



Building AI responsibly for mental healthcare



A workspace for therapists to provide
effective and efficient care

NICEDAY

84 million

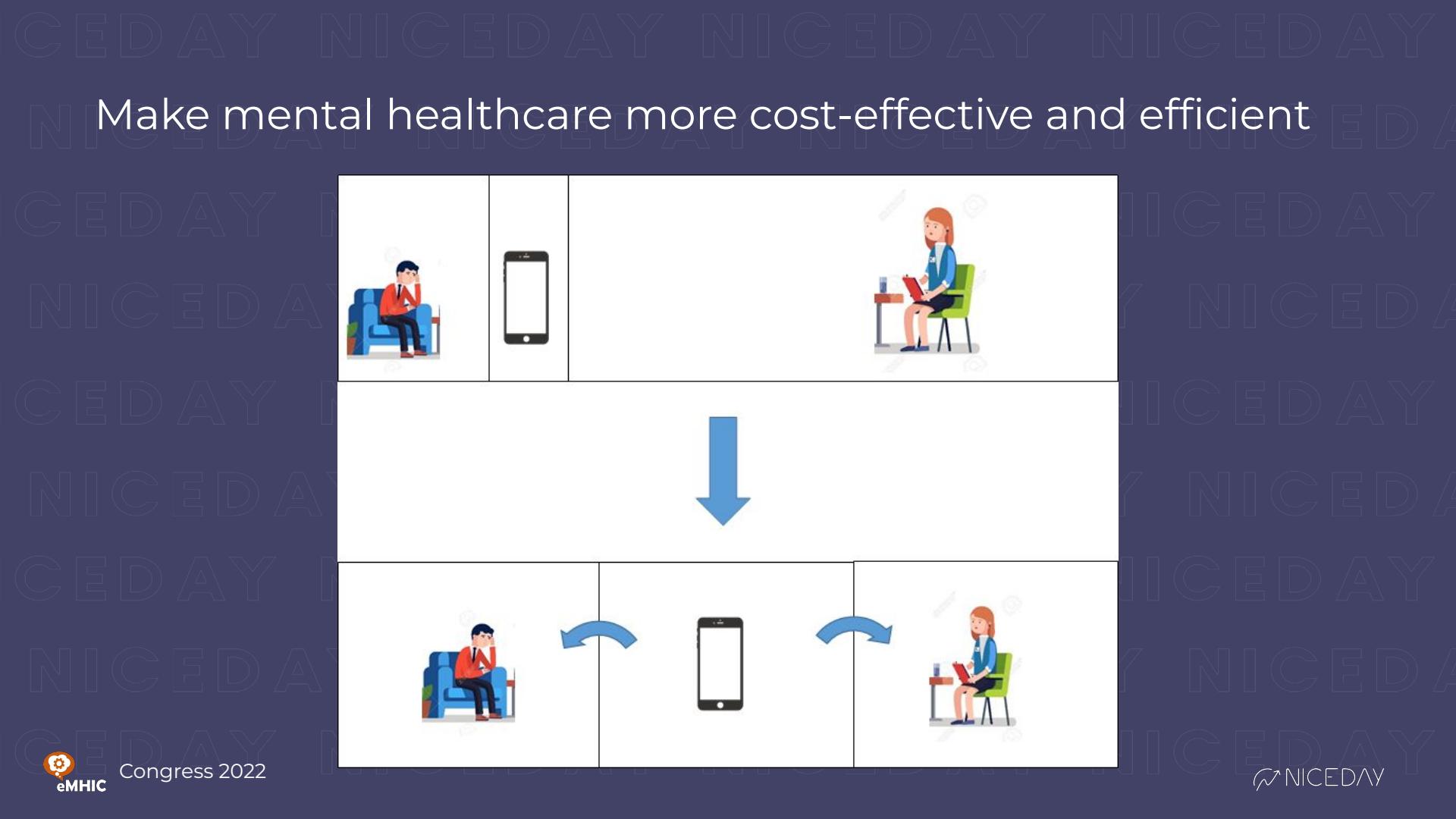
People in EU with mental health problems / year

