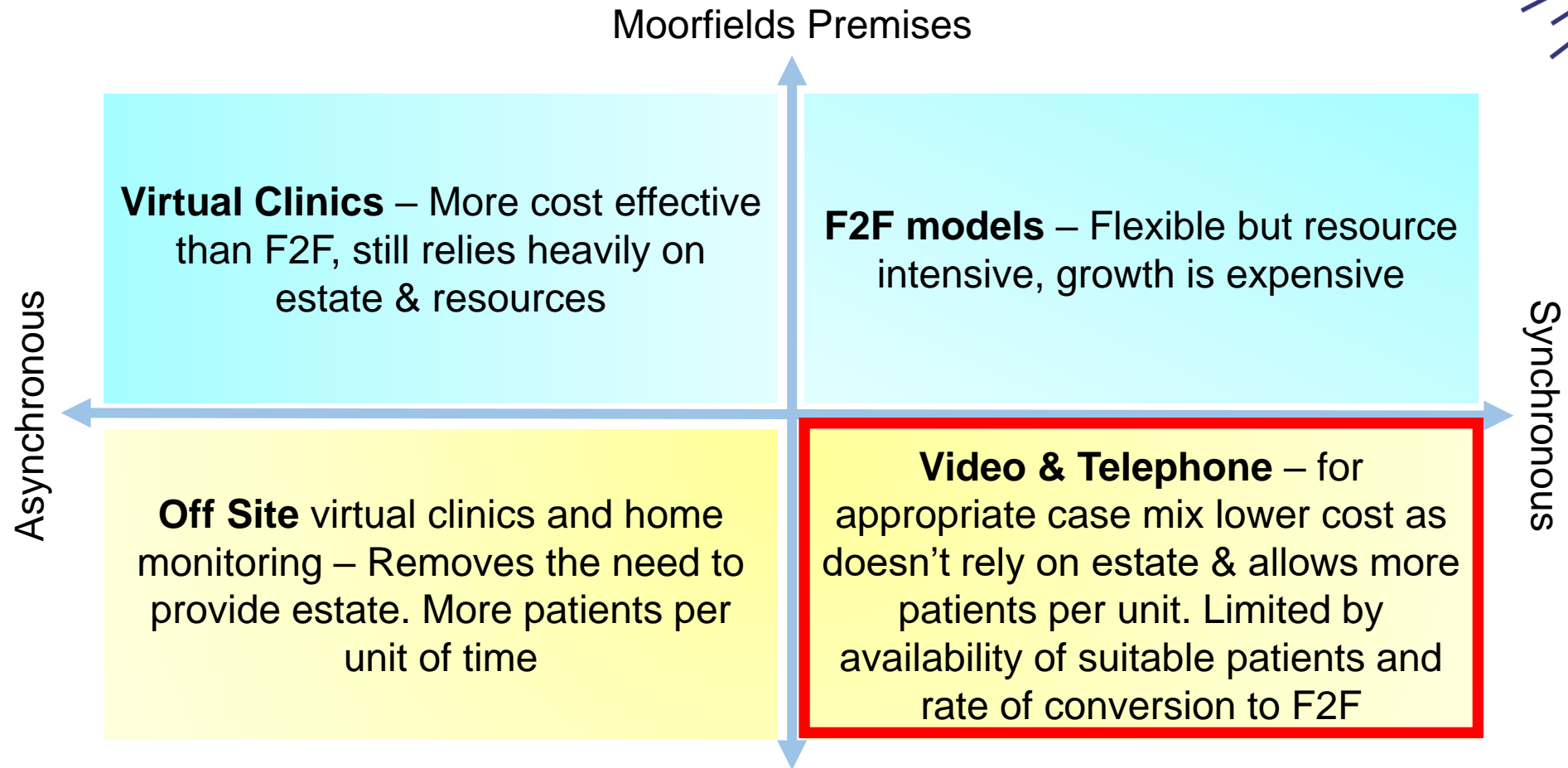# Remote care at Moorfields: innovation and scale

