

**Mid and
South Essex
NHS Foundation Trust**

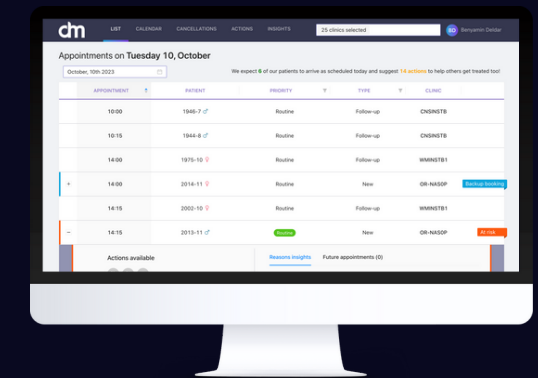
Using AI to increase clinic utilisation,
reduce the backlog and drive equitable
access to healthcare



Key outcomes

dmSchedules

- 1:30 cost benefit ratio in releasing funded clinic capacity
- 100,000 extra opt appointments per year at Mid and South Essex



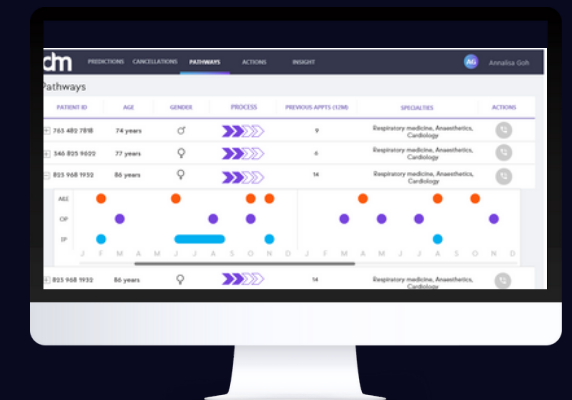
dmConnects

- Bridging AI, Logistics and communications to drive equitable access to care



dmPathways

- Personalizing and coordinating care for frail patient groups
- Releasing significant costs and 2% outpatient capacity
- 1:19 cost benefit ratio across Epsom General and Mid and South Essex



dmPartners

- Connected to the largest SMS provider of the NHS
- Partnered with the largest people carrier company
- Building on Palantir Foundry

