

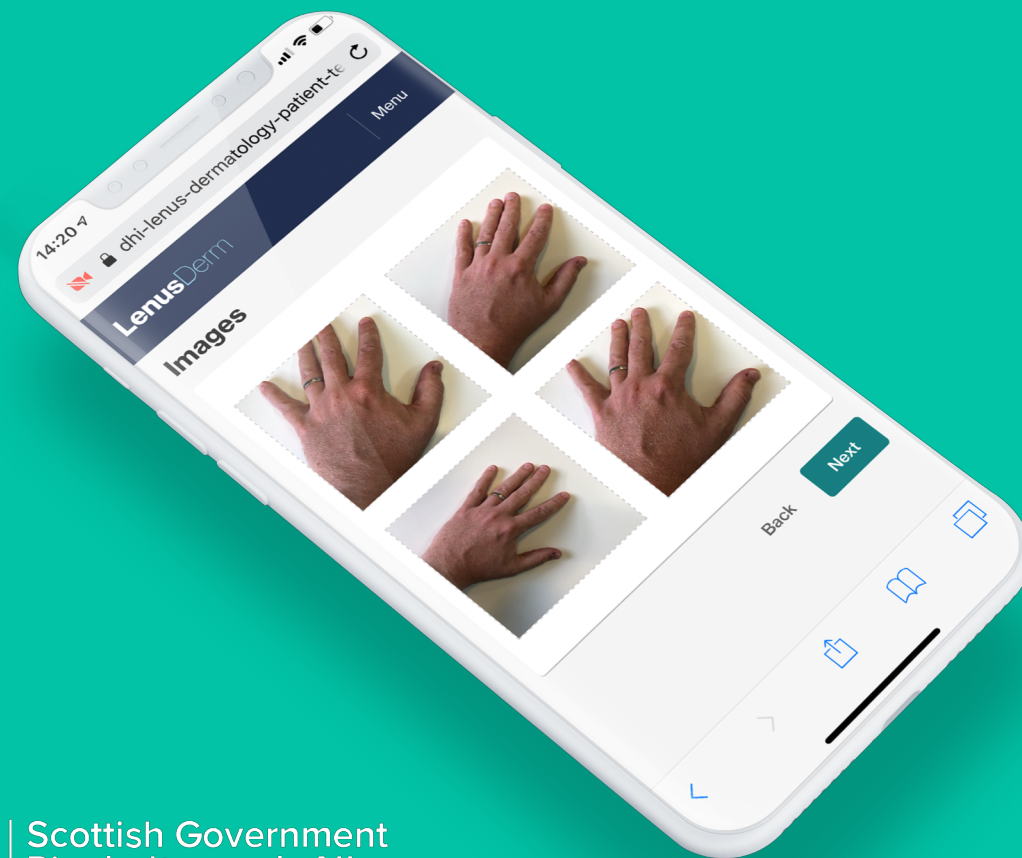
# Dermatology

Digital Outpatient Appointments

**SBRI** Government challenges.  
Ideas from business.  
Innovative solutions.

**NHS**  
SCOTLAND

 Scottish Government  
Riaghaltas na h-Alba  
gov.scot



# The Challenge

“The time has come to re-evaluate the purpose of outpatient care and align those objectives with modern-day living and expectations”