350.000

Registered psychologists in EU

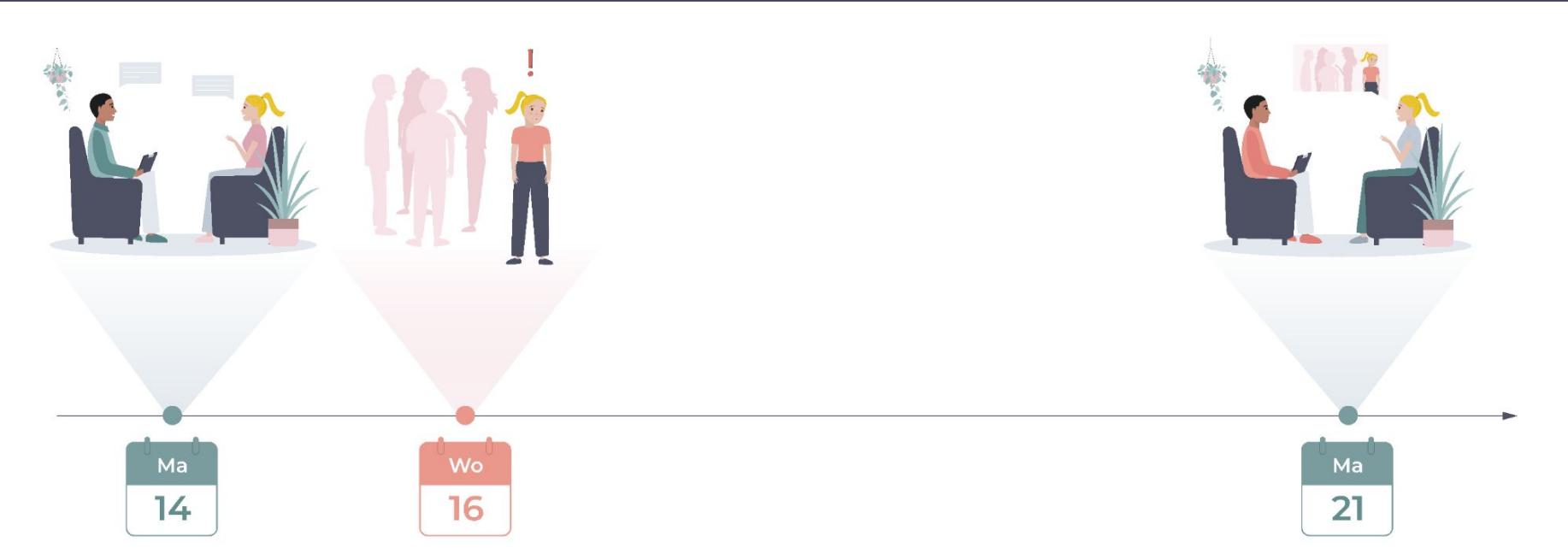
[source: [oecd](#)]

[source: [EFPA](#)]



