The Future of Technology in Social Care Series

Casson Consulting
Encouraging innovation in social care

skillsforcare

Digital
Social Care

NCF
THE NATIONAL CARE FORUM

House Keeping

- This webinar is being recorded

- Attendees are on mute and can't be seen

- Please use the Q&A function to ask questions.

- On a phone, tap the screen to see the controls – choose More and then Q&A

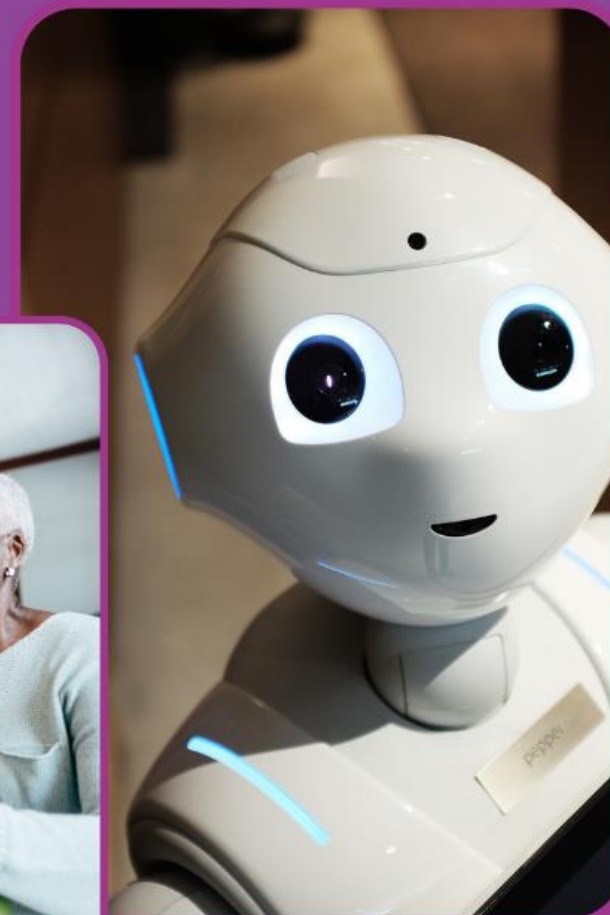- You will get access to the recording and the presentation (inc links)

Agenda

Time	Agenda Item	Speaker
1:00 – 1:10	Welcome and Overview	Daniel Casson
1:10 – 1:30	Levelling up dementia care through use of AI technology	Cheryl Baird, Orchard Care Homes and Tandeep Gill, Painchek
1:30 – 1:50	An AI platform combining Virtual Wards and D2A to solve the Healthcare crisis	Kelvin Summoogum, MiiCare
1:50 – 2:00	Information about the NHS AI Lab	NHS AI Team
2:00 – 2:25	Q&A session for the panel	All
2:25 – 2:30	Close	Daniel Casson

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PainChek
Intelligent Pain Assessment

Levelling up dementia care through use of AI technology

Tandeep Gill, PainChek
Cheryl Baird, Orchard Care Homes

UNDERSTANDING THE POWER OF ARTIFICIAL INTELLIGENCE (AI)

- AI has the potential to transform social care

- AI needs to address some important issues in social care

- AI a member of the team

- AI allowing allows focus on 'human superpowers':

Critical Thinking

Communication

Collaboration

Creativity

PAIN MANAGEMENT CHALLENGES

- ## Difficulties in assessing Pain
  - o Complex
  - o Dynamic
  - o Multidimensional
  - o Subjective

- ## Education and Training
  - o Staffing capability
  - o Inconsistency of training

- ## Reporting and Documentation

Up to **80%** of people in aged care experience chronic pain[1]

More than **70%** of people in aged care have dementia[2]

Over **50%** of people living with dementia have undetected and untreated pain[1]

1 Aged Care Awareness
2 CPEC London School Of Economics Nov 19
3 Carter, D (2015) Dementia and Homecare: Driving Quality and Innovation by the UK Homecare Association

REAL STORIES – ORCHARD CARE HOMES

What issues were present prior to bringing in PainChek?