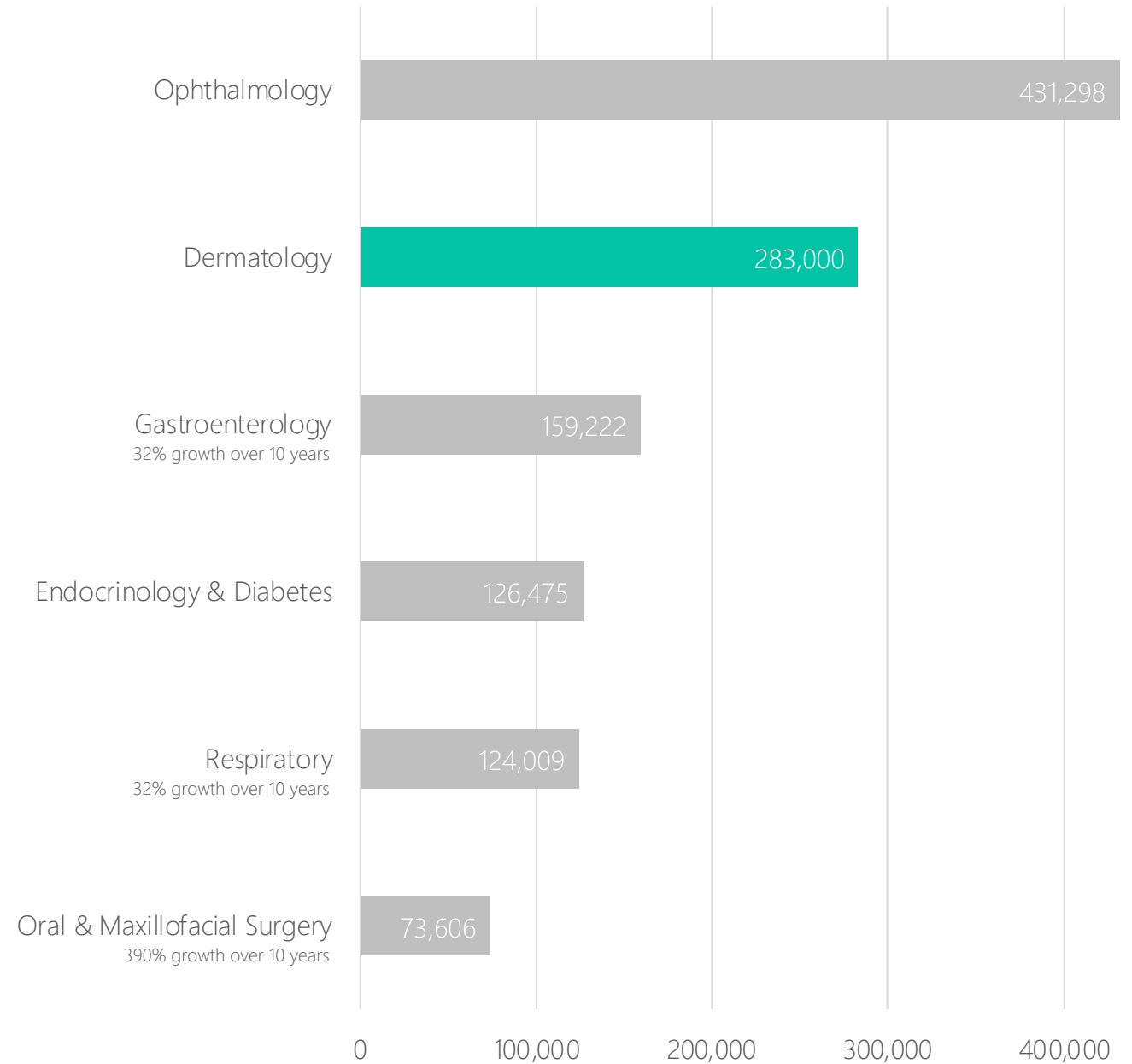
Outpatients: The Future - Royal College of Physicians Report Nov 2018

## Key Recommendations

- Alternatives to face-to-face consultations available to patients and included in reporting of clinical activity
- Clinic templates should allow for timing flexibility depending on case complexity
- All outpatient care pathways should aim to minimise disruption to patients' lives
- Clinical information should be available to clinician and patient prior to consult..
- Patients should be supported to be co-owners of their health decisions
- Patients should be able to communicate with secondary care in a variety of ways, and know how long a response will take.

# Increasing Demand

Some outpatient appointment types have grown over the last 10 years.