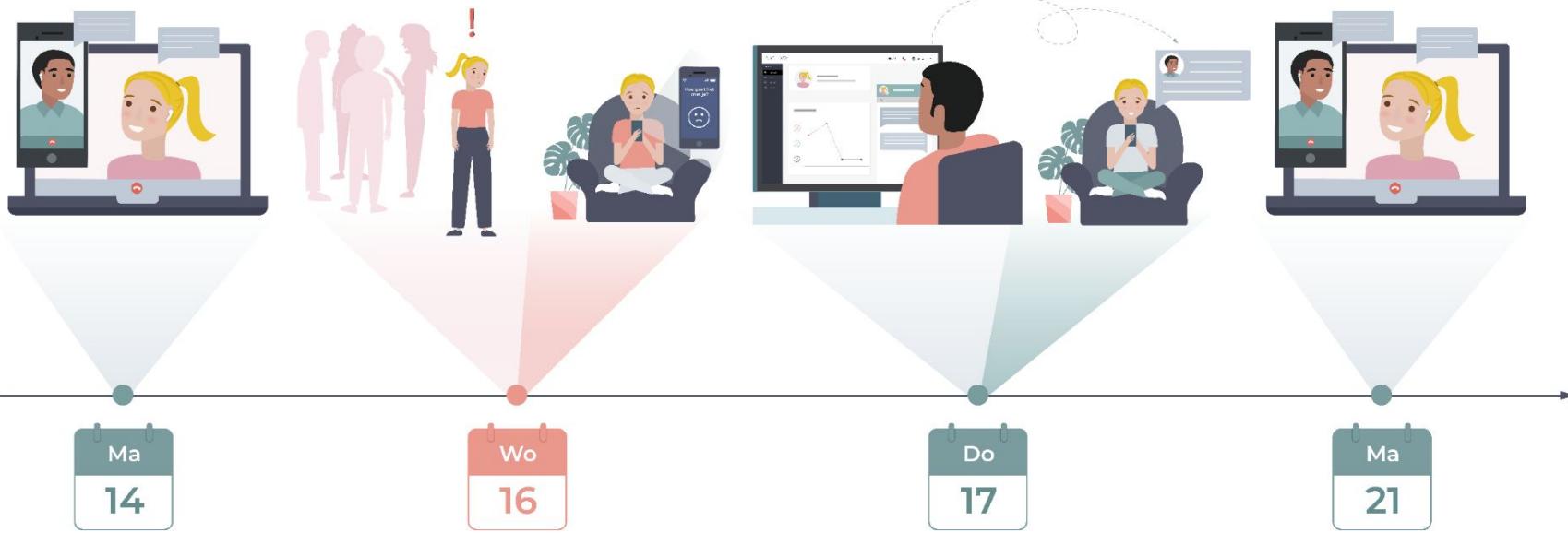
Make mental healthcare more cost-effective and efficient

Traditional Care



NICEDAY

Care with NiceDay



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Make **each** therapist as good as the **best**

Measure

Effectiveness of treatment in
NiceDay

Measure

Implement

Make every therapist as good as
the best therapist

Implement

Way of
working

Generate
Insights

Generate insights

Create insights that indicate what the
best treatment practices are

Bringing AI beyond a research setting

> 63.000 treatments

> 2.000 therapists





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Our journey towards responsible AI