Peter Thomas

Chief Clinical Information Officer and Consultant Ophthalmologist
Moorfields Eye Hospital
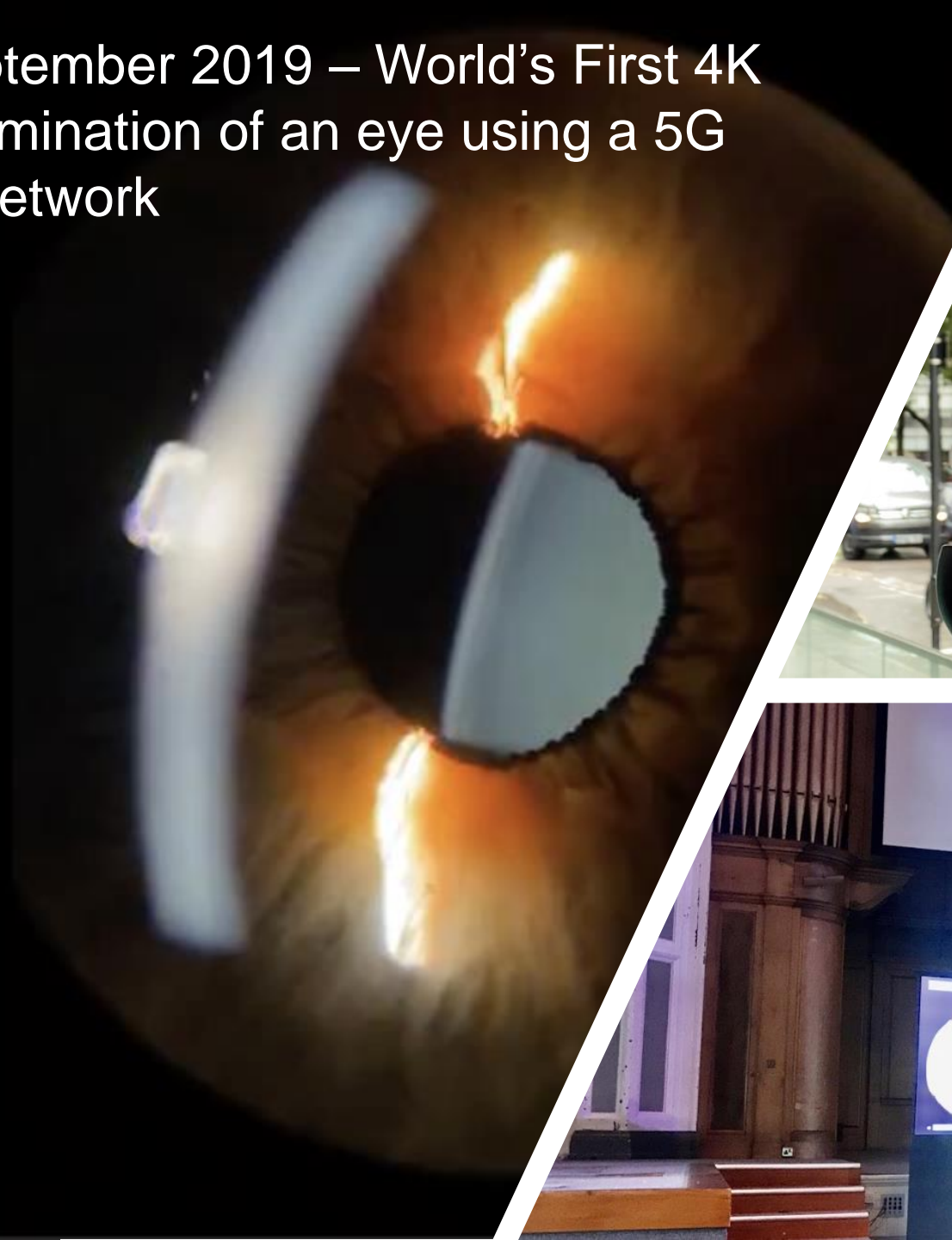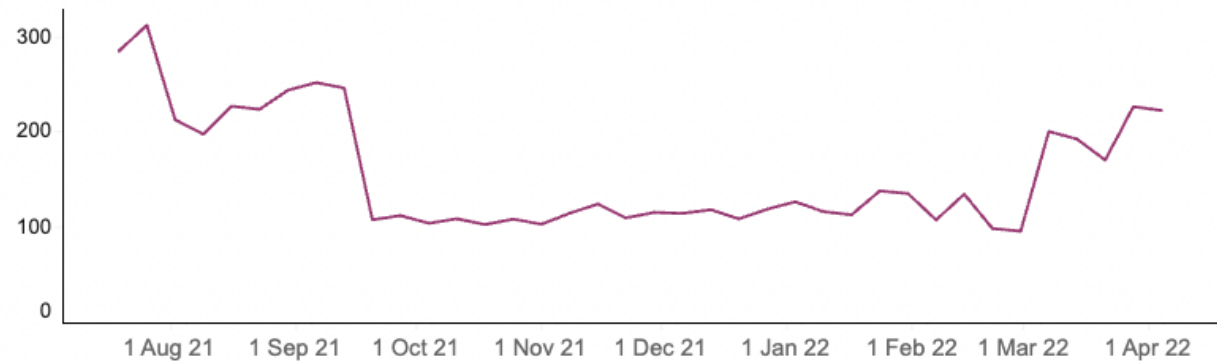
March 2023

