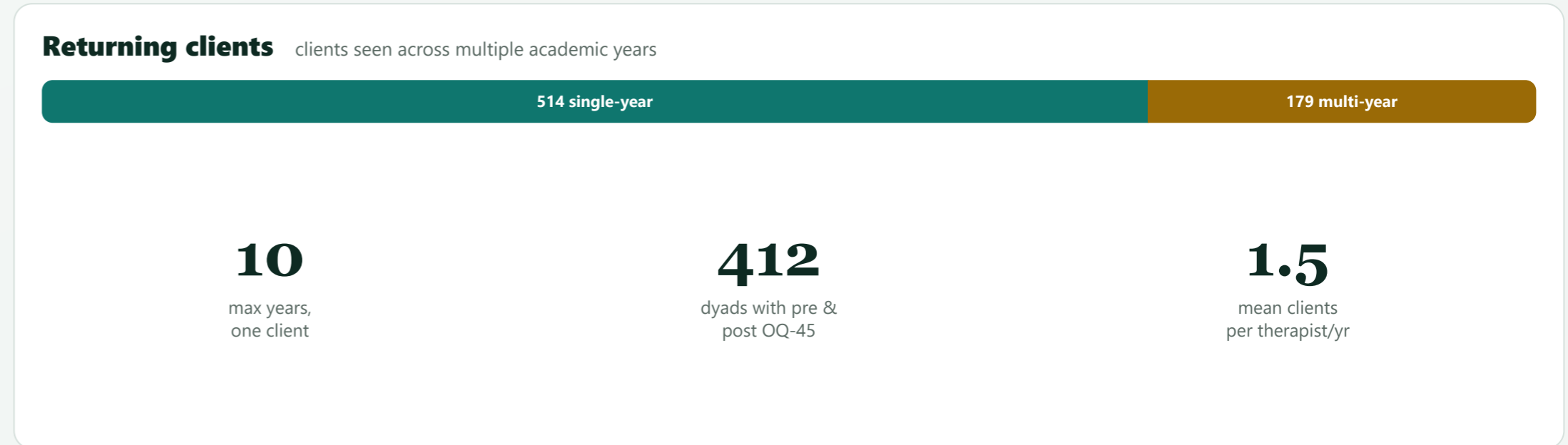
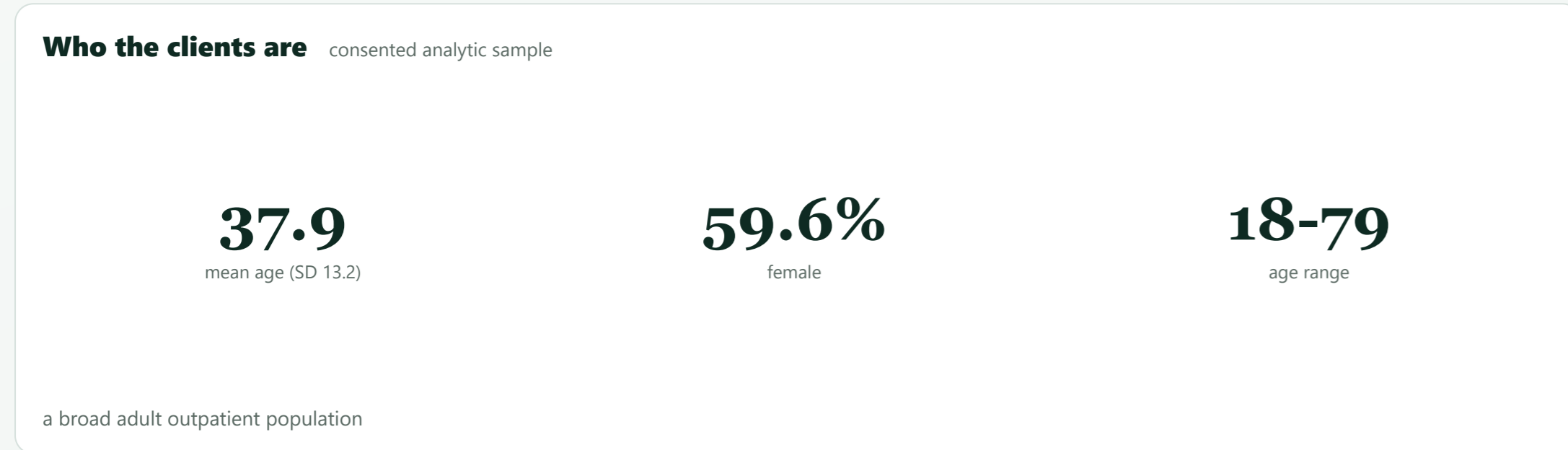