Uber

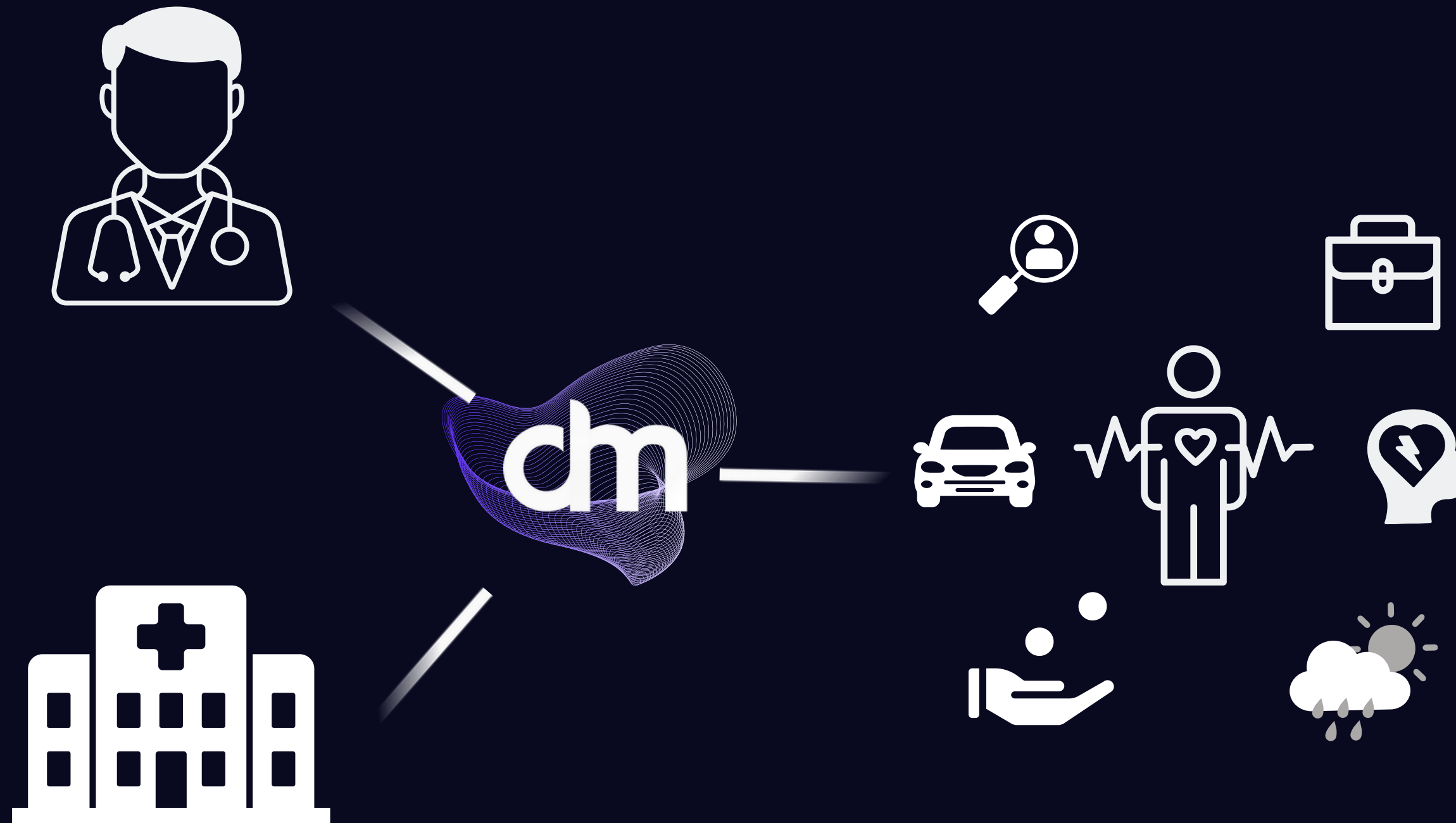


Using AI to understand patient compliance

- Take over 650m+ behavioural/environmental data points from multiple sources
- Predict No Show and short notice cancellations (<48 hours notice)
- Help healthcare providers increase efficiency and clinic utilisation
- Understand patient engagement to tailor messaging and outreach
