

Digitising the Urgent Skin Cancer Dermatology Referral pathway using a novel, cloud-based patient pathway platform

Background

Open Medical has worked closely with the Dermatology department at Luton & Dunstable University Hospital since 2018 to support the development of a nationally recognised dermatology service. At the time of engagement, the department was facing many of the issues experienced by the speciality on a national level, in particular: a sustained rise in skin cancer referrals, difficulty recruiting to consultants posts, and a reliance on expensive agency locum staff.

A paper published by the Royal College of Physicians in 2013 indicated that there was a shortfall of 250 whole - time equivalent (WTE) dermatology consultants nationwide. Dermatology has one of the highest referral rates of all specialities. An ageing population and increased patient awareness are some of the key drivers increasing the number of referrals year-on-year.

Teledermatology is widely regarded as an effective triage tool that supports organisations in the delivery of a service that is facing an ever-increasing demand with a concurrently reducing workforce. To bridge the vacancy gap, specialties are being forced to change the way they deliver services with an increased number of specialist nurses being utilised with the need to maintain high levels of clinical safety and governance. Our collaborative work outlines how our Pathpoint eDerma cloud-based system can support a dermatology department to meet increasing demand, reduce costs and develop a nurse-led triage service, supported by consultant dermatologists.

PATHPOINT^ederma

Pathpoint eDerma is a cloud-based clinical system developed by clinicians and professional software developers, specifically to serve as a secure and centralised platform for dermatology service coordination. Pathpoint eDerma is more than a Teledermatology system; the platform enables inpatient and outpatient referrals to be efficiently and remotely triaged utilising a store and forward methodology, placing patients into the right pathways (clinic review, biopsy, discharge to GP) immediately at the point of triage.

The platform has been developed in accordance with the published **British Association of Dermatologists Quality Standards** for TeleDermatology and provides an effective, robust and customisable solution for the demand management of a busy multi-site Dermatology department; whilst also bridging primary and secondary care services with its community-based model.

Pathpoint eDerma provides a safe and secure environment to store patient data and share information between doctors. Deployed on the NHS N3 network, and using 128-bit SSL encryption, it is fully compliant with NHS digital information governance requirements, including GDPR. As a web-based service it is fully accessible from any desktop computer in NHS Hospital Trusts in England.



'We are extremely happy with the eDerma platform. The quality is excellent and the responsiveness of the Open Medical team to our feedback has been very good. Our nurses have found it easy to use. We can use the images for education. It has allowed us to reduce locum agency spend. We would highly recommend it'

Dr Bernadette De Silva
Consultant Dermatologist

KEY OUTCOMES

 **Reduced Face-to-Face appointments by 92%**

 **Projected reduced agency spend for the department £132k**

 **Reduced referral to biopsy time for suspected cancers**

 **48 Hours Achieved target dermatology consultant assessment time**

Challenges

- Maintaining timely and efficient review of hospital ward referrals, whilst being relocated offsite in a new purpose designed department
- 20% increase in skin cancer referrals
- High consultant vacancy rates resulting in a significant locum spend for the department
- Reducing spend on see and treat, one stop 2 week wait cancer clinics, in part maintained by agency locums

Our Solution

Open Medical is a cloud-based digital health company specialising in clinical pathway design. Using a user-centred design methodology, focused on end-user needs, our team implemented a service redesign alongside the trust, using our Pathpoint eDerma digital dermatology platform, to support the entire patient pathway from initial referral (primary & secondary care) to management and discharge back to the GP.

The Pathpoint eDerma platform was used to deliver nurse-led initial triage, utilising a digital dermatoscope and iPad, to capture high-quality images of lesions prior to virtual assessment by a Consultant Dermatologist. The platform is then utilised as a clinical workflow tool to organise multiple aspects of the patient pathway including biopsy lists, MDT assessments and clinical governance assessments.

Key areas of improvement

The agreed clinical criteria, nurse-led initial triage, and high-quality image capture enabled the majority of assessments to be **completed remotely by a Consultant Dermatologist** without the need for a face-to-face appointment. This resulted in a significant direct cost saving with regards to locum spend, as well reduced indirect costs (eg. administrative costs). There was also a benefit to patients who did not need to attend an unnecessary face-to-face clinic appointment.

Data is **captured in real-time and coded** using the internationally recognised SNOMED-CT coding. As a result Pathpoint eDerma is able to support the trust with ongoing audit and quality improvement activities. This is a service we continue to support the trust with.