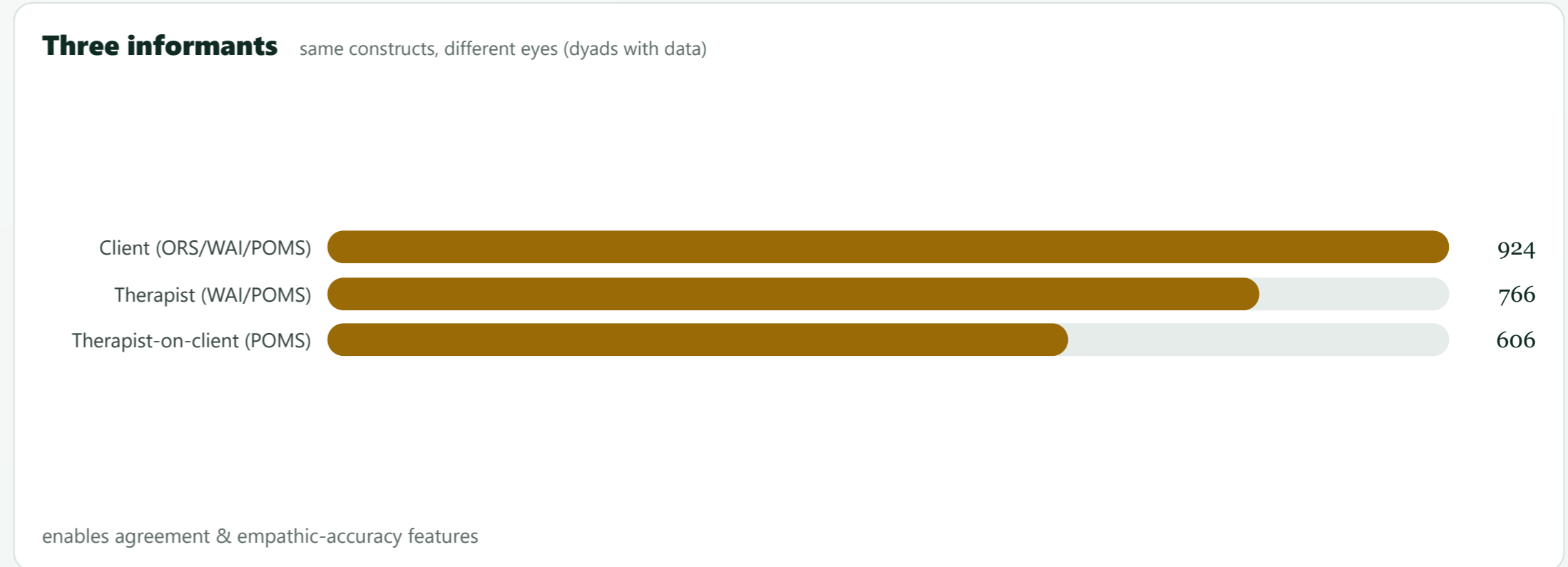
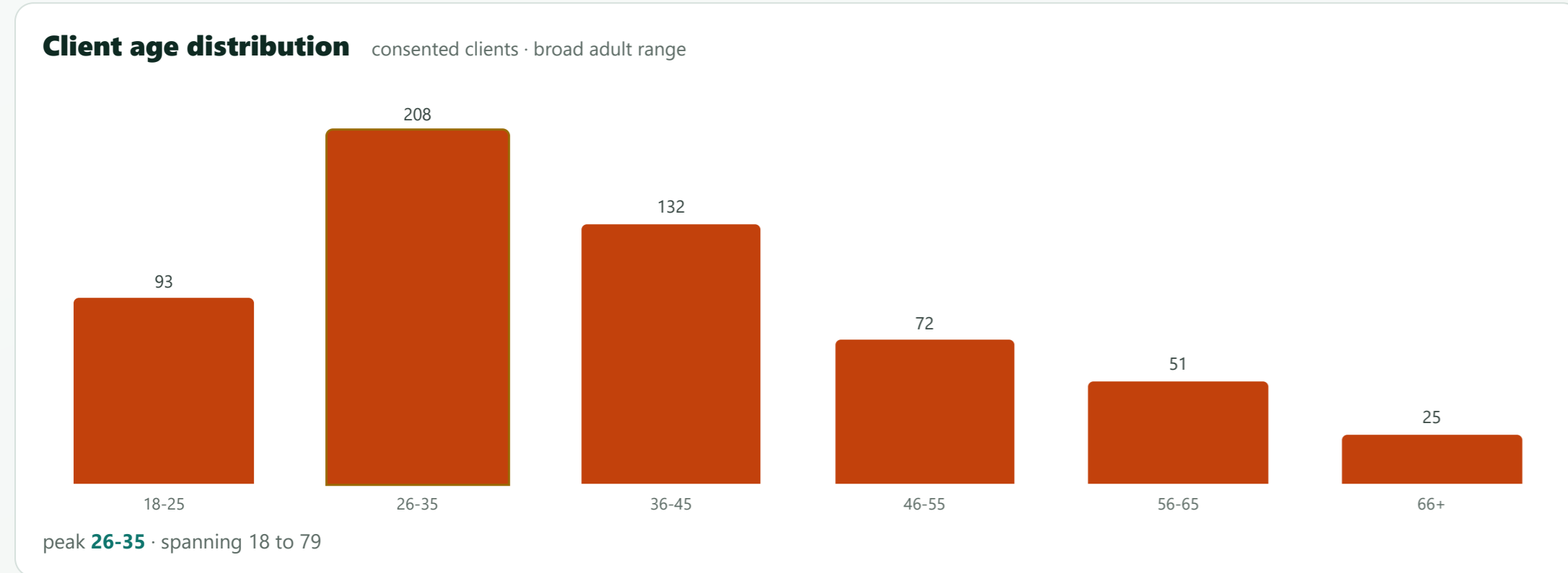