- Live across multiple provider sites



How we predict No Shows?



dm Products

dm Schedules



NHS Trust - This week

- 850 very likely DNA's
- 350 very likely to Late Cancel
- 450 Patients Back-up Booked

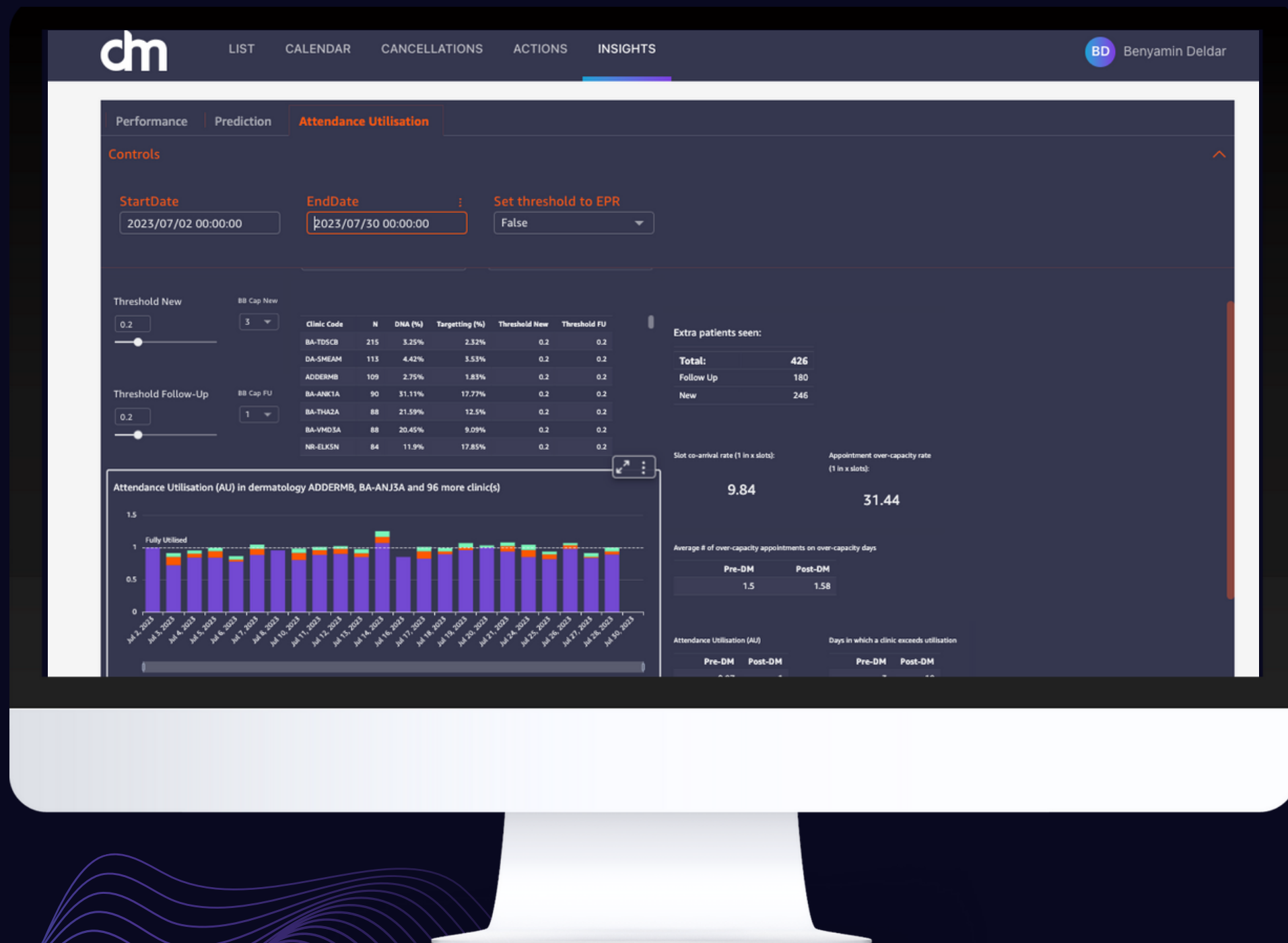
*Based on avg clinic utilisation of 88% (8% DNA
+ 4% late cancellations)