A taxonomy of models of care

26th September 2019 – World's First 4K tele-examination of an eye using a 5G phone network

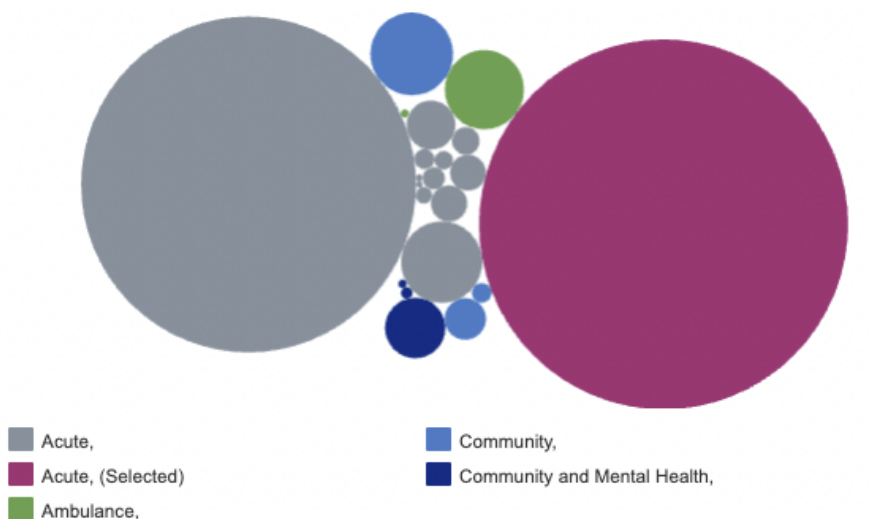# 'Number of consultations' for Moorfields Eye Hospital NHS Foundation Trust

Trend Analysis

Number of consultations for clinical specialty 'Urgent and emergency care', by week

(* denotes all)

By Specialty Level *(use chart as filter)*

Number of consultations by specialty

For 'Moorfields Eye Hospital NHS Foundation Trust', 44.1% of total activity, is available by clinical specialty.

Specialty	Count
Ophthalmology and vision related services	7,233
Urgent and emergency care	**5,935**
Corporate/Admin	3,703
Oncology / Oncology Related Services	139
Other community services	120
Genetics	58
Pharmacy and medication related	11
Neurology	8

Please note: Data are only available from 1st April 2021.

By Provider Type and Provider *(use chart as filter)*

Number of consultations, for specialty 'Urgent and emergency care'

- Acute,
- Acute, (Selected)
- Ambulance,
- Community,
- Community and Mental Health,