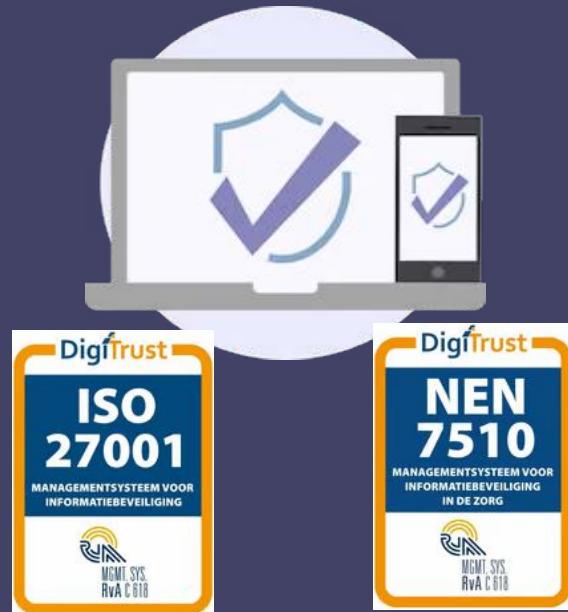


Congress 2022

NICEDAY

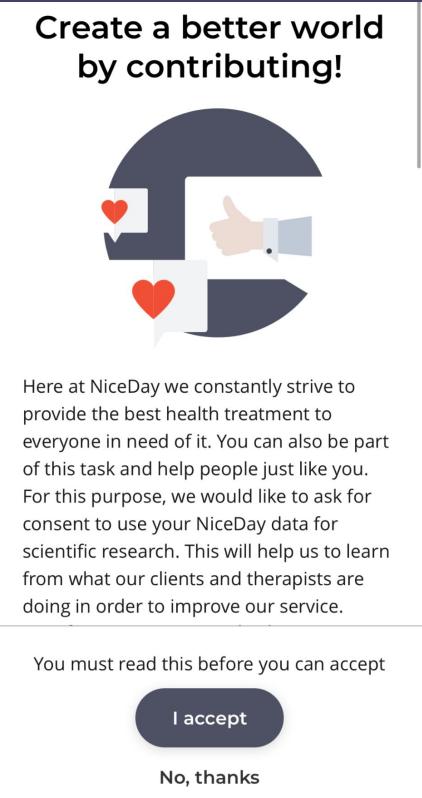
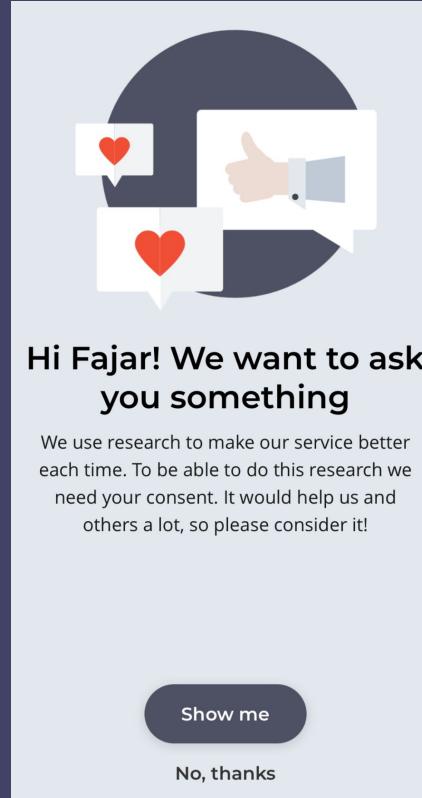
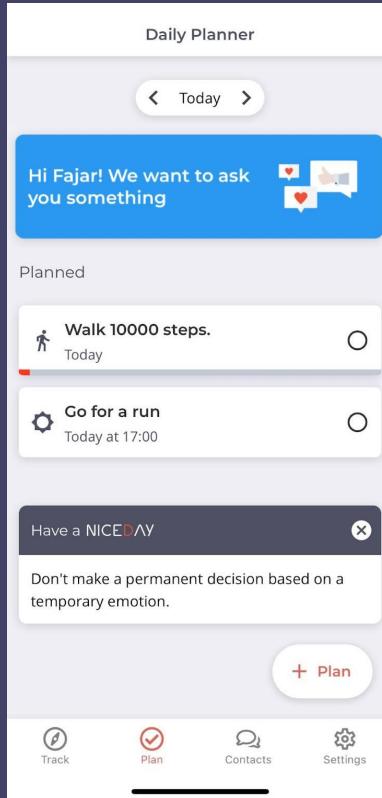
Strong foundations