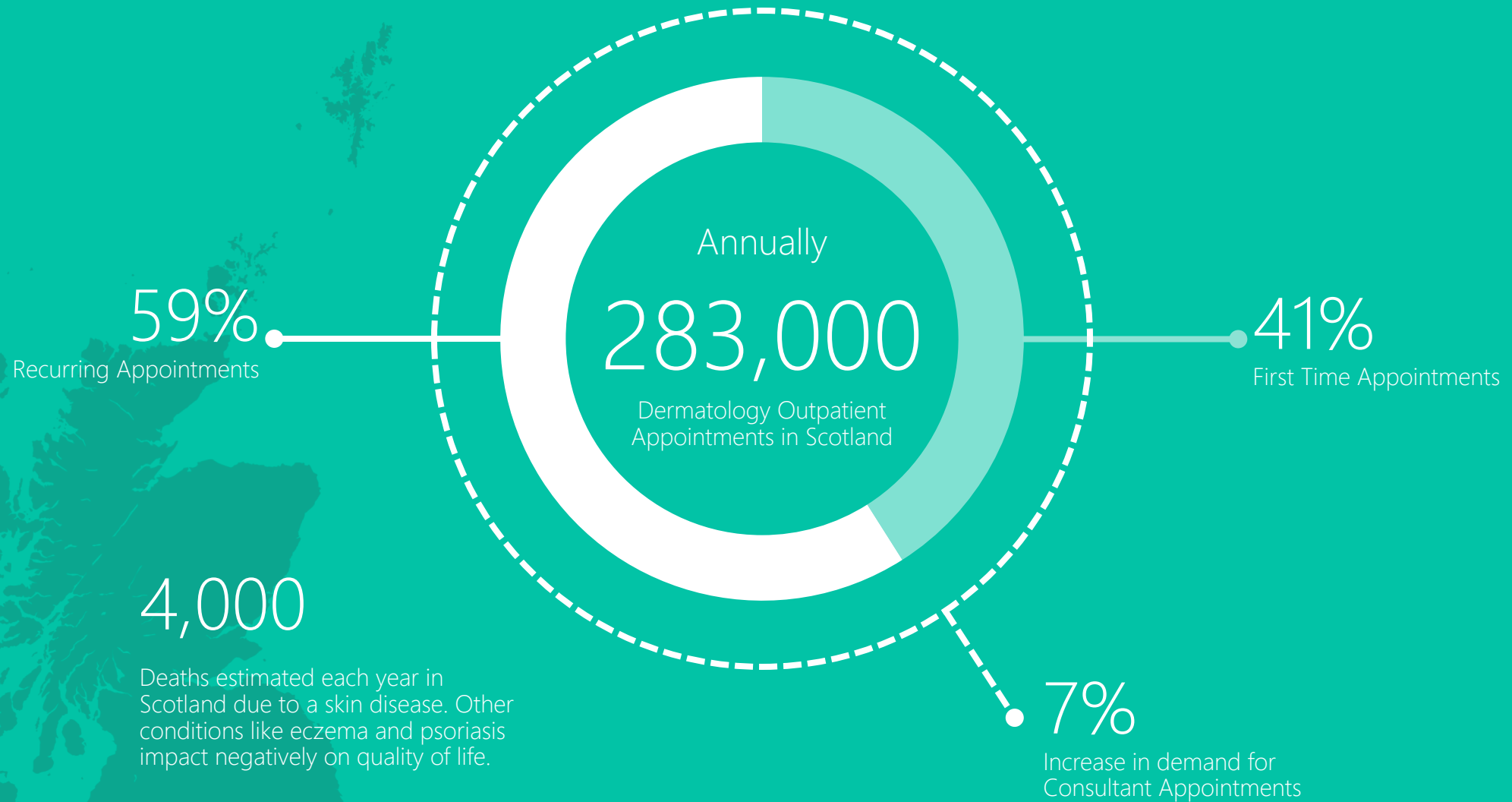
# The Opportunity

Can we change the current diagnosis on a single data point and by a real time appointment paradigm?

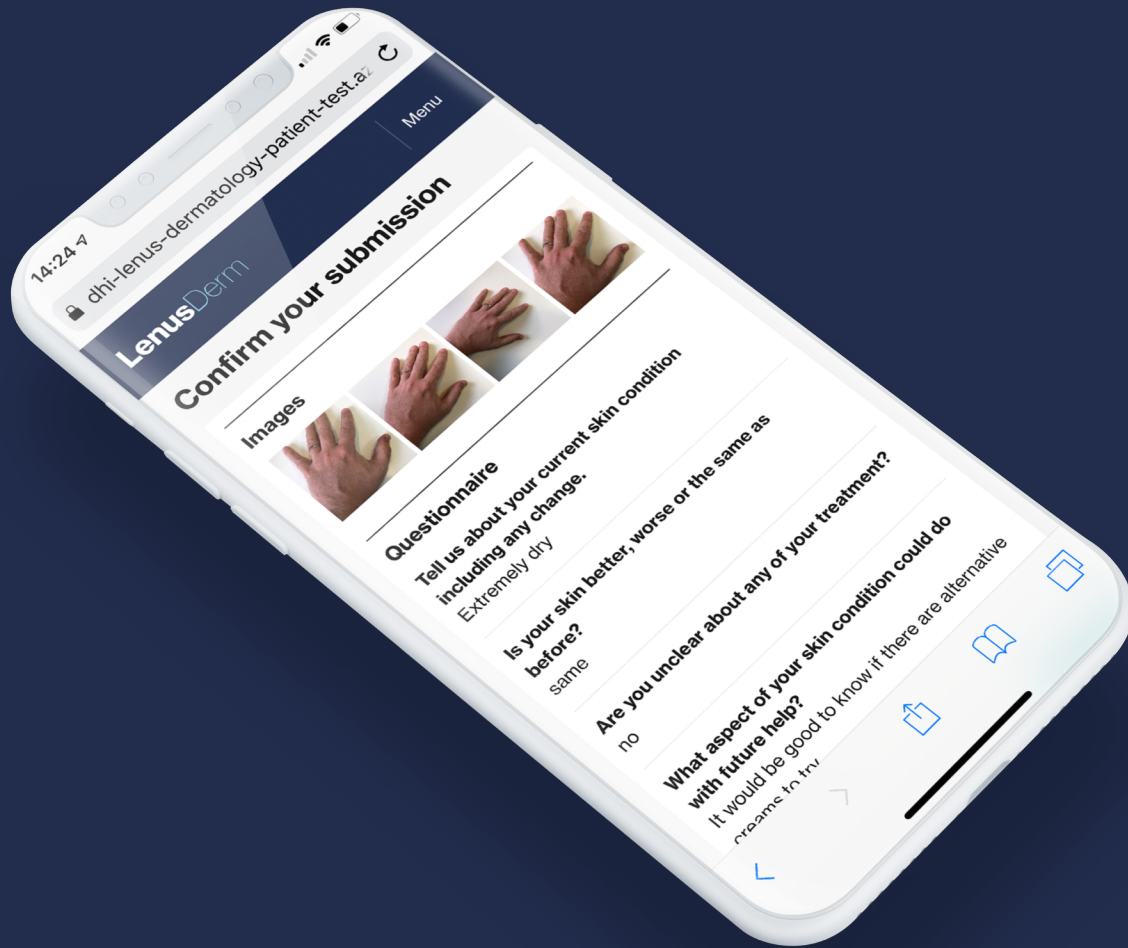
- Can a new digital service model be delivered more efficiently and safely?
- Can it deliver an improved patient experience?
- What % of outpatient appointments are suitable for digital clinic model?
- Can it integrate with existing systems to support clinical workflows and reporting?
- What conditions are appropriate for this type of service model?