What was you perception of AI prior to discovering this system?

What are the main benefits to residents?

48% reduction in 'When Required' medication in one year

6% reduction in Antipsychotics across estate

44% reduction in Medication Incidents

10 hours per month time saved assessing pain

16% reduction in falls due to promptly identifying pain

What are the care givers perceptions to AI assisted technology such as PainChek?

ORCHARD CARE

PainChek
Intelligent Pain Assessment

Tandeep Gill
tandeep.gill@painchek.com

Cheryl Baird
Cheryl.baird@orchardcarehomes.com
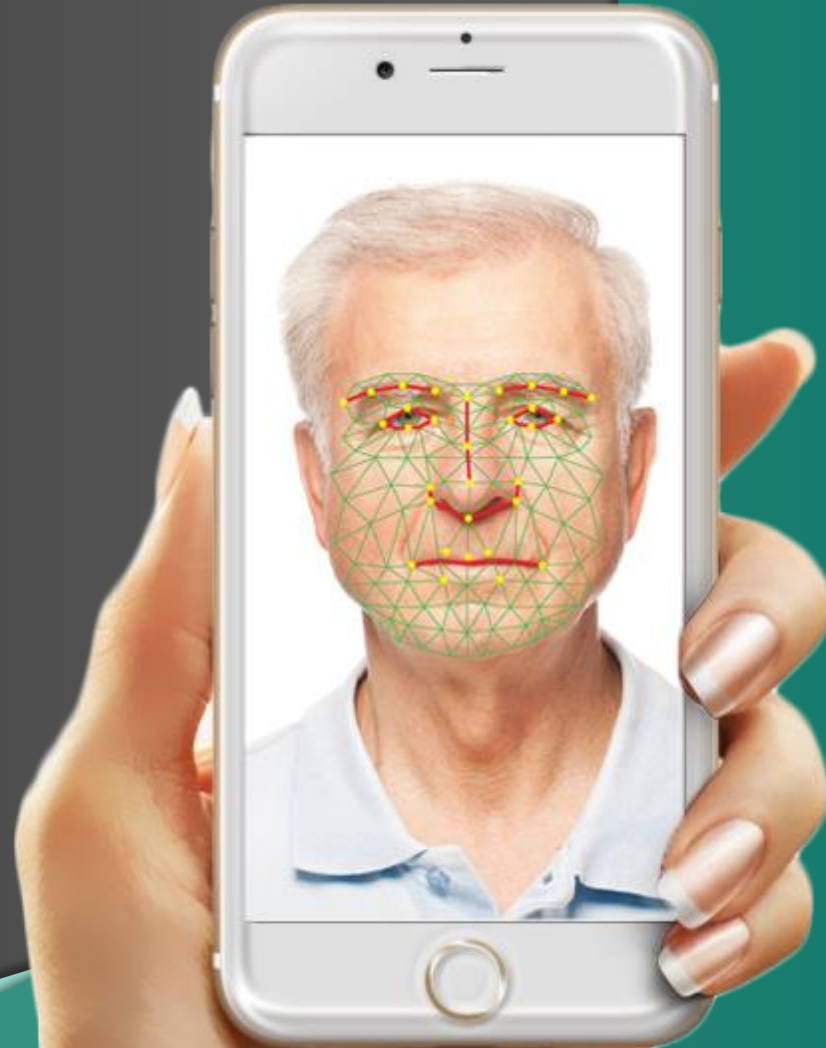
Available on the App Store

ANDROID APP ON Google Play

An AI platform combining Virtual Wards and D2A to solve the Healthcare crisis

Mission

To transform **Urgent** and **Emergency** care services across the country by reducing the **length of stay** in hospitals through **Virtual Wards** and **Discharge to Assess**.

