

**PATHPOINT<sup>®</sup>**

**SKIN COMMUNITY**

**DIAGNOSTIC CENTRE**

**LAY SUMMARY OF RESULTS**

OpenMedical

# Introduction

Skin cancer is the most common form of cancer in the UK. There are approximately 500,000 skin cancer referrals to dermatology services per year. The available workforce is not able to cope with such a high volume of referrals through the traditional clinical pathways. In these traditional pathways, a face-to-face appointment is needed for every patient. This appointment must be with a consultant dermatologist. The limited availability of dermatology specialists places ongoing strain on critical diagnostic services. Furthermore, the quality of these referrals is often suboptimal, which can cause delays in diagnosis.

The Community Diagnostic Centre model 'Skin CDC' refers to a method of remote dermatology, called teledermatology. In this model, people have photos of their skin spots (lesion) taken in a community setting. As part of this project, Open Medical introduced this model in 8 community diagnostic centres. These centres are spread out across England and are connected to three NHS Trusts. These centres used our software, eDerma, to manage and send photos and relevant patient data.

Patients who saw their General Practitioner (GP) about a spot on their skin were sent to these centres to have their photos taken. Patients were also asked to complete a questionnaire about their skin and the lesion. The questionnaire was developed with patient representatives and members of the public, and asks questions about things such as their skin type, family history, and how much time they spent in the sun.

The photos and completed questionnaire were then sent to a dermatologist (skin specialist) to be examined. They then decide if a patient could be discharged, need further tests, or if they should receive treatment.

## Referral to diagnosis

We measured how fast this method was at diagnosing people's skin lesions, and compared it to the traditional method. In the traditional method, every patient sees a dermatologist in person. We calculated the time it takes from the GP referral up to the moment a patient received a diagnosis for both these methods.

The results show that, for most people, the new model is about 14 days faster at diagnosing people. This is because most people have a simple lesion that can be diagnosed without requiring a face-to-face appointment. For these cases the dermatologist can make a diagnosis by viewing the photos and reading the questionnaire. Some patients needed further tests or examinations. For these patients there was no meaningful difference in the time it took to diagnose them. On average, people received their diagnosis more than a week faster using the new method.

## Health economics

We asked a different company to examine if the new model was affordable. It was estimated that use of eDerma could save over £18,261 in a 6 month period, compared to the current way of working. A diagnosis through the eDerma model with community diagnostic centres was £32 cheaper than the traditional method.

## Health equity

Use of eDerma showed that patients of different ages were all diagnosed equally as fast. There was no relationship between IMDD groups and the time it takes someone to get a diagnosis. IMDD groups refer to 'Index of Multiple Deprivation Decile', which is a postcode based measure of socio-economic status. This considers factors such as local crime rates, employment rates, and education.

We also examined the potential impact of various demographic factors on the time it takes someone to get a diagnosis. These included factors such as ethnicity, sexual orientation, gender, and level of education. Analysis showed no meaningful difference between these factors and referral to diagnosis time.

Furthermore, there was no difference in the Patient Reported Experience questionnaire (PREM) results and these factors. In this PREM, patients were asked to tell us how they experienced the pathway. The vast majority of people were positive about the new model. Patients from different backgrounds and demographics are equally positive about this model.

There are signs that eDerma may help address health inequalities. Patients on the eDerma pathway were more likely to be LGBTQ+, non-white, or have a disability. All patients in face-to-face clinics were white and heterosexual, and far

less patients had mobility issues. Unfortunately, the number of people who completed the questionnaire in the face-to-face clinics was low. We can't be confident that these communities would have attended if we had more responses. However, this tells us that face-to-face clinics may not be as accessible to all communities compared to the new model.

We could also see that the new model resulted in significantly reduced travel distance for patients. This was especially true for people travelling from more deprived areas.

## Carbon emissions

Carbon emissions are gases produced by human activities such as using electricity, producing goods and driving vehicles. The NHS is committed to reducing such emissions, as they are harmful to the planet. It was difficult to gather all the information to examine carbon emissions for this project. Many of the things that have a high carbon emission, such as the device used to take photos (a dermatoscope), are used in both models. There is no change in carbon emissions expected there.

Digital forms of communication and use of the database uses electricity, which has a carbon cost. This is usually cancelled out by reducing the amount of paper (letters) sent.

We do have information about changes in patient travel distance. The distance a patient had to travel to get their diagnosis was lower in the three different NHS Trusts where we used eDerma. This was compared to what it would have been without eDerma. This was especially true for the NHS Trust that covered a large region. Before, patients had to travel very far for their appointment. For this Trust, patients were able to use more sustainable methods of transport, like walking or cycling, rather than driving.

All things considered, we believe that the impact of eDerma on carbon emissions is small. In areas where one hospital covers a large region, the new model may help reduce carbon emissions.

## Patient and public involvement and engagement (PPIE)

Lastly, we reviewed how involving patients and members of the public helped this project. We found that the participants' feedback shaped the project. We interviewed the participants, who said that their contributions were valued and taken on board. 90% of their feedback was accepted. Both the Open Medical team and the PPIE participants said they developed new skills, and the lessons learned will inform future work.

Engaging patients and members of the public in this project had a positive impact on product development, data analysis, and creation of patient facing materials.

## Conclusion

We introduced a new model to help patients seek a diagnosis for their skin lesion. This model used our eDerma software to manage patient data and workflows.

- The time from referral to diagnosis reduced drastically, resulting in a faster diagnosis. Most people were diagnosed 14 days faster.
- Use of the eDerma model is likely to result in cost savings.
- The model did not negatively affect health equality. Some of the evidence indicates that eDerma helps reduce such inequalities.
- For NHS organisations that cover a large area, eDerma likely reduces the amount of carbon that is emitted per diagnosis.
- Working in collaboration with patients and members of the public had a positive effect on the development of eDerma and the community diagnostic centre model we employ.

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