# Dermatology Challenge



# Digital Appointments via asynchronous virtual clinics



- Removes the scheduling conflict - health professional and patient do not interact in real time
- Alternative care pathway for % of clinics and outpatient consultations
- Improved patient experience and reduce reliance on oral histories
- Integration to Trak important to support workflow & reporting
- Increase control and ownership of health data - a patient focused longitudinal record

# Getting Started

The digital appointment is set up in TrakCare by an administrator

Track sends a message to new system with date & time + patient ID + email address

The screenshot displays the TrakCare web application interface within an Internet Explorer browser window. The title bar reads 'SCGC-UAT-2014 - Internet Explorer'. The top navigation bar includes links for 'Home | Tools | Messages | Logout' and user information: 'User: John Costello | Location: Glasgow Royal Infirmary | Lock'. The 'TrakCare by InterSystems' logo is in the top right corner.

The main content area is titled 'Follow Up Appt' and contains a breadcrumb trail: 'Patient Find > Patient List > Patient Details > Appointment Search > Editable Letter'. Below this is a menu with options like 'Others Workbench', 'MPI', 'Urgent Man Referral', 'Outpatients', 'Outpatients WL', and 'Other WL'. A secondary menu includes 'WL Operations', 'Flexi Book', 'Ward Attenders', 'Request Casenotes', 'MR Bulk Request', and 'MR Bulk Move'. A third menu shows 'View O/S Records', 'Pt Activity', 'Pt Activity Popup', and 'My Recent Patients'. At the bottom of this menu are buttons for 'Outpatient Worklist', 'Follow Up Appt', 'Appt List', 'Next Appt', and 'Schedule'.

The patient information bar shows: 'CHI: 0109560000', 'Name: Test Two Hscpportal', 'Gender: Male', 'DOB: 01/09/1956', 'Age: 62 Yrs', and 'Phone:'. Below this is the 'Appointment Search' form. It includes fields for 'Hospital' (Glasgow Royal Infirmary), 'Specialty' (Dermatology), 'Consultant' (Nurse Gillian McCormick), and 'Appointment Type' (G R NURSE VIRTUAL ONL). There are checkboxes for days of the week (Monday through Saturday) and a 'Date' field set to '22/02/2019'. Other options include 'Interpreter Required' (checked), 'Interpreter' (Not Stated), 'Transport', 'Diary Mode' (checked), 'Print Patient Letter' (checked), and 'Edit Letter' (unchecked). An 'Authorisation for booking past guaranteed date' section has fields for 'Authorising User' and 'Authorising Password', with an 'Update' button. A 'Start Time' field and a 'Saturday' checkbox are also present. 'Find' and 'Make additional Ap' buttons are at the bottom of the form.

Below the form is a 'List of Services / Clinics' table with the following data:

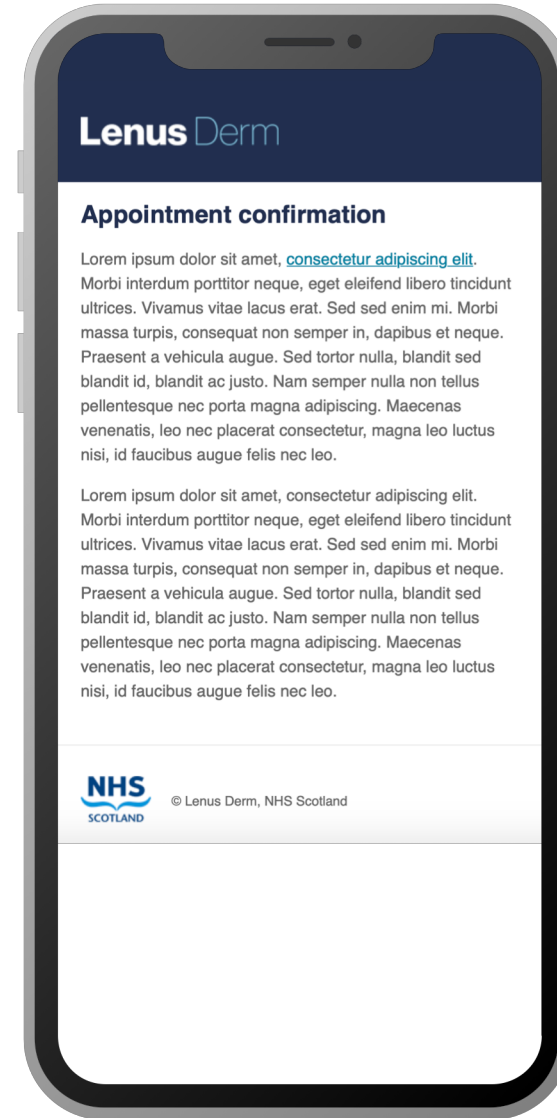
	Care Provider	Day	Date	Start Time	Specialty	Appointment Type	Overbook/Edit	Delete	Duration	Transport	Interpreter
<input checked="" type="checkbox"/>	Nurse Gillian McCormick	Friday	22/02/2019	09:00	Dermatology	G R NURSE VIRTUAL ONLINE DERM			5		Not Stated

