



# How do we scale a skilled, empathic mental health workforce?

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Oct 2024

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## Disclosures

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### Research support:

#### *AI/ML Development*

R01 AA018673

R34 DA034860

K02 AA023814

R56 MH118550

#### *Clinical technologies*

R44 AA028463

R44 DA046243

R42 MH123215

R42 MH128101

R44 MH133517

The Annie E. Casey Foundation

More than 60 peer-reviewed publications provide foundational support for Lyssn's AI and technologies



What does education and implementation science say are best practices for building and maintaining counselor (or any) skills?

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- Select/hire skilled professionals
- Provide high quality training
  - Practice and Feedback!
    - Many *unique* practice opportunities
    - Varying skills
    - Varying content
    - Immediate and summative feedback
- Measure skill use over time
- Reduce non-clinical work (burnout)

# Okay, so what's the problem? *Scale*

## *Crisis Hotline Has Answered 10 Million Calls, Texts and Chats*

Mental health experts have said that the 988 hotline for mental health emergencies is still a work in progress, in need of more funding, coordination and awareness.



Unfortunately

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High training costs

Few expert trainers

High turnover

Time constraints

CQI = \$\$\$\$ & burdensome

## What do we usually do at scale?

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Slides and written content



Watch lectures and role play examples



CME quiz

### **Outcomes:**

1. What content was offered
2. How many providers accessed content
3. Demonstration of knowledge via quiz

***Nothing about quality of skills or skill development***



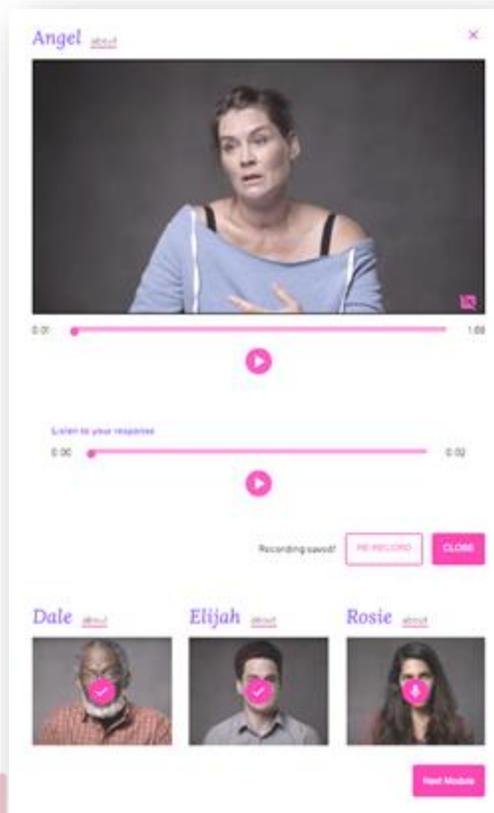
**At Lyssn we scale high quality training, ongoing QA, and documentation**

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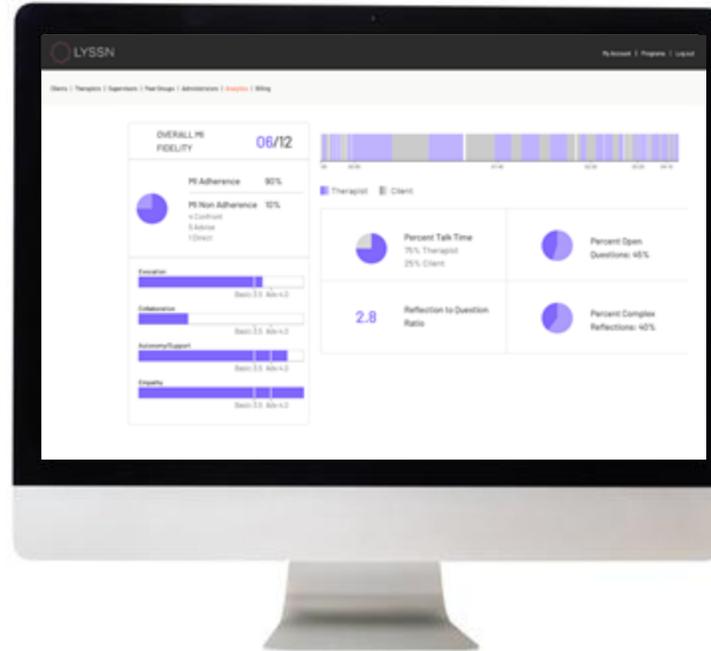