2017



Explicit Research Consent

2018



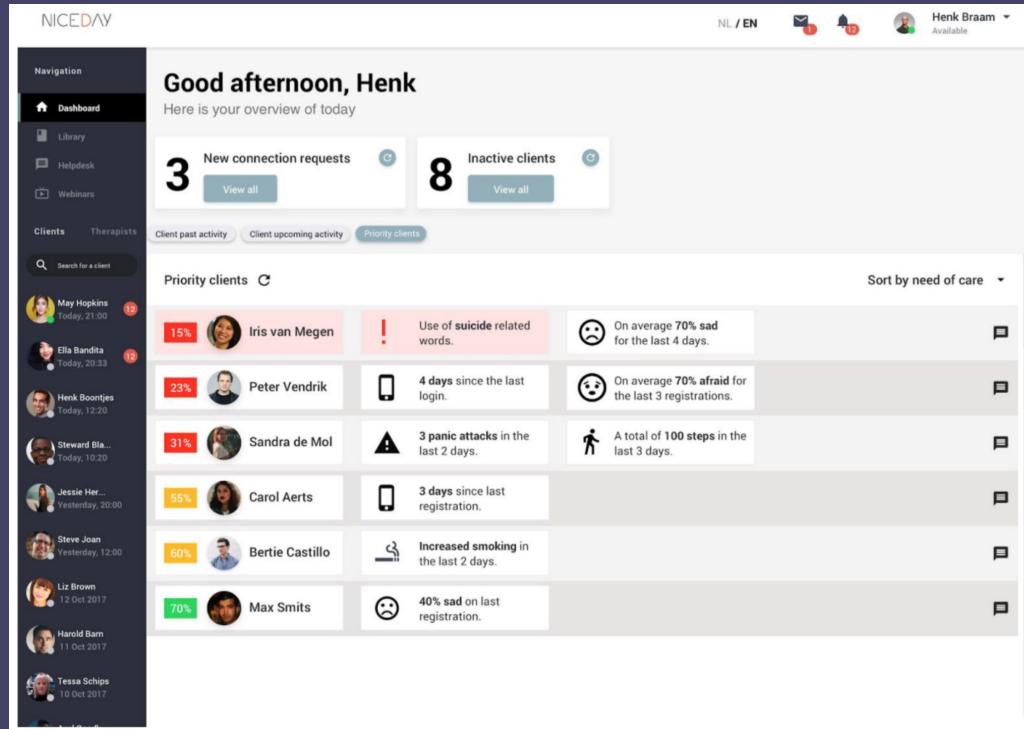
Insights with Domain Expert

2019

nd_way_score	i1	i2	i3	i4	i5	i6	i7	i8	i9	i10	i11
80.24%	0.54	0.79	0.84	0.88	0.48	0.91	1.00	1.00	1.00	1.00	0.82
73.44%	0.27	0.89	0.78	1.00	0.30	1.00	1.00	1.00	1.00	0.72	0.33
72.25%	0.45	0.67	1.00	0.88	0.05	0.84	1.00	0.98	0.99	0.91	0.63
71.50%	0.00	1.00	1.00	0.78	0.00	1.00	1.00	1.00	0.83	1.00	1.00
70.72%	0.00	0.81	1.00	1.00	0.36	0.77	1.00	0.73	1.00	1.00	0.48
69.45%	0.00	0.74	1.00	0.75	0.04	0.98	1.00	1.00	1.00	1.00	1.00
68.81%	0.60	0.72	1.00	0.49	0.04	0.92	1.00	0.94	1.00	1.00	0.36
67.97%	1.00	0.72	0.55	0.54	0.13	0.78	1.00	0.94	1.00	0.94	0.37
65.43%	0.66	1.00	0.00	1.00	0.00	1.00	1.00	1.00	0.56	0.71	0.71
65.42%	0.00	0.89	0.45	1.00	0.48	0.83	1.00	0.57	1.00	1.00	0.60
64.91%	1.00	1.00	0.39	1.00	0.00	1.00	1.00	0.59	1.00	0.00	0.00
64.13%	0.93	0.63	0.64	0.67	0.28	0.56	0.78	0.83	1.00	0.60	0.27

AI based client prioritization prototype

2020



The screenshot shows the Niceday AI-based client prioritization prototype dashboard. The top navigation bar includes 'Niceday', 'NL / EN', and a user profile for 'Henk Braam Available'. The main header says 'Good afternoon, Henk' and 'Here is your overview of today'. It displays '3 New connection requests' and '8 Inactive clients'. Below this, a table lists 'Priority clients' sorted by 'need of care'. Each client entry includes a profile picture, name, a progress bar, and a summary of their current state and recent activity.

Client	Progress (%)	Summary
Iris van Megen	15%	Use of suicide related words. On average 70% sad for the last 4 days.
Peter Vendrik	23%	4 days since the last login. On average 70% afraid for the last 3 registrations.
Sandra de Mol	31%	3 panic attacks in the last 2 days. A total of 100 steps in the last 3 days.
Carol Aerts	35%	3 days since last registration.
Bertie Castillo	60%	Increased smoking in the last 2 days.
Max Smits	70%	40% sad on last registration.