The bottom status bar shows 'John Costello' and a zoom level of '120%'.

# Patient App: Desktop/Tablet/Mobile

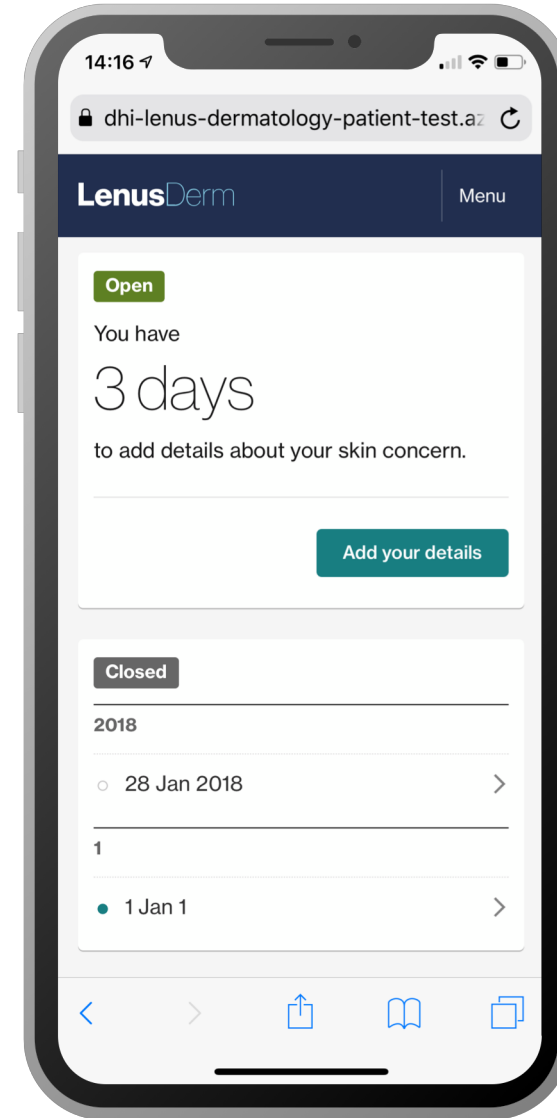
## The patient:

- Receives an email with link to the app.
- Is prompted to login or register.
- Then grants consent to share data (GDPR)
- Sets preferences for reminders (SMS/Email)



# Patient App

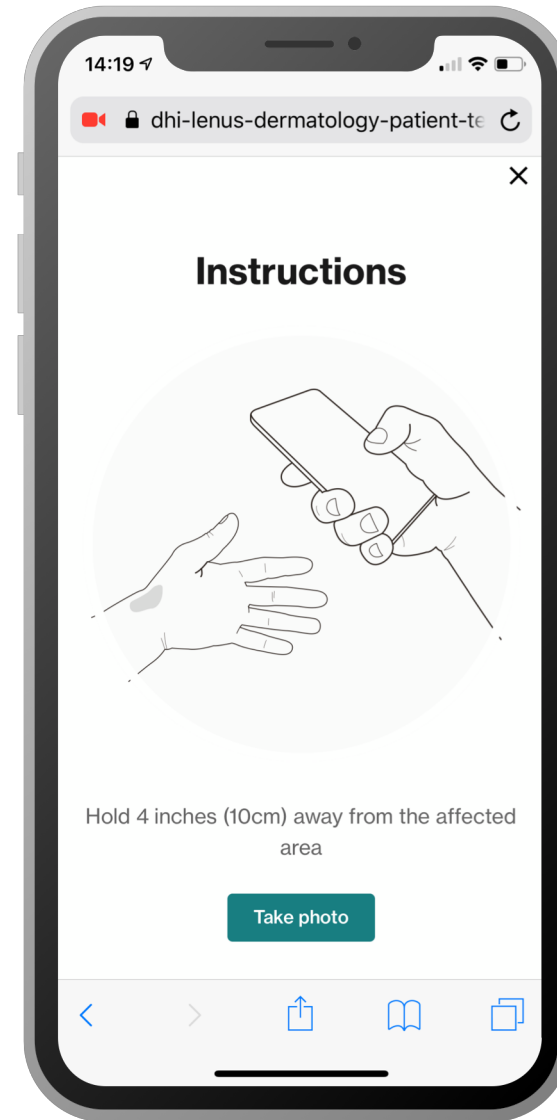
When the patient's virtual appointment window opens they can add information to send to their clinician.