# Lyssn's AI powers products for training, quality improvement, and clinical documentation for crisis and BH

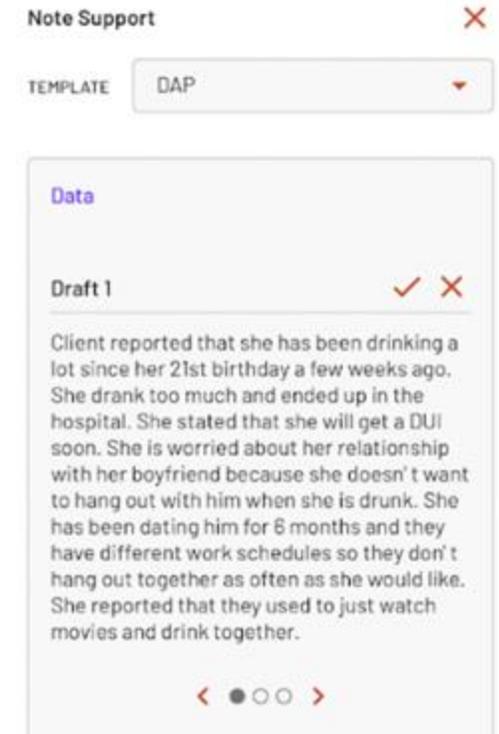
## Training



## QI



## Documentation



# Suicide prevention training

Watch Learn Practice



Empathically responding to disclosed suicidal thoughts or behaviors is therapeutic and an intervention in and of itself.

1:51 2:52

👉 Brief skills introductions from experts (Dave Jobes, PhD)

The three steps to building empathy with your client when they have disclosed suicidal thoughts or behaviors are 1) stay in the room, 2) model skillful behavior, and 3) use active listening skills.