dm Pathways

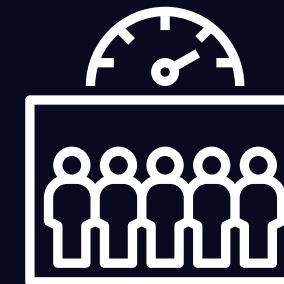
dm Connects

dm Schedules

Our intelligent booking platform



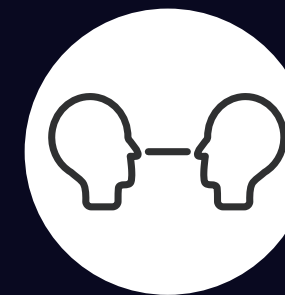
Capacity Management



- Surfaces those likely to No Show
- Predicts and surfaces late (<48 hours) cancellations
- Provide a hotlist of all patients cancelled in the last 48 hours to get those slots filled
- Smart templating and backup booking to get to 100% utilisation



Human Interventions



- Reasons behind their likely to No Show surfaced
- Empowers admins make targeted interventions to maximise the chances of the patient attending

Impact of dynamic clinic templating

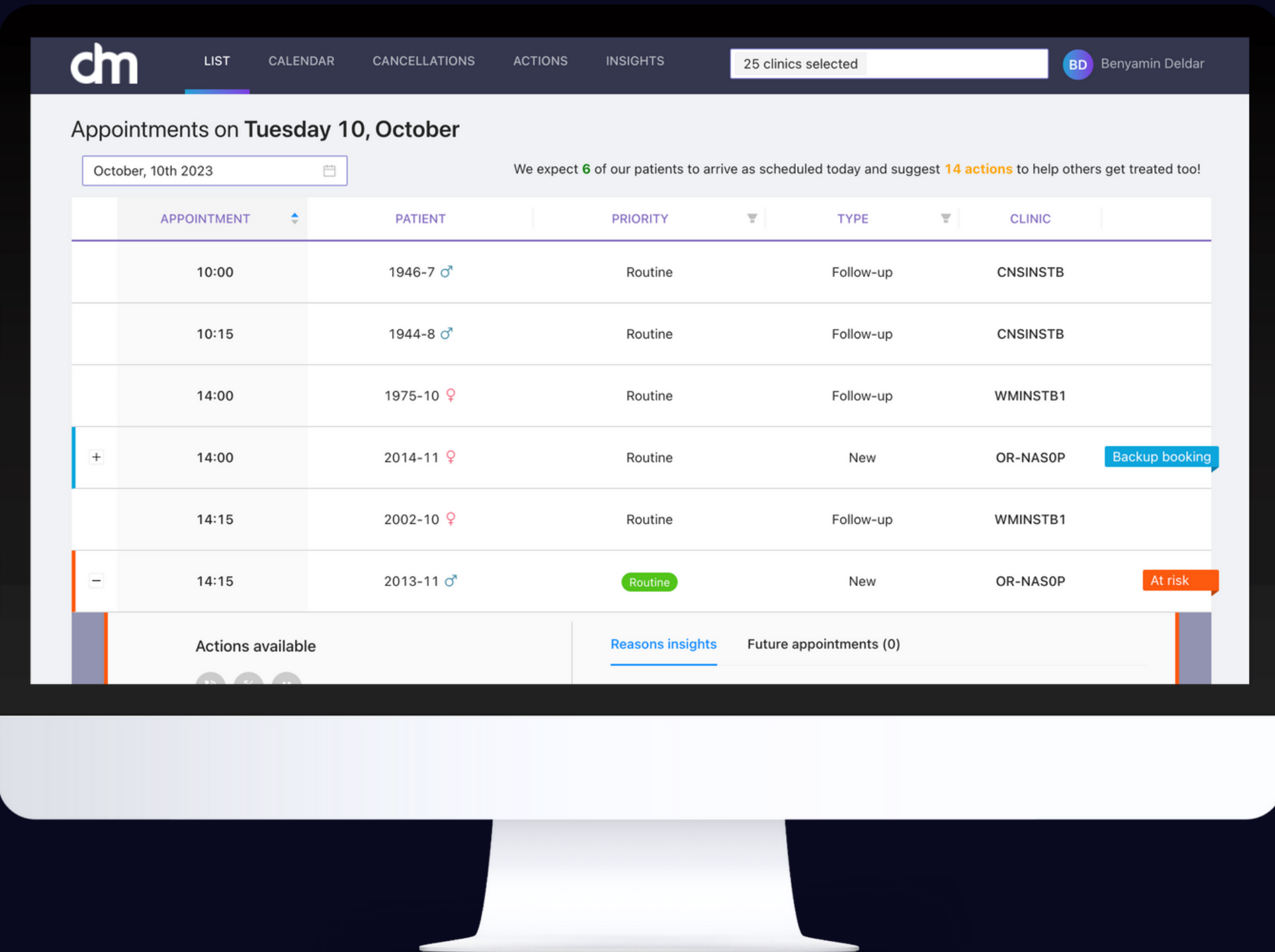


Table 2: Cost Benefit Analysis Deep Medical Compared to Standard Practice: Average Per Annum	Scenario 1	Scenario 2	Scenario 3
	Full Benefit Efficiency Value £000s		
Additional Attendances Achieved From Prevented DNAs and Reduction in Unfilled Clinic Slots	156371	128798	100764
Total Costs	£945.59	£853.10	£759.07
Total Efficiency Benefit	£28,518.15	£23,530.45	£18,459.68
Net Efficiency Benefit	£27,572.56	£22,677.35	£17,700.61
Benefit: Cost Ratio	30.2	27.6	24.3
Net Benefit:Cost Ratio	29.2	26.6	23.3

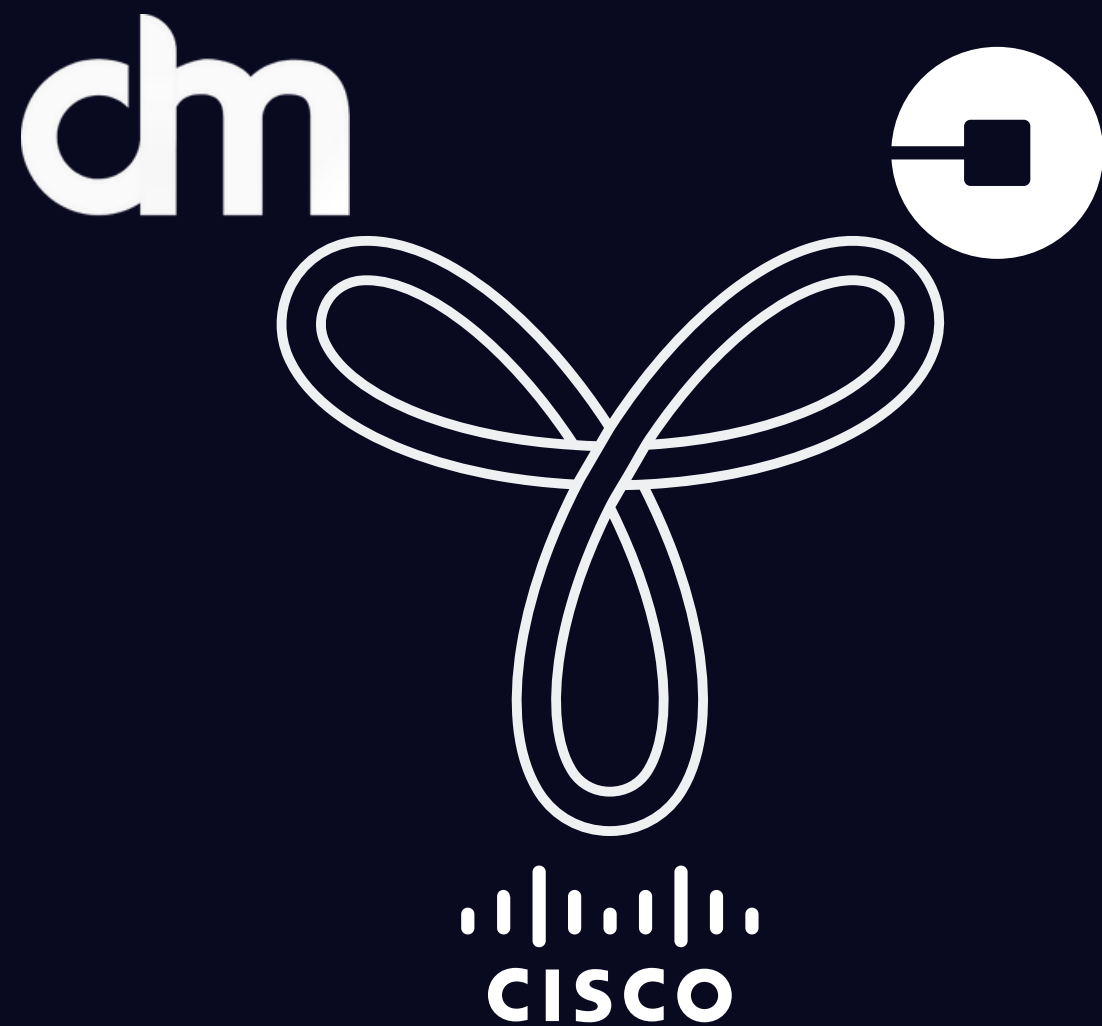
Impact to date across Mid & South Essex NHS trust ~ 2 months