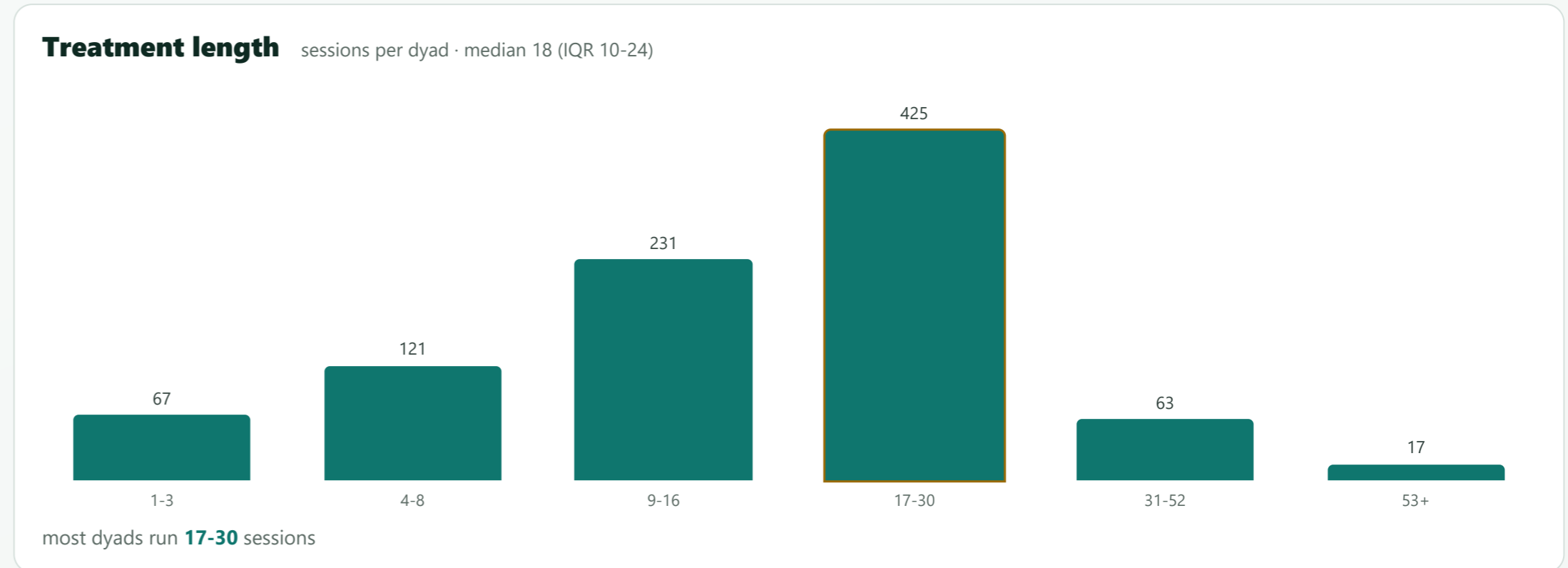