ℹ️ **View by Provider** *(use as a filter)*

Moorfields Eye Hospital NHS Foundation Trust
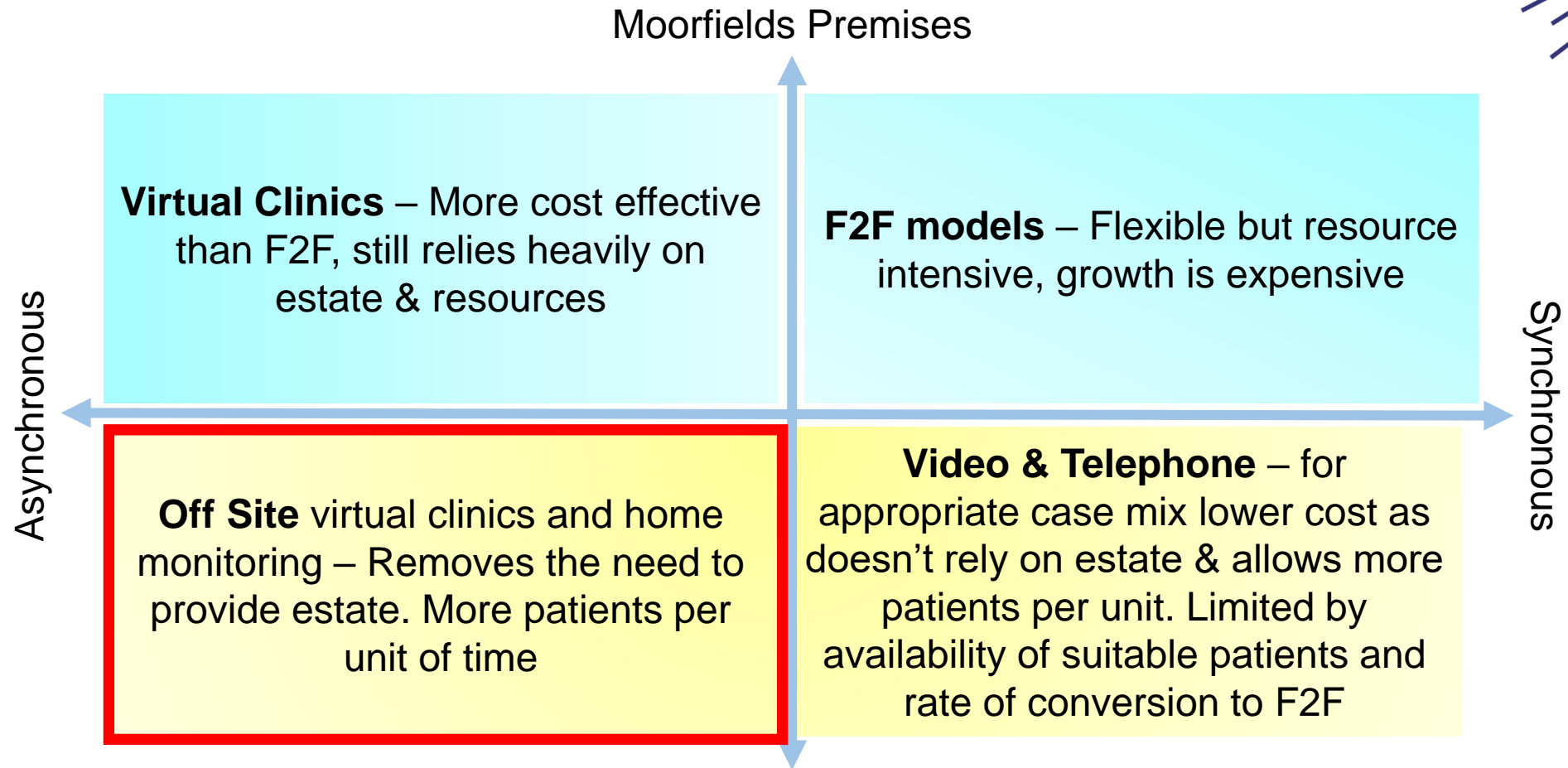
Number of consultations across all clinical specialties

204 flights

4443 Km
2761 Miles

LONDON

NEW YORK

	A&E video	Outpatient video	Outpatient telephone	Total	Equivalents
Travelling distance saved (km)	246,316	241,542	926,436	1,414,294	1.8 times to the moon and back
Travelling time saved (hours)	9,983	9,604	36,837	56,424	6.4 years of life
Travelling expenses saved (£)	£68,132	£65,446	£251,020	£384,599	10.9 years of average UK salary
Volume of CO2 emissions saved (kgCO2)	21,226	20,416	78,306	119,948	51,103 litres of petrol burned