The problems we are focusing on

BED OCCUPANCY

26%

Increase in general and acute bed occupancy between 2020 and 2022, and averages 90% in some NHS trusts

AVOIDABLE HARM & MORTALITY

50%

Increase in avoidable harm and mortality rates due to unplanned A&E attendances and winter illnesses

HOSPITAL DISCHARGE

13k

Beds across the NHS are occupied by patients who are fit to be discharged, due to a lack of step down pathways

ELECTIVE BACKLOG

>52wks

Backlogs and significant pressures dealing with high-volume low-complexity cases (**HVLC**)

ISOLATION & INEQUALITY

4.3m

Who are estimated to have zero basic digital skills

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Technology is already being used to unlock huge benefits
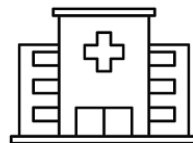
Virtual Wards

help unlock clinical capacity and flow through the system

Cut Costs

Saving the NHS **£2,532 per day** for each early discharge to one of the 3 pathways

Re-admissions

70% reduction in hospital re-admissions

Home visits

3x less likely to require a home visit after discharge

The Big Players are already using technology

Somerset Integrated Care System

Kent and Medway Integrated Care System

Bedfordshire, Luton and Milton Keynes Health and Care Partnership

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A digital health **solution** focusing on very specific areas of care to solve the elderly care crisis
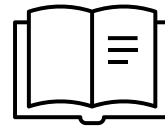
CHRONIC CONDITIONS

- Diabetes
- Dementia
- Frailty
- UTI
- Falls

VOICE ASSISTANT

- Meds adherence
- Companionship
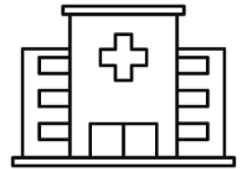- Personal safety
- Entertainment
- Reminders

DIGITAL HEALTH RECORD

- Centralised and comprehensive digital health record
- Share health record with clinicians, carers and family members

DIGITAL THERAPEUTICS

- Sleep therapy
- PTSD
- Depression
- Anxiety
- Physical wellness

HOSPITAL AVOIDANCE

- Virtual Wards – treat at home
- Remote monitoring
- Reduced hospital visits
- Early Discharge

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The solution we built to solve these problems, comprising 3 simple components

MONICA

2. A DIGITAL HEALTH COACH

Our customers receives an IoT device (our cube) which hosts **Monica,** the health **voice assistant,** designed to interact with the user and motivates them to have a **healthier** lifestyle and be their best self through personalised digital health **therapies** for sleep, exercise, etc.

3. AI POWERED HEALTH DIAGNOSTIC TOOL

AI

We collect the **health data** of our users and feed these into our **machine learning algorithm** for the early detection of health morbidities and to help them better manage their chronic conditions
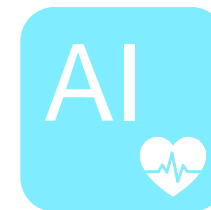
1. A HEALTH NAVIGATOR FOR CLINICIANS

A dashboard tracking the health and wellbeing of a user and making this data available to those who care about your health. Also available as a mobile APP

ANDROID APP ON Google play

Available on the App Store

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What YOU could achieve

MiiCare offers a full stack solution to provide innovative mental, physical and social care

Acute Resource Utilisation	Risk Management & Preventative Care	Hospitalisation Prevention	Utilising & Upskilling Staff
Strain on emergency Services reduced + Increased bed capacity through D2A	**Significant Reduction in UTI's, Infections and Falls**	**Prevent hospitalisation by extending independence at home by 8 months**	**Efficient staff utilisation through evidenced prompts + Digital solution training**