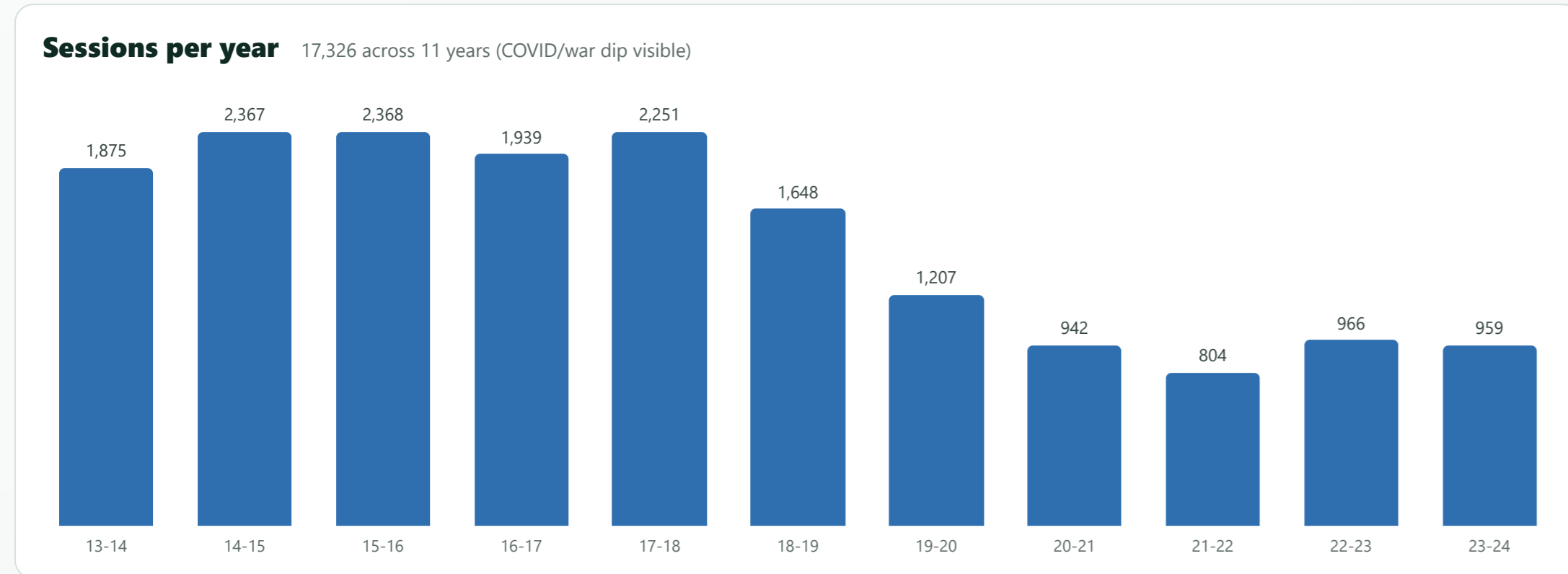
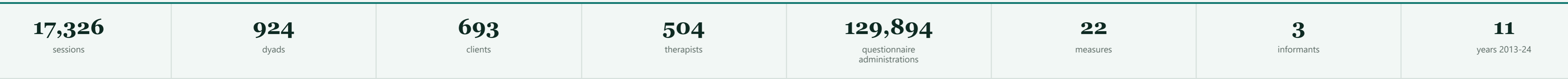