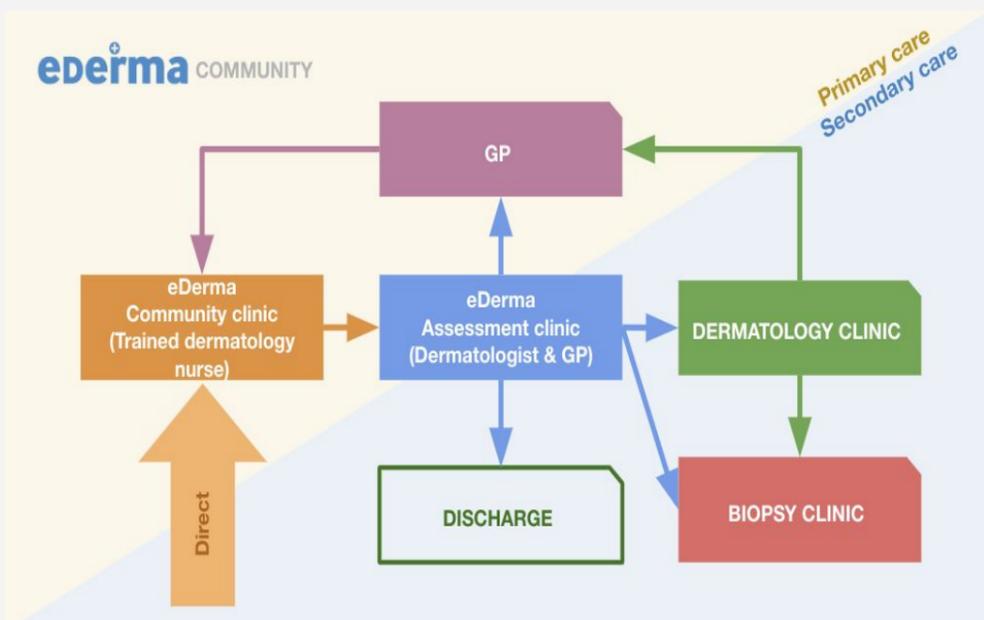
The Pathpoint eDerma system enabled the current team to improve their working practices and reduce unnecessary travel between two sites, as the platform was able to facilitate improved inpatient review of patients.

Clinicians have highlighted that the system has improved current working practices within the department, increased efficiency and reduced the number of unnecessary appointments. **96% of the 53 patients included in the survey reported satisfaction** with the newly implemented model of care, and that they would recommend the service to their family and friends.

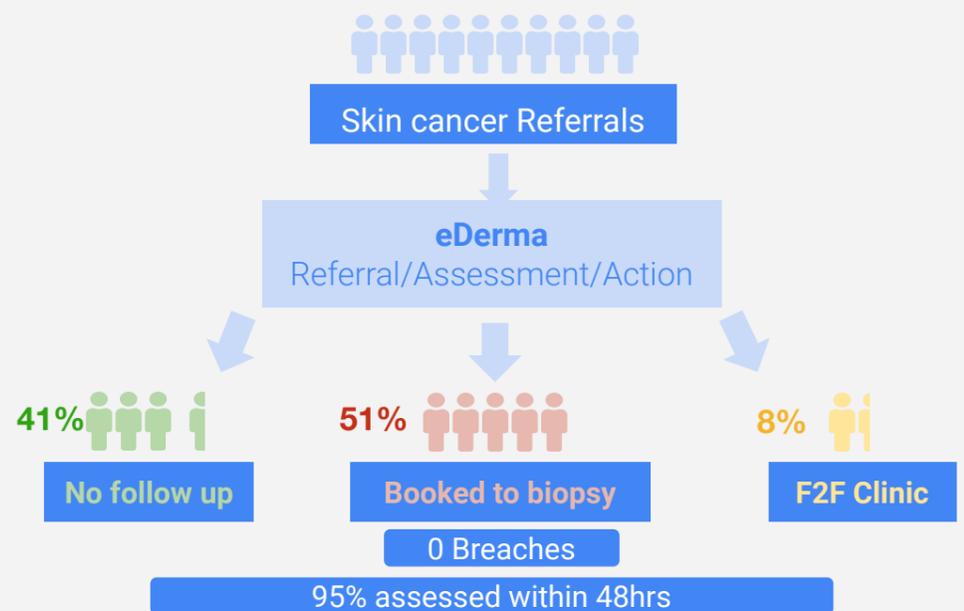
With our **built-in digital sign-on-screen patient consent**, images that are saved onto the platform and coded to specific diagnoses can be accessed at any point by members of the clinical team to support education and training.