# Patient App

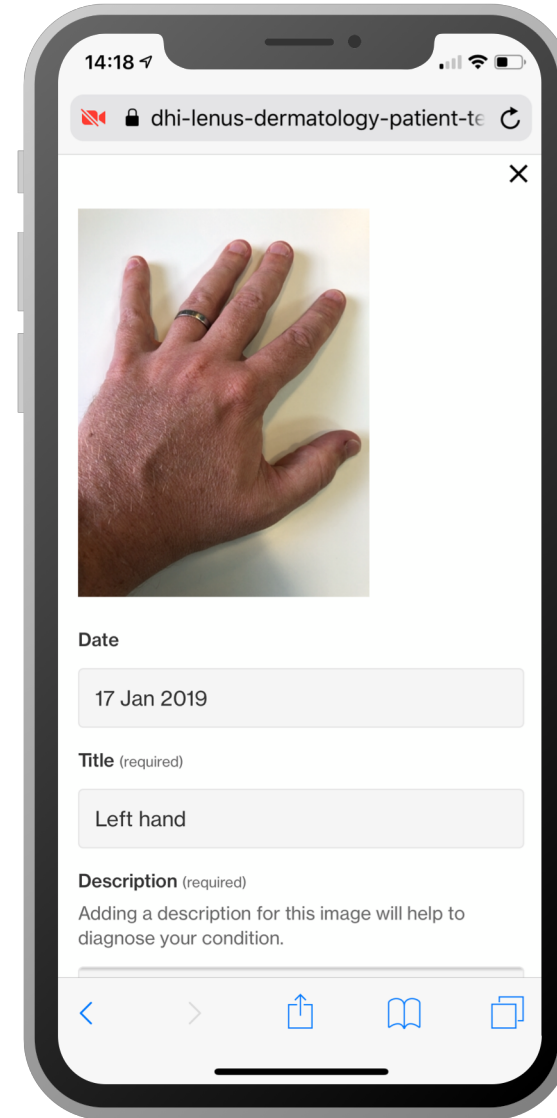
The patient can upload images using the app.

The images are sent to the data platform's FHIR API.



# Patient App

The patient can upload images using the app. The images are sent to the data platform's FHIR API.



# Patient App

The patient answers clinical questions before submitting the appointment.

14:21

dhi-lenus-dermatology-patient-te

**LenusDerm** Menu

**Questions**

1 2 3 4 5 6

How much does it trouble you? (optional)

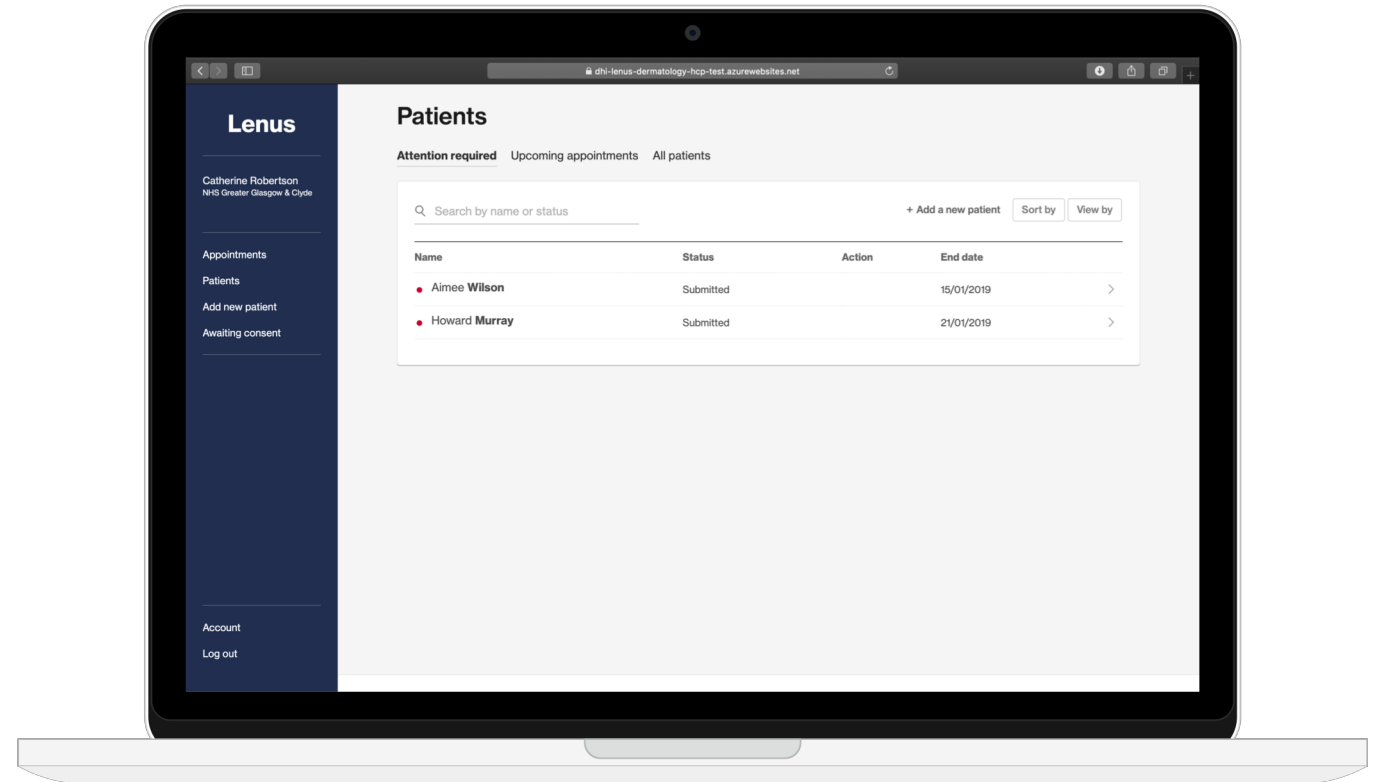
It's irritating and itchy.