PDF [1 MB]   Figures   Save   Share   Reprints   Request

Safety of video-based telemedicine compared to in-person triage in emergency ophthalmology during COVID-19

Ji-Peng Olivia Li • Alice A.P. Thomas • Caroline L.S. Kilduff • Abison Logeswaran • Rishi Ramessur • Anton Jaselsky • et al. Show all authors

PlumX Metrics

Moorfields
Eye Hospital
NHS Foundation Trust

NHS

A taxonomy of models of care

Moorfields Premises

Virtual Clinics – More cost effective than F2F, still relies heavily on estate & resources

F2F models – Flexible but resource intensive, growth is expensive

Asynchronous

Synchronous

Off Site virtual clinics and home monitoring – Removes the need to provide estate. More patients per unit of time

Video & Telephone – for appropriate case mix lower cost as doesn't rely on estate & allows more patients per unit. Limited by availability of suitable patients and rate of conversion to F2F

Non-Moorfields Premises

Moorfields
Eye Hospital
NHS Foundation Trust

NHS

Smartphone-based vision testing

Source: alleye.io
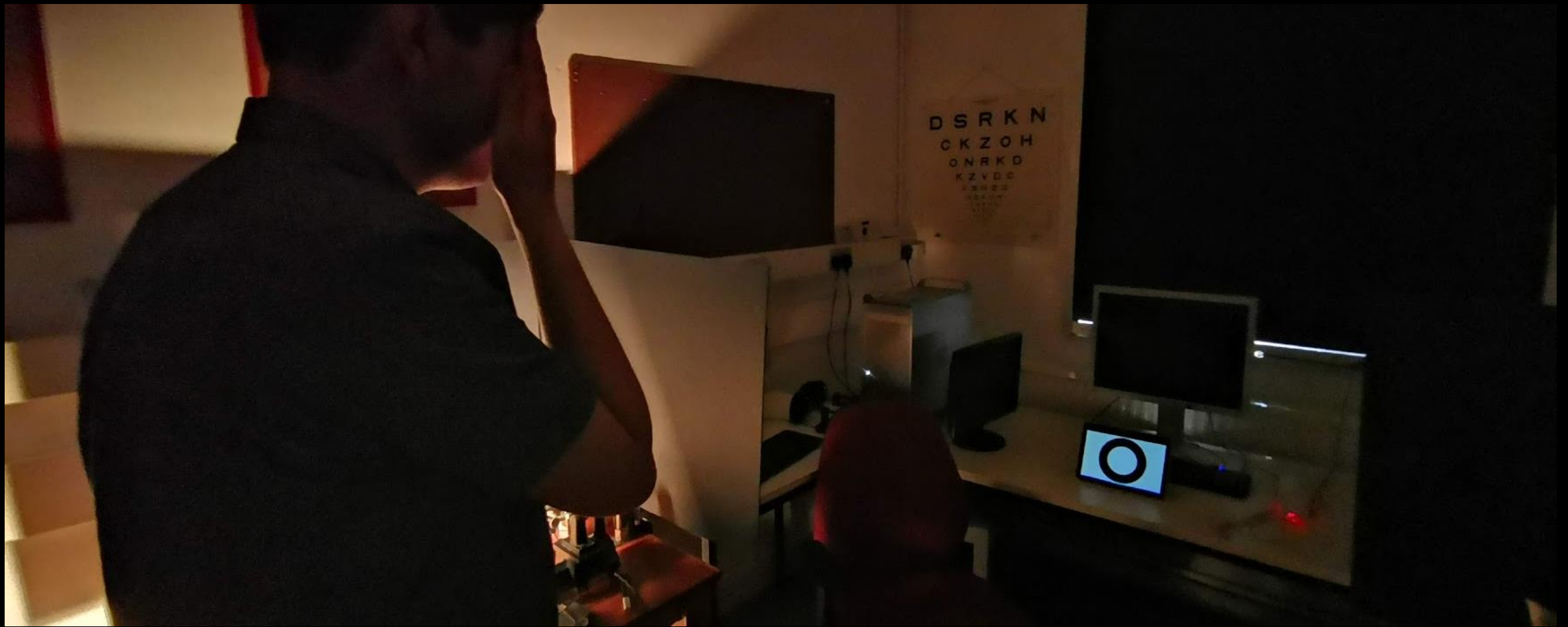
0-1 secs

1-2 secs

59-60 secs

Raw → Fitted

Horizontal Gaze Position, *mm*

d0 A_{mm}=0.09
d1 A_{mm}=0.11
d2 A_{mm}=0.13
d3 A_{mm}=0.16
d5 A_{mm}=0.22
d6 A_{mm}=0.26
d12 A_{mm}=0.41
d15 A_{mm}=0.52
d30 A_{mm}=1.03
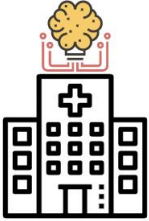d40 A_{mm}=1.09

Time, secs

Moorfields
Eye Hospital
NHS Foundation Trust

NHS
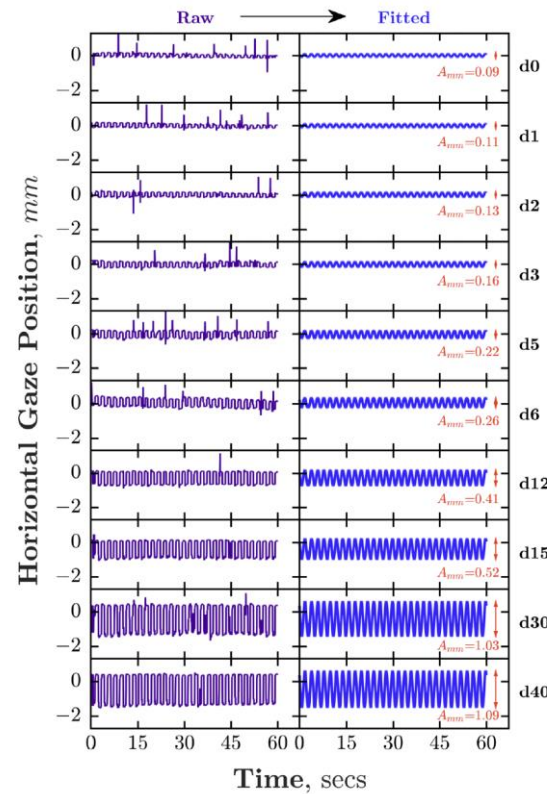
How to scale?

There are **two** conceptual types of hospital that digital transformation could realise

The Smart Hospital

A physical hospital in which care is improved and made more efficient by technology.

The operational model of a smart hospital is very similar to that of a traditional hospital.

Conservative digital ambition.
Limits growth with fixed patient pool.
Does not fully utilise financial investment.
Some benefits are not achieved unless services can be scaled.
Glass ceiling to innovation capability.

The Digital Hospital

An organisation that delivers care via digital channels. Best understood as a telemedicine organisation, e.g. Babylon Health.

The operational model of a digital hospital is likely to be quite different to that of a traditional hospital.

Decouples service delivery from real estate and physical interaction.
Can achieve growth by scaling services within its operational model, and is best placed to take advantage of technology and analytics.
Forms partnerships with other providers to support end-to-end care.

Mercy Virtual Care Program
About Mercy

Home > About Mercy > Mercy Virtual Care Program

Mercy Virtual Care Services

Mercy Virtual delivers virtual care services to 600,000 patients across seven states (Arkansas, Kansas, Missouri, North Carolina, Oklahoma, Pennsylvania & South Carolina), improving patient outcomes and access while reducing the total cost of care. Operating 24 hours a day and is staffed with more than 300 clinicians, it's often called a *hospital without beds*.

