement Sci* 2015; **10**:24.
- 56 Yardley L, Morrison L, Bradbury K *et al.* The person-based approach to intervention development: application to digital

- health-related behavior change interventions. *J Med Internet Res* 2015; **17**:e30.
- 57 Lugtenberg M, Burgers JS, Han D *et al.* General practitioners' preferences for interventions to improve guideline adherence. *J Eval Clin Pract* 2014; **20**:820–6.
- 58 Greenfield G, Foley K, Majeed A. Rethinking primary care's gatekeeper role. *BMJ* 2016; **354**:i4803.
- 59 Yuan B, He L, Meng Q *et al.* Payment methods for outpatient care facilities. *Cochrane Database Syst Rev* 2017; **3**:CD011153.
- 60 van Egmond S, Wakkee M, Droger M *et al.* Needs and preferences of patients regarding basal cell carcinoma and cutaneous squamous cell carcinoma care: a qualitative focus group study. *Br J Dermatol* 2019; **180**:122–9.
- 61 The Netherlands Federation of University Medical Centres. Project Erasmus MC: basaalcelcarcinoom follow up study (B-FUS). Available at: <https://www.doenoflaten.nl/projecten/project-7-basaalcelcarcinoom-follow-up-study-b-fus> (last accessed 11 February 2019).

Supporting Information

Additional Supporting Information may be found in the online version of this article at the publisher's website:

Appendix S1. Predefined topic lists.

Table S1. An overview of illustrative quotations per theme.