Back Next



# Clinical Dashboard

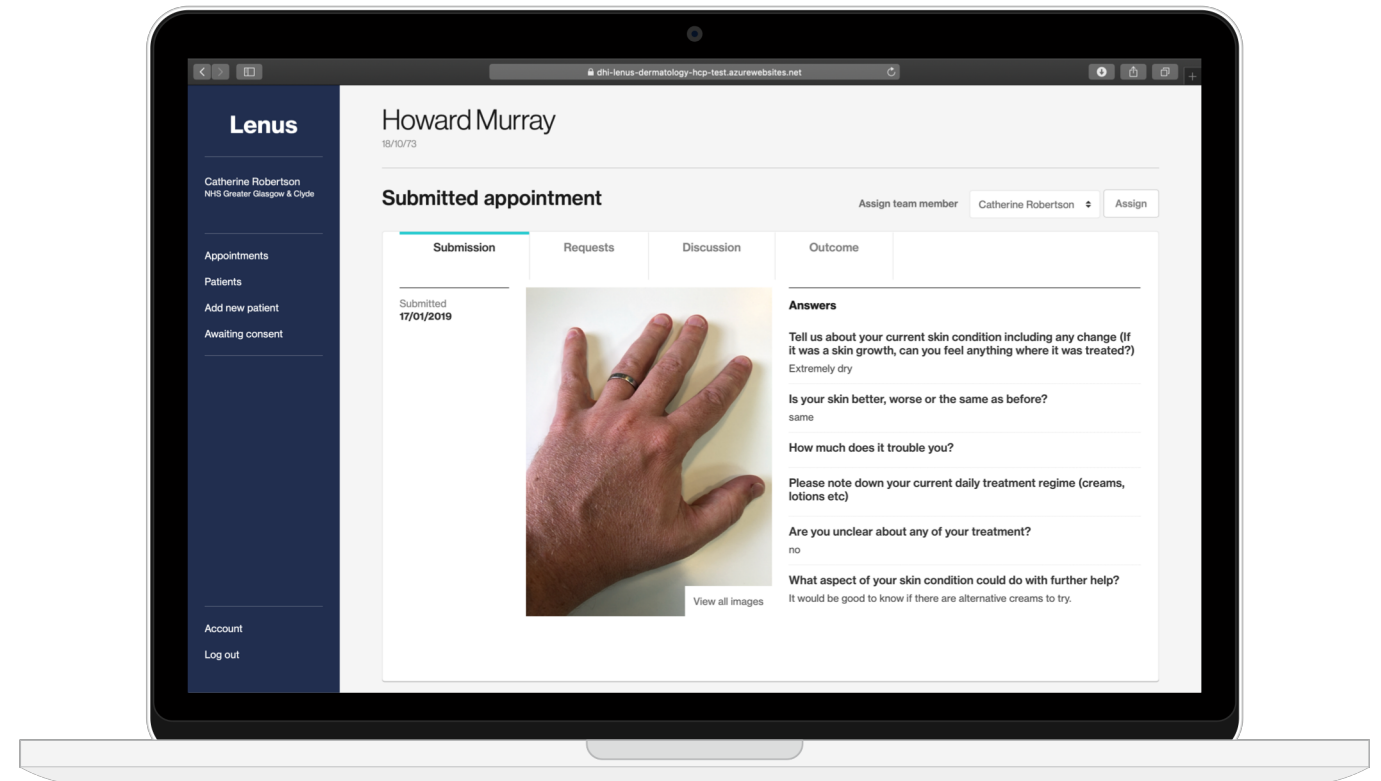
The clinician is presented with a view of patients that have recently submitted data for an appointment.