Delivering Care Wherever It's Needed

Mercy's virtual care program creatively combines people and technology to extend Mercy's reach and services well beyond the walls of doctors' offices, hospital campuses and other traditional facilities.
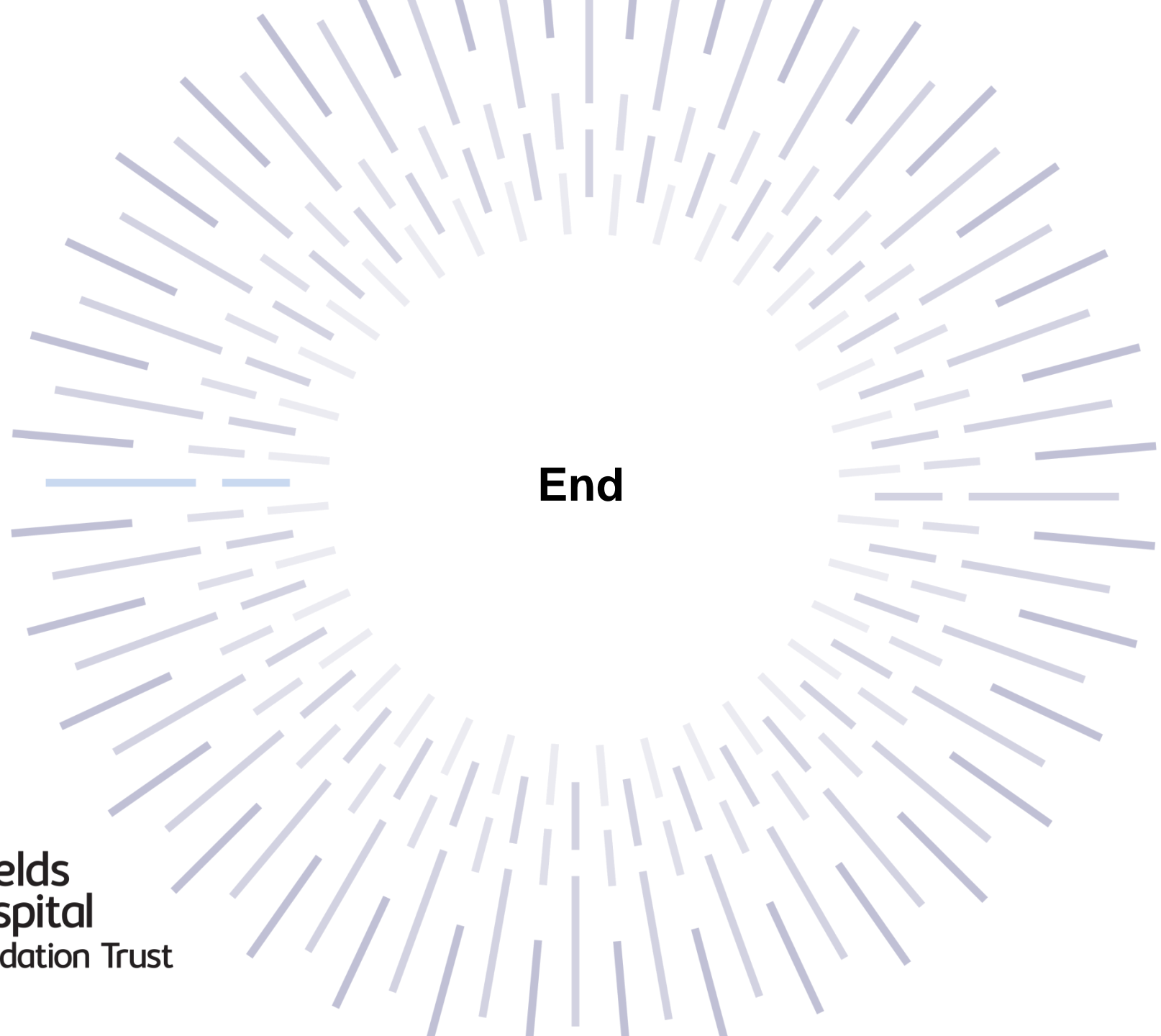
By studying the impact of new approaches and then putting new technologies to the test, Mercy ultimately hopes to provide better care through more convenient and lower-cost locations.

Mercy Virtual Care Center

The first of its kind, Mercy Virtual Care Center began operating in October 2015 without a single patient in the building.

Virtual care is delivered using highly sensitive two-way cameras, online-enabled instruments and real-time vital signs, allowing clinicians to "see" patients. Patients may be in one of Mercy's traditional hospitals, a doctor's office, or, in some cases, the patient's own home.

NHS

End