Watch Learn Practice

Muhammad about ✕



0:09 0:23

Practice with immediate AI feedback 👉

Record your response 0:00



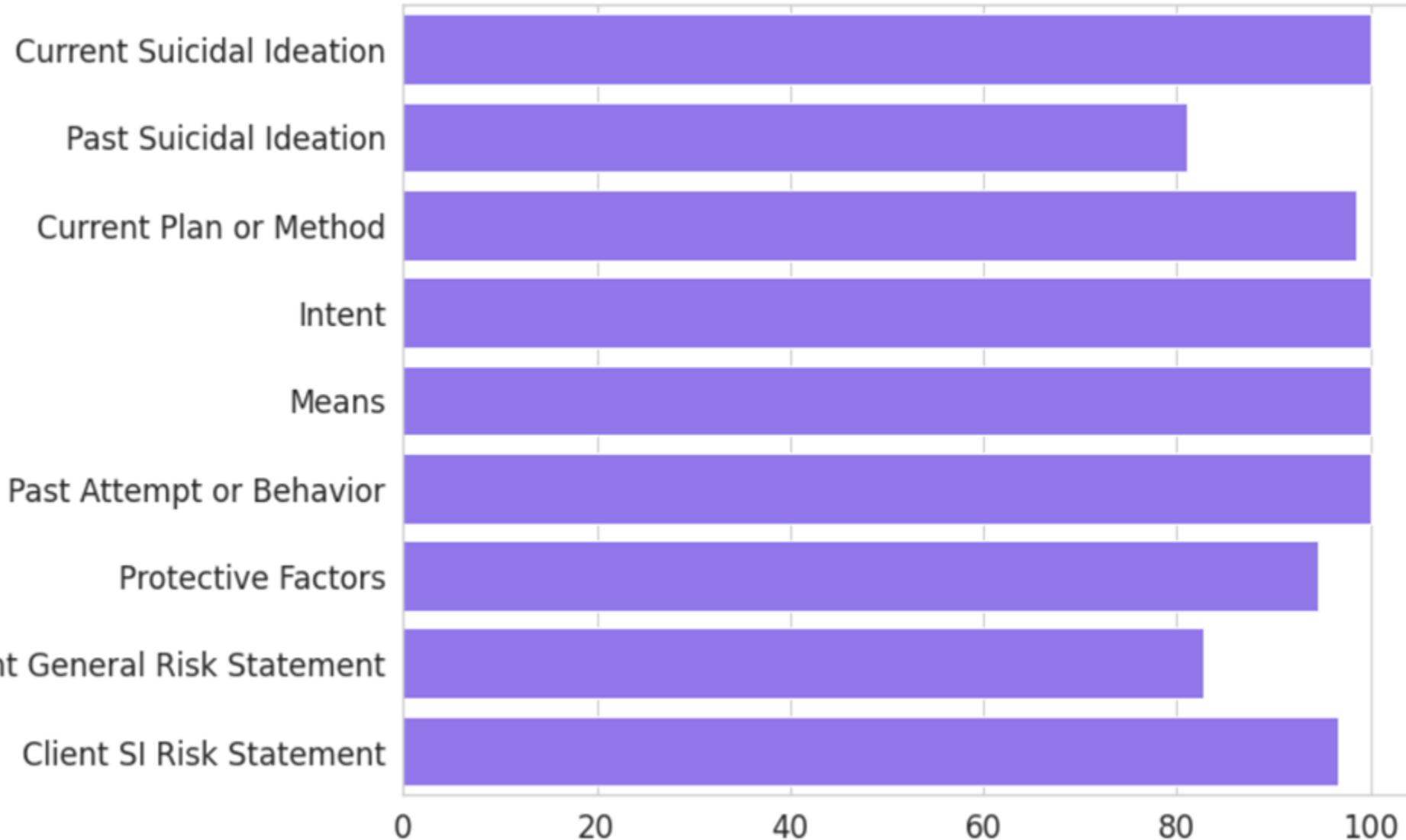
# Automated Quality Improvement

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## AI models have *very* strong performance: Almost identical to expert human evaluators

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**Imel et al. (2024).**  
Machine learning-based  
evaluation of suicide risk  
assessment in crisis  
counseling calls.  
*Psychiatric Services.*

# AI estimated empathy in 1,383 crisis chats shows range of effective communication

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Primarily information gathering with few reflections or affirmations of caller

Reflective listening skills at almost every call-taker talk turn

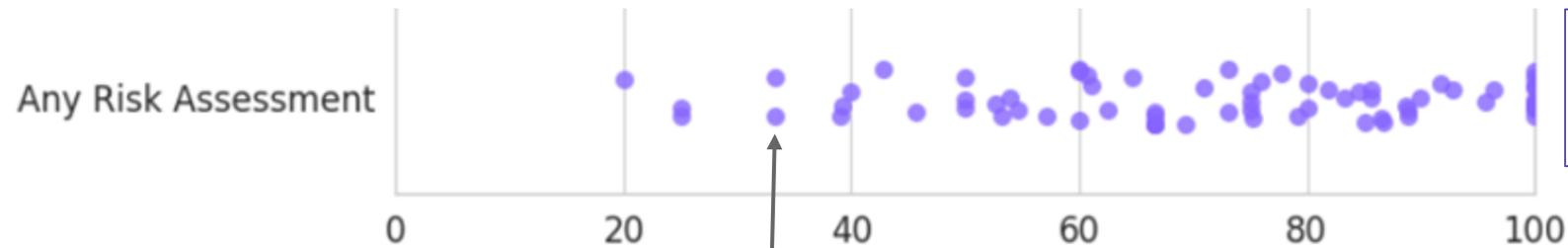
**Low empathy**

**High empathy**



## New AI models support QA and supervision at scale (n=71 call-takers / 1,383 chats)

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What proportion of a call-takers chats included any risk assessment?

"I've been having a crappy day, year. .... I just feel... alone, tired, and ..... I feel so hopeless..... I feel awful, no one likes me ... I'm very alone ..... I don't have anybody."

← Lyssn's 'possible suicidality' AI detected this chat, where there was no call-taker risk assessment of suicidality.