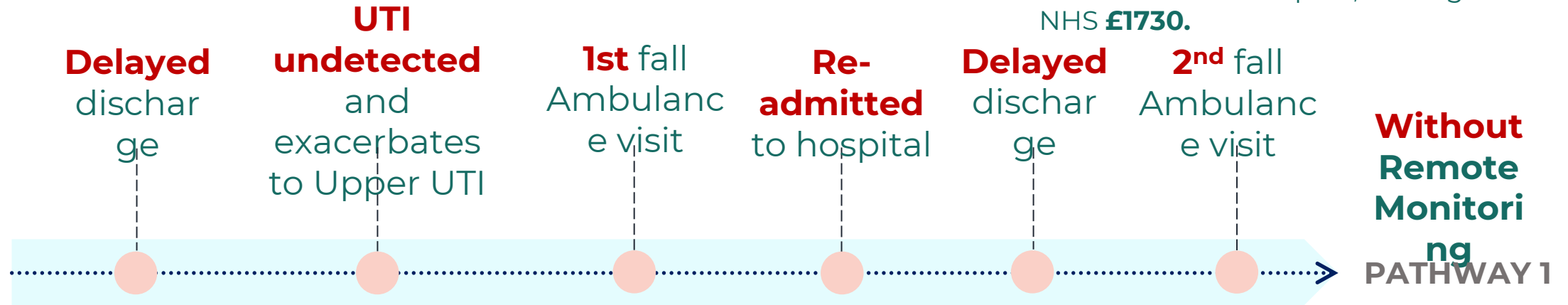**Happy Workforce. Healthy Patients. Improved NPS Score.**
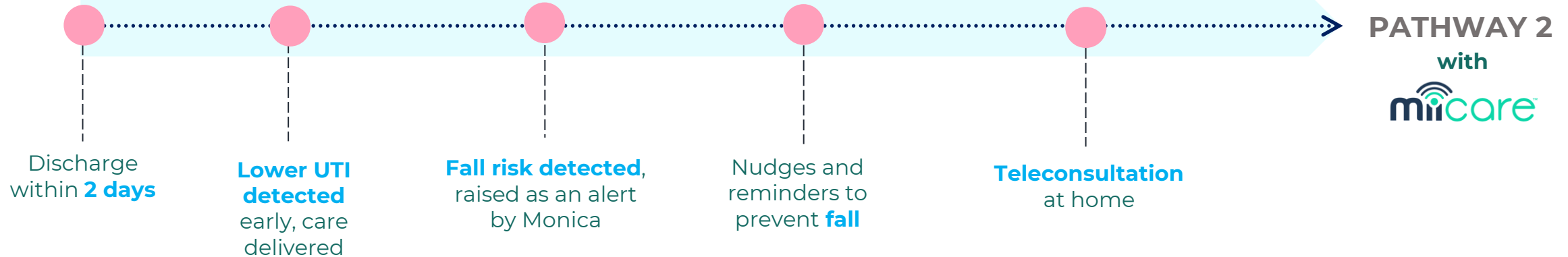
The user journey

Vivienne

Vivienne lives alone. She suffers from **chronic UTI** infections, and had **three falls** in one year, all landing her in the hospital. She was treated overnight for the infection in hospital, costing the NHS **£1730.**

Delayed dischar ge

UTI undetected and exacerbates to Upper UTI

1st fall Ambulanc e visit

Re-admitted to hospital

Delayed dischar ge

2nd fall Ambulanc e visit

Without Remote Monitori ng

PATHWAY 1

Hospital Admission

PATHWAY 2

with

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Discharge within **2 days**

Lower UTI detected early, care delivered

Fall risk detected, raised as an alert by Monica

Nudges and reminders to prevent **fall**

Teleconsultation at home

We are already creating value for
our customers

1638

Bed days saved over 6 months

50%

Reduction in home visits

65%

Reduction in hospital readmissions

£2,900

Reduction in costs per month per user

Somerset Integrated Care System

Bedfordshire, Luton and Milton Keynes
Health and Care Partnership

Bracknell Forest Council

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Our Partners
4 ICSs, 16 LA's and 10 Private Care Providers

Please chat with us, and hear what health advice our voice AI 'Monica' may have for you, from your voice

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UK

USA

The NHS AI Lab

The NHS AI Lab

Accelerating the safe adoption of artificial intelligence in health and care

Do you have an idea for an AI project?

Help the AI Lab develop AI solutions for your ideas or challenges

Artificial Intelligence (AI) has the potential to make a significant difference in health and care settings through its ability to analyse large quantities of complex information. We're already seeing great applications of AI technology, and more work is underway to fully harness its benefits and use AI safely and ethically at scale.

https://transform.england.nhs.uk/ai-lab/

The Artificial Intelligence in Health and Care Award

The AI Award supports technologies across the spectrum of development from initial feasibility to robust evaluation.