Validating research

2021

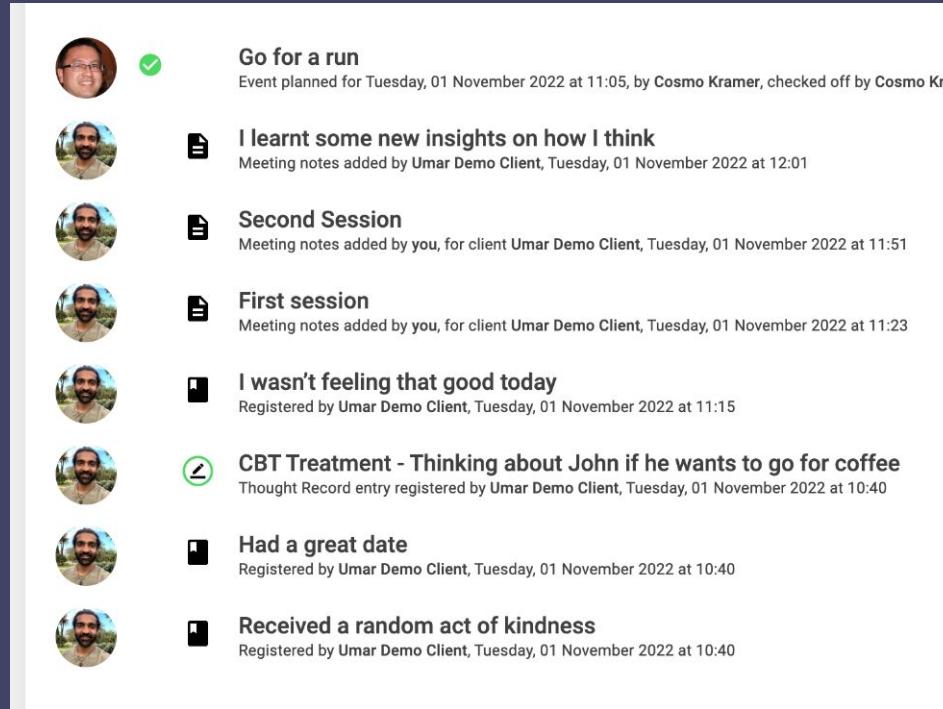


bitext



2022

Explainable AI for need driven care



The screenshot shows a list of client entries for November 1, 2022, on the Need Driven Care Dashboard. Each entry includes a small profile picture of the client, a title, and a brief description. The entries are:

- Go for a run**
Event planned for Tuesday, 01 November 2022 at 11:05, by Cosmo Kramer, checked off by Cosmo Kramer
- I learnt some new insights on how I think**
Meeting notes added by Umar Demo Client, Tuesday, 01 November 2022 at 12:01
- Second Session**
Meeting notes added by you, for client Umar Demo Client, Tuesday, 01 November 2022 at 11:51
- First session**
Meeting notes added by you, for client Umar Demo Client, Tuesday, 01 November 2022 at 11:23
- I wasn't feeling that good today**
Registered by Umar Demo Client, Tuesday, 01 November 2022 at 11:15
- CBT Treatment - Thinking about John if he wants to go for coffee**
Thought Record entry registered by Umar Demo Client, Tuesday, 01 November 2022 at 10:40
- Had a great date**
Registered by Umar Demo Client, Tuesday, 01 November 2022 at 10:40
- Received a random act of kindness**
Registered by Umar Demo Client, Tuesday, 01 November 2022 at 10:40

Need Driven Care Dashboard for therapists in current NiceDay

Explainable AI for need driven care

2022

Urgency	Most important criteria		
High	Feedback	<i>The # of panic attacks increased with 5 compared to last week</i>	It has been 4 days since the last intervention
High	Feedback	Felt lonely 3 times more compared to last week	The social avoidance intensity increased with 5 compared to last week
High	Feedback	Worried 4 times more compared to last week	It has been 3 days since the last intervention
High	Feedback	<i>The # of panic attacks increased with 1 compared to last week</i>	The loneliness registrations increased with 2 compared to last week
Medium	Feedback	The social avoidance intensity increased with 2 compared to last week	The tension registrations increased with 2 compared to last week
Medium	Feedback	<i>The # of panic attacks decreased with 2 compared to last week</i>	The loneliness registrations decreased with 2 compared to last week
Low	Feedback	<i>The # of panic attacks decreased with 2 compared to last week</i>	It has been 4 days since the last intervention

Ideation of client prioritization based on expert driven AI

Explainable AI for need driven care

2022



DEEPMATCH
COUNCYL

NICEDAY
Nederland

Thank You!



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