# Lyssn QI platform: AI support for call-takers

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# Quickly identify conversations related to suicide

 Search transcript

- TOPICS  **suicide 91** relationships 14 health 13 mood 12 [show more](#) 

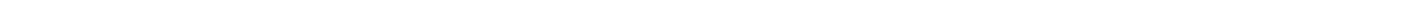
COUNSELOR | Okay. So we are calling the crisis we are calling the suicide hotline. And number one and number two I am a mandated reporter and I do have a do to warning if you report to me any current thoughts about killing yourself or killing anyone else.

CLIENT | Well I am having suicidal suicidal thoughts but I have not thought about killing anyone else.

COUNSELOR | Okay. So um we're gonna talk about that in a second but it's important that if you do have actual thoughts of killing yourself I need to know you know some information about you. Are you willing to give any information about you? Well

CLIENT | I would like I'm having sort of suicidal thoughts that I would I'm too scared to actually do anything so I wouldn't try to kill myself you know?

COUNSELOR | Okay. Right. But I am a mandated reporter so you know that.

4 TALK TURNS  

CLIENT | Yes. I'm sorry but I just I'd rather not.

COUNSELOR | I understand but you are calling a suicide hotline. It's important that you u understand that. Okay? And what county are you calling from? Are you willing to give that?



# Focused summary on suicide risk assessment



**A view of caller and counselor statements for every interaction**



# Risk Assessment

8 Client Statements	16 Provider Statements	33 Topics Talk Turns
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## Client Statements ⓘ