AI Skunkworks

The Skunkworks team helps the health and care community experiment with AI projects and develop capability.

AI Imaging

The NHS AI Lab is supporting the development of imaging technology; from mechanisms used to safely collect and share data to validating AI imaging software.

AI Regulation

We are running programmes to enable a world-leading, safe and robust regulatory ecosystem for the development and deployment of AI technologies.

AI Ethics

We are integrating ethics into the AI life cycle in a patient-centred way to ensure the ethical and effective adoption of artificial intelligence in health and care.

All programmes

See a summary of all the programmes within the NHS AI Lab.

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AI in Social Care

Understand AI

CASE STUDY
Remote intelligent monitoring and predictive analytics to support people in their optimal care setting

London Borough of Bexley

Manage change

Understand AI

CASE STUDY
Acoustic monitoring integrated with electronic care planning

Friends of the Elderly, Allycare and KareInn

Manage change

Understand AI

CASE STUDY
Predictive analytics to assess risk and trigger care interventions

Cera Care - Concern Predictor

Manage change

Understand AI

CASE STUDY
Intelligent monitoring for proactive care

Birdie & Medacs Healthcare

Manage change

Understand AI

CASE STUDY
Remote monitoring of vital signs

Lifelight and Hampshire Hospitals NHS Foundation Trust

Manage change

Understand AI

CASE STUDY
Remote monitoring for early detection of respiratory conditions

Feebris, Havering Health and Care City

Manage change

Understand AI

CASE STUDY
Assessing pain in people with dementia who cannot self-report

PainChek case study

Manage change

Understand AI

CASE STUDY
User-centred service design via free text analytics

London Borough of Islington

Manage change

Understand AI

CASE STUDY
Predictive analytics: responding to a post-COVID-19 world

Worcestershire County council

Manage change

Understand AI

CASE STUDY
Joined-up demand analysis for health and care

City of Wolverhampton Council

Manage change

Understand AI

CASE STUDY
Predictive analytics triggering workflows to support carers, prevent falls and reduce loneliness

Nottinghamshire County Council

Manage change

Understand AI

CASE STUDY
Analytics and decision support to improve workforce retention
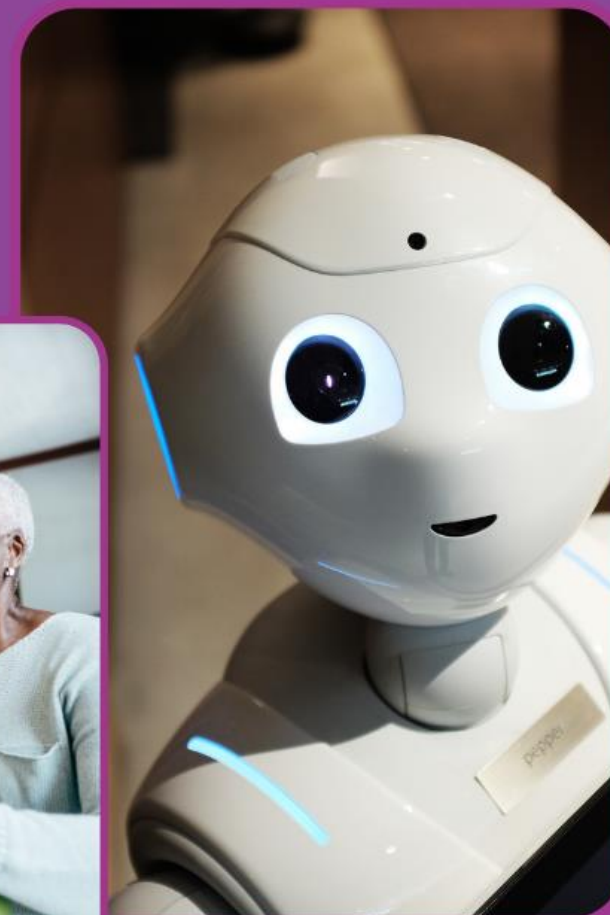
Skills for Care

Manage change

25

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Question & Answer Session

Thank you

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