- 50% reduction in No Show rate through targeted calls and backup booking
- Surface unfilled cancellations that happen under short notice, account for an extra 40,000 appointments
- When fully deployed we estimate a minimum of 100,000 extra patients seen across the three sites
- 12.72x return for every £1 spent



dm Connects

Bridging communications, AI and logistics



AI powered patient-relationship management tool

- Integrated with Cisco Webex and Uber health
- Uses insights to drive attendance
- Communicates across multiple channels (Whatsapp, iMessage, SMS, automated calls)
- Allows pre scheduled NEPTS to ensure patients get access to care when needed

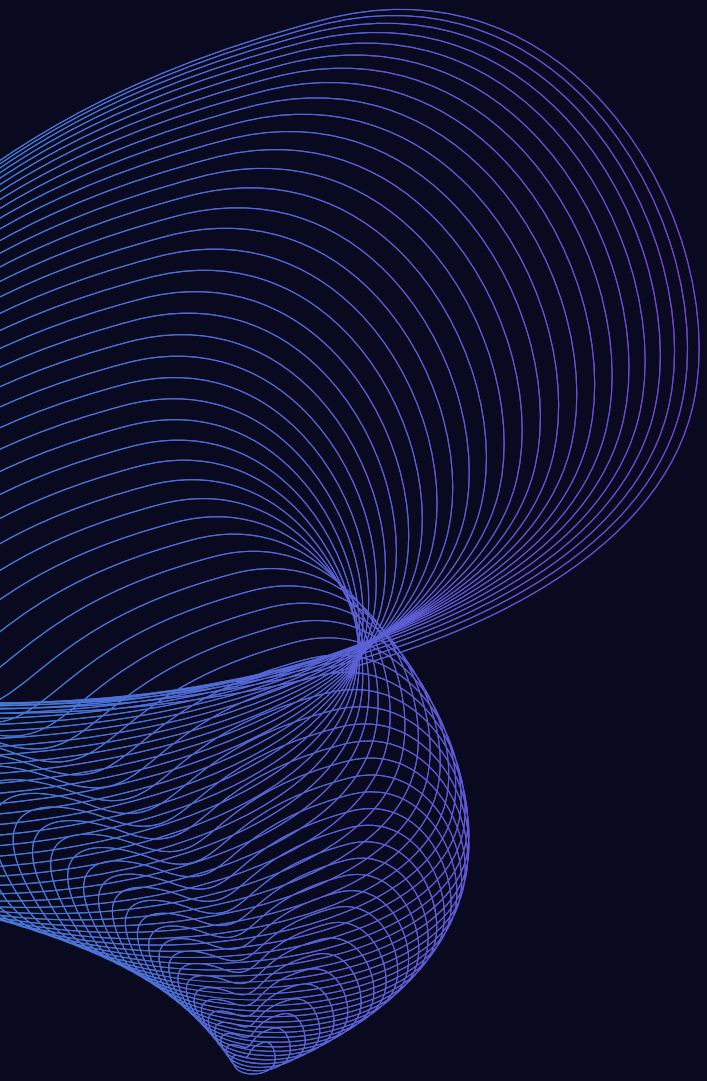
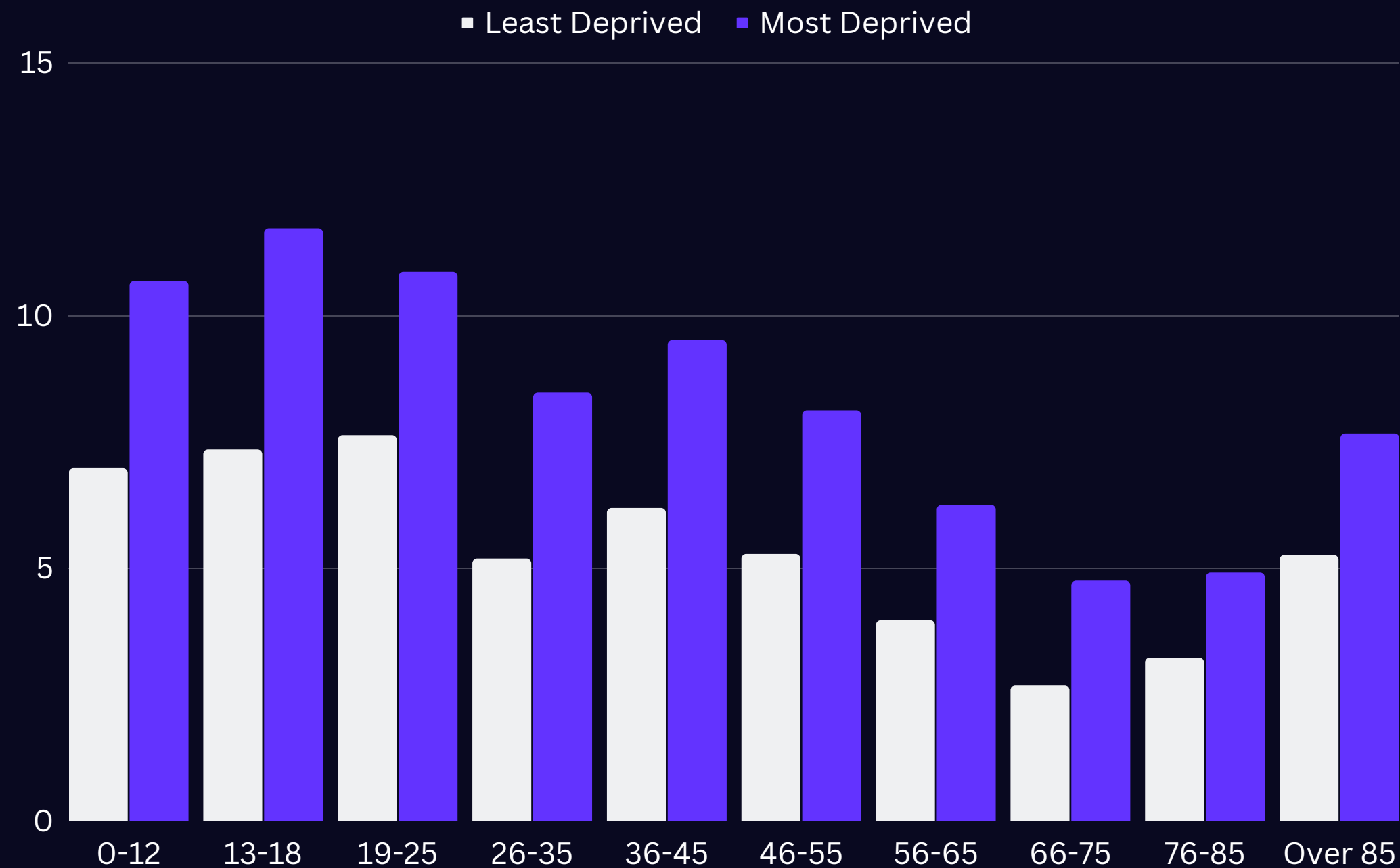
dm Connects

Personalised Patient Engagement



SCAN ME

Challenging health inequalities



No Show Analytics

[1] Missing 2 appointments per year results in an 8-fold increase in risk of all-cause mortality

[5] Poorer BP control, higher risk of hospital admissions, decreased clinic efficiency and increased mortality

[2] 7mmol/mol higher HBA1C if you miss your diabetes appointment [2]