◆ THE QUESTION WE SET OUT TO ANSWER ◆

# Can routine outcome monitoring — questionnaires only, no session text — be turned into a personalized forecast of who improves, in which domain, and who is at risk of deterioration?

We set out to answer this with **11 years** of the clinic's routine data — a broad, multi-informant, session-by-session battery.

**OUR APPROACH** a two-phase machine-learning program — **benchmark** a per-client outcome forecast at **session 3-5**, then **personalize** it by domain & flag deterioration



### The measurement battery — 22 instruments, full names

informant (dot): client / therapist / therapist-on-client · items · consented N | right: how the battery feeds the model

SESSION	BASELINE	THERAPIST	CROSS-RATER
before / after every session	once per academic year	self-report	therapist-on-client
<ul style="list-style-type: none"> <li><b>ORS</b> Outcome Rating Scale (4 it 699)</li> <li><b>HSCL</b> Hopkins Symptom Checklist (11 it 699)</li> <li><b>WAI-6</b> Working Alliance Inventory (6 it 622)</li> <li><b>POMS</b> Profile of Mood States (12 it 621)</li> <li><b>SES</b> Session Evaluation Scale (1 it 409)</li> <li><b>Rupture</b> Rupture self-report item (1 it 622)</li> </ul>	<ul style="list-style-type: none"> <li><b>OQ-45</b> Outcome Questionnaire-45 (45 it 599)</li> <li><b>BDI</b> Beck Depression Inventory (21 it 598)</li> <li><b>IIP</b> Inventory of Interpersonal Problems (32 it 593)</li> <li><b>DERs-18</b> Difficulties in Emotion Regulation Scale (18 it 560)</li> <li><b>ERQ</b> Emotion Regulation Questionnaire (10 it 497)</li> <li><b>PID-5</b> Personality Inventory for DSM-5 (25 it 347)</li> <li><b>SPIN</b> Social Phobia Inventory (17 it 448)</li> <li><b>SE</b> Rosenberg Self-Esteem Scale (10 it 449)</li> <li><b>SWLS</b> Satisfaction With Life Scale (5 it 326)</li> <li><b>SHEEHAN</b> Sheehan Disability Scale (3 it 189)</li> <li><b>IPDE</b> Int'l Personality Disorder Examination (77 it 143)</li> </ul>	<ul style="list-style-type: none"> <li><b>WAI-6 (T)</b> Working Alliance Inventory (therapist) (6 it 600)</li> <li><b>IIP (T)</b> Inventory of Interpersonal Problems (therapist) (32 it 374)</li> <li><b>DERs (T)</b> Difficulties in Emotion Regulation (therapist) (18 it 328)</li> </ul>	<ul style="list-style-type: none"> <li><b>tc-ORS</b> Outcome Rating Scale (therapist-rated) (4 it 522)</li> <li><b>tc-POMS</b> Profile of Mood States (therapist-rated) (12 it 482)</li> </ul>

The longitudinal core — repeated before/after every session, giving each client a dense within-treatment trajectory.

The therapist's own interpersonal style & emotion regulation — the basis for therapist-effect predictors.

The therapist's view of the same client — enables client-therapist agreement & empathic-accuracy features, among the strongest known predictors.

### FROM BATTERY TO FORECAST

**22 instruments**  
3 informants · 11 years  
129,894 questionnaire administrations

↓

**Tree-ensemble model**  
missing-tolerant · leave-one-year-out CV · honest emulation

↓

**6 personal forecasts**  
per client, by outcome domain — plus a deterioration flag

### HOW WE WILL ANSWER IT

a two-phase machine-learning program · questionnaires only · figures are illustrative (no results yet)