# Clinical Dashboard

The clinician uses the dashboard to review the information submitted by patients.

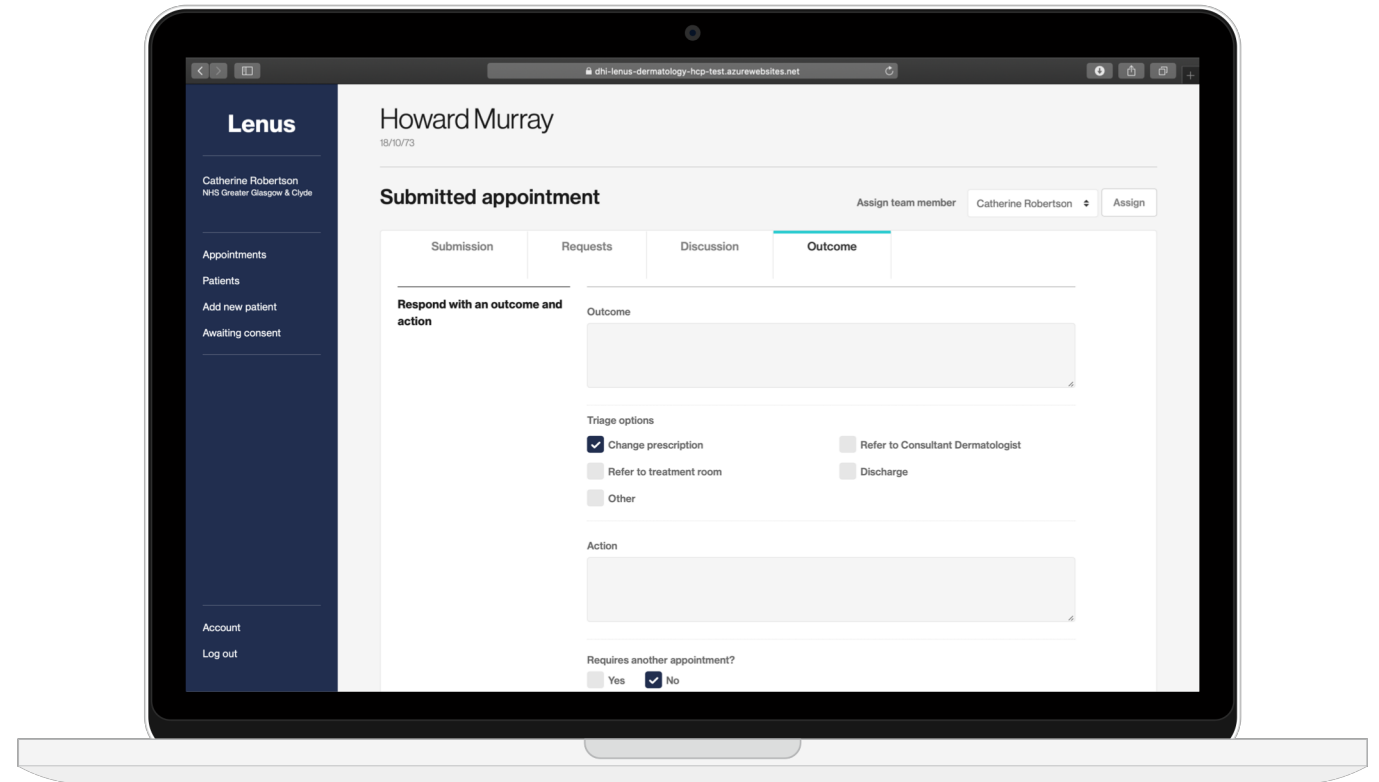
Option to request more data from patient and refer to colleague for second opinion



# Clinical Dashboard

The clinician responds to the consultation with an outcome which is shared with patient.

A PDF of the clinical interaction is automatically exported back into the patient record in EHR.



## Addressable Market

- ✓ 20%  
of appointments could be onboarded to this model now.
- ✓ 57,600  
derm appointments per year could be fulfilled using this model.

## Anticipated Benefits

### 4 minutes rather than 10

Early testing of the service highlights appointments can be conducted, on average, in 4 minutes rather than 10.



5,760

Hours of consultation time saved pa



200

Tonnes of CO<sub>2</sub>  
saved from reduced patient  
travel time pa

# Other Outpatient condition Types

Easily customise to  
meet requirements for  
other conditions.

Leverage existing  
digital components:  
identity, consent,  
notifications, FHIR data  
exchange & Trak &  
EHR integration.

Customise data  
collection and  
presentation to fit  
condition