[6] Past 5 UK Maternal Mortality report identify late booking as a significant risk factor for maternal death for all women, and particularly Black women.[7]

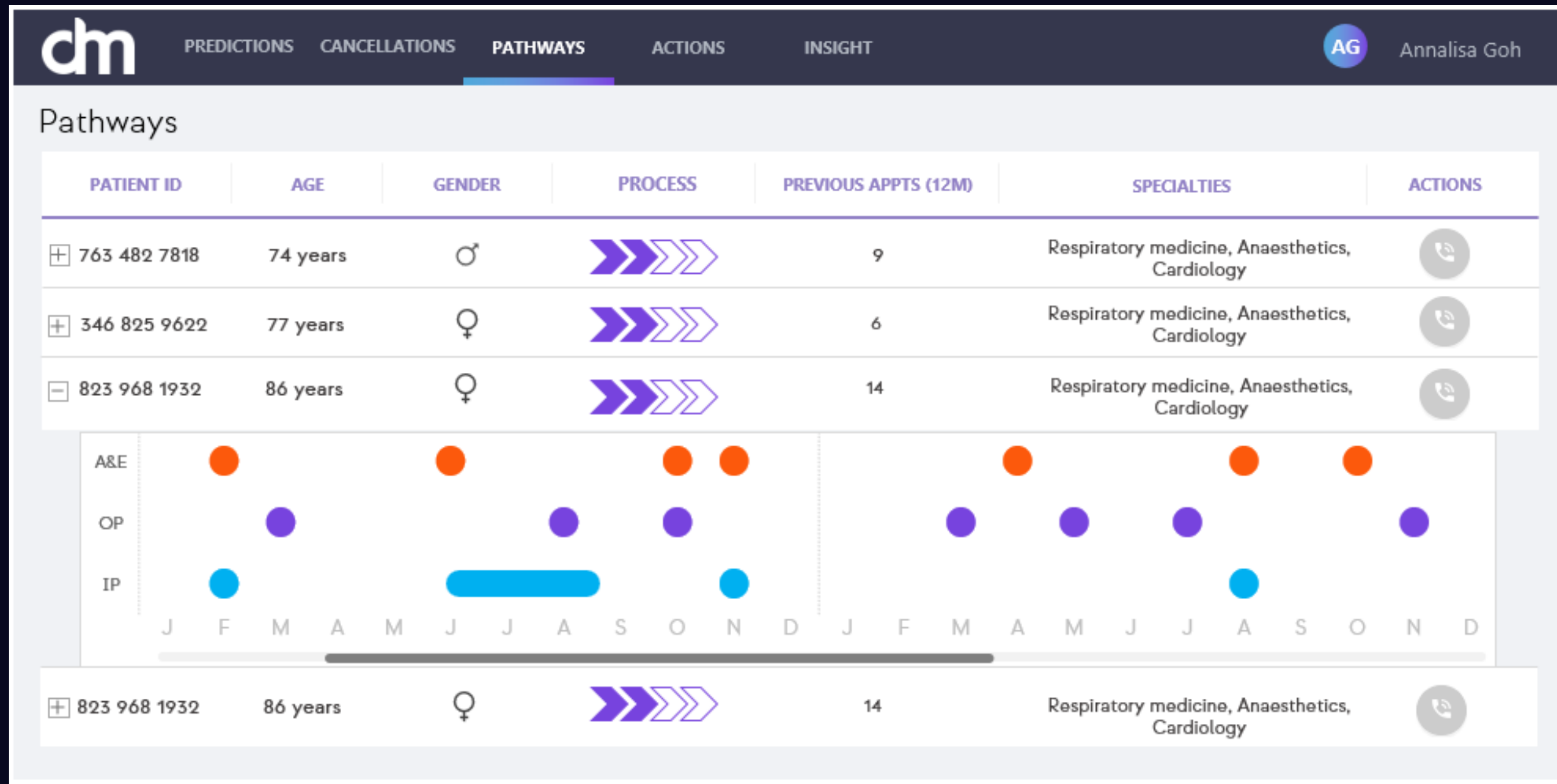
[3] 2.5x increase in readmission to IP psych. Up to 50% of patients who miss appointments drop out of scheduled care.

[7] No show to asthma was found to be linked with poorer concordance to medication and increased number of exacerbations.