General Risk 3

Suicide Risk 5



See exact phrases that AI detected

Provider Stat

Ideation 5

Plan 2

Attempts 1

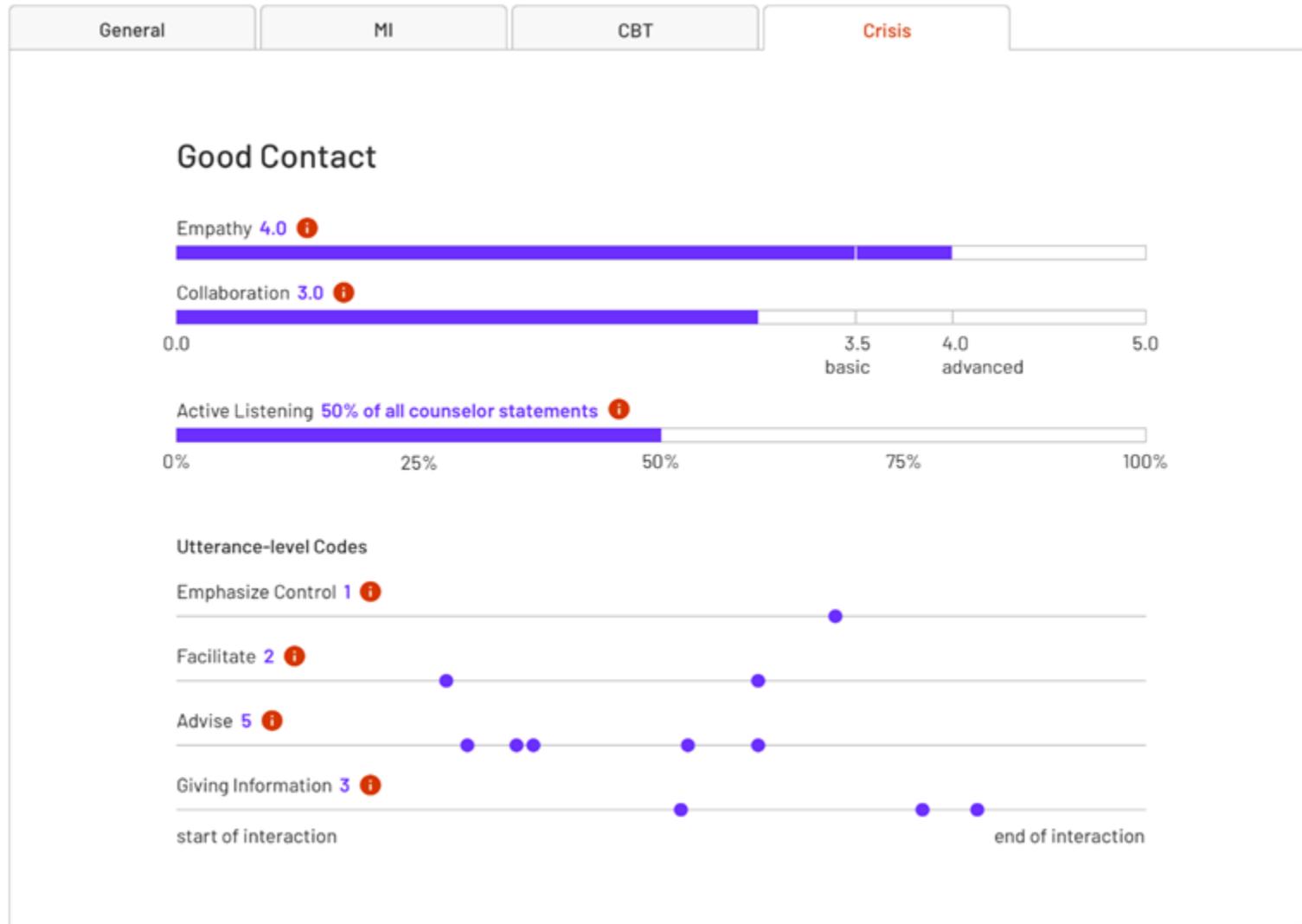
Means 3

Intent 2

Provider  
...  
Okay. 3:54 Um and then today do you have a plan for how you would potentially end your life?  
...



# Lyssn crisis also reports quality of engagement by call-taker



# Visualize call-taker quality and drill down to individual calls

## Therapist Summaries

DOWNLOAD DATA

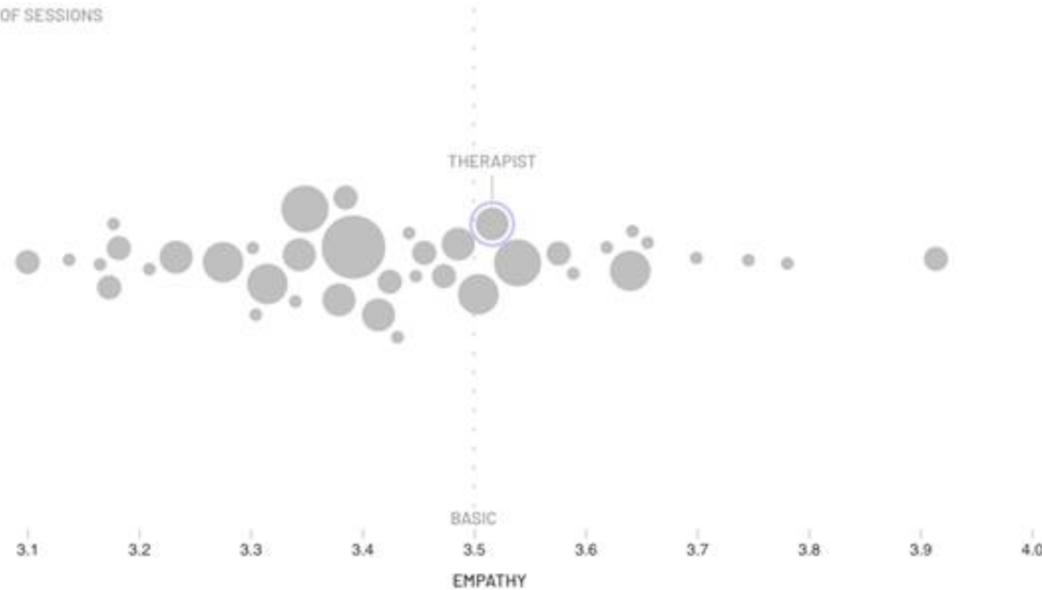
TIMEFRAME

past week

METRIC

empathy

NUMBER OF SESSIONS



THERAPISTS

- Aikin, Rebecca
- Aikin, Helen
- Bateman, Elle
- Bowers, Jack
- Cast, Mark
- Deitz, Dan
- Deitz, Betsie
- Dewalt, Aaron
- Hancock, Faye
- Haworth, David
- Hesch, Thomas
- Lawicki, Steve
- Lawless, Ike
- Lawless, Matthew



**Our mission: To support 988 call-takers, supervisors, and quality managers to deliver the best possible care**

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Questions? What can we talk about?