Since the implementation of Pathpoint eDerma, the Luton Dermatology Department have become a leading example of how to implement a **sustainable digital dermatology service**.

eDerma Referral Pathway



eDerma Assessment Outcomes



eDerma Digital Consent Capture

Skin lesion referral for Rurajuhi, Clapop

Created by **Smith, Joyce** on Mon, 04/06/2018 - 21:47

Name: Rurajuhi, Clapop **Number:** 184 742 0528
Date of birth: 01/06/1948 **Hospital number:** 953416
Sex: Female

Consultant: Smith, Joyce **Original referrer:** Dr Peter Smith
Location: Clinic 1 **2WW:** Yes

Diagnosis: Basal cell carcinoma of skin **Skin type:** Type III - Darker white skin. Tans after initial burn.
Side: Left
Skin region: Skin of part of forehead **Risk factors:** Multiple atypical melanocytic naevi | History of malignant melanoma of the skin
Dimensions: 3.4 x 2.3 x 0.5 mm
Onset/Change timing: Months
Skin lesion red flags: Bleeding

Referral notes: Ut sem viverra aliquet eget sit amet tellus cras adipiscing. Lectus quam id leo in vitae turpis.... [+ SHOW MORE](#)



Consent: Photograph consent (OBTAINED)
State: Pending

PATIENT [VIEW](#) [EDIT](#)

Photograph consent (OBTAINED)

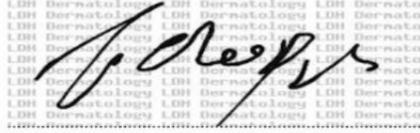
Created by **Smith, Joyce** on Mon, 04/06/2018 - 21:48

Name: Rurajuhi, Clapop **Number:** 184 742 0528
Date of birth: 01/06/1948 **Hospital number:** 953416
Sex: Female

Your doctor/nurse has determined that it is necessary or helpful to obtain photographs of your skin condition to assist with diagnosis and treatment. This will form part of your medical record and will be held and used strictly in accordance with your wishes. Photographs will only be taken and used with your consent, which can be refused or limited by you and you can also withdraw this or change it in the future. You will have the opportunity to view all images or recordings prior to signing this consent.

Please sign this form once you are happy that all of the above aspects have been explained fully to you.

I consent for the photographs to be used for direct care.
 I consent for the photographs to be used **anonymously** for research, training, and service improvement.
 I consent for the photographs to be used anonymously and with prior notice for publication.



Rurajuhi, Clapop 04/06/2018
State*
Obtained

[UPDATE CONSENT](#) [CANCEL](#)

Outcomes

Patient satisfaction

- 96% of patients strongly agreed / agreed that they were happy to see a Dermatology nurse for assessment in the eDerma clinic.
- 96% of patients would recommend the eDerma nurse assessment clinic to their friends and family.
- **100% of patients were satisfied** with having their photos reviewed by a Dermatology consultant following the nurse-led clinic.

Clinician Satisfaction

- 100% of clinicians agreed that Pathpoint eDerma improved the way that they work.
- **100% of clinicians agreed that Pathpoint eDerma has improved the efficiency** of managing patients.
- 100% of clinicians agreed that Pathpoint eDerma has reduced the number of unnecessary face-to-face appointments.

Financials & Efficiency

- **£132k potential cost saving** identified from the department moving from 5 to 9 eDerma sessions a week.
- 97% of urgent skin cancer referrals triaged via remote dermoscopic assessment within 48hrs.
- 41% of referrals discharged via remote dermoscopic assessment without the need for a face-to-face appointment
- 6 minutes average time for consultant dermatology assessment.

National Recognition

- The department was highly commended at the **11th BMJ Awards - Dermatology Team of the Year 2019** for their successful new department and pioneering digital innovation after the implementation of the Pathpoint eDerma system and model of care.



"Moving our dermatology department off-site was a daunting process as we wondered how we would continue to provide in-patient-based dermatology care. The introduction of eDerma was invaluable during the transition period and in allowing us to continue to provide an efficient and effective referrals service to the medical and surgical teams back at the hospital site."

Dr Catriona Hayes, Dermatology Specialty Registrar, Luton and Dunstable University Hospital