[4] Missing 5 consecutive screening appointments increases the incidence of Diabetic retinopathy by 3-fold

[8] Ethnic Minorities more likely to be non-attenders than white women (44-71% vs 12%) for cervical smear appointments. resulting in later stage cancer diagnosis

dm Pathways



1. 1:19 benefit cost ratio
2. 22,000 (2%) appointments released
3. Reduced prescription costs £90
4. Reduction in GP Callouts
5. Reduction in ED attendances
6. Reduction in Social care callouts

dm Pathways

01

02

03

04

REVIEW

21% of outpatient activity >75
Identify within booking systems patients >75 with multiple appointments across multiple specialties a year

REFINE

Layer our ML models to identify within this cohort which are likely to no-show ~ 3000 patients accessing 45000 appointments

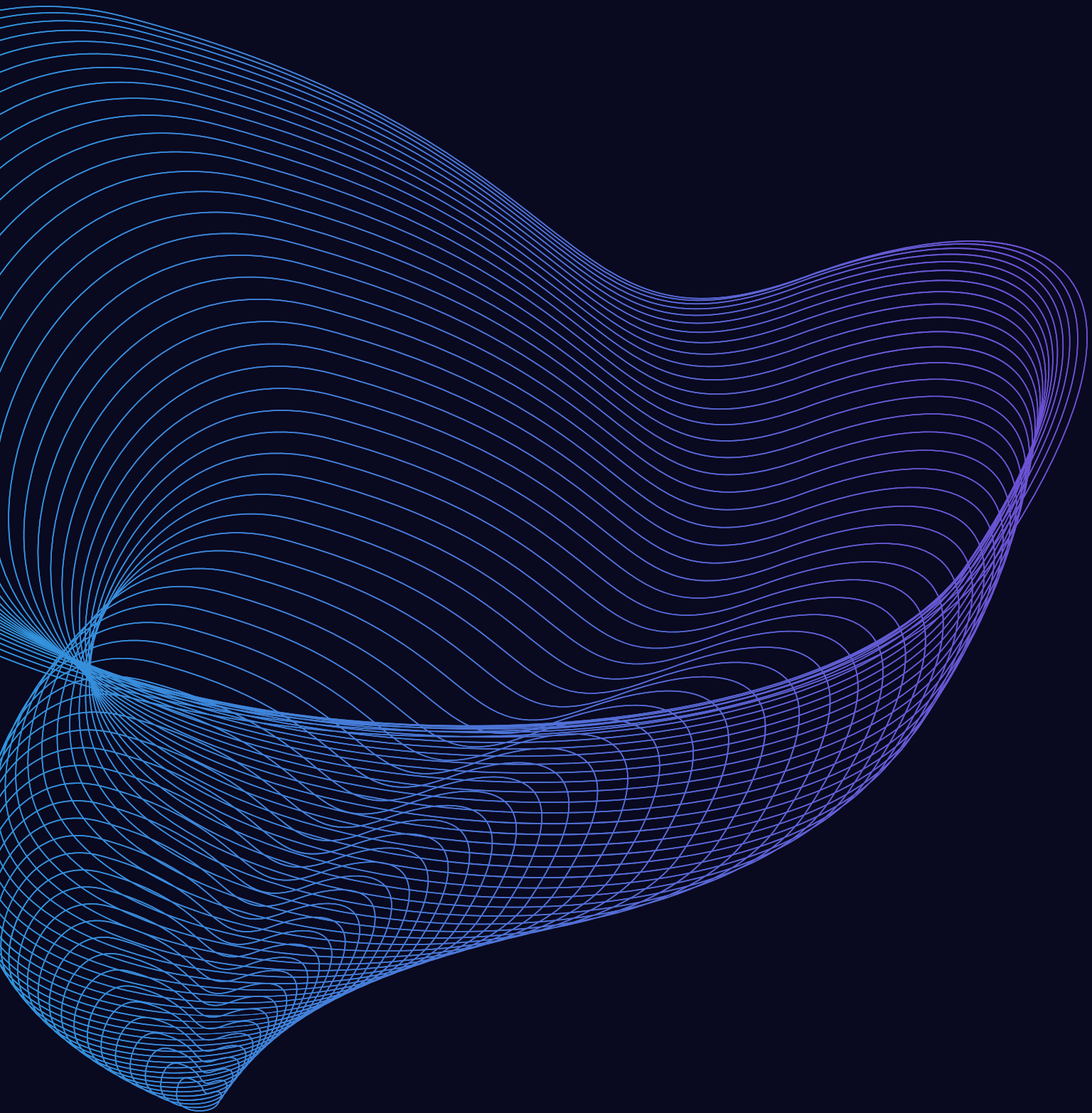
INTERVENE

Dispatch MDT to review the patient, document a Clinical Frailty Score and undertake a Comprehensive Geriatric Assessment

MEASURE

Measure impact by personalising:

1. Social Care needs
2. Outpatient requirements
3. Prescription needs
4. Advanced care planning



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