**Results**

* Descriptives
  + % of clients who alerted on each subscale (or would have alerted) and % that alerted (or would have alerted) on at least one subscale
  + When in therapy alerts occur
  + Compare clients who alerted and didn’t
    - Average starting CCAPS
    - Average # of sessions

**Discussion**

* There are many clinical situations that could result in an alert. For example, a client’s progress may be relatively flat or steadily getting worse and reach a point where the lack of change or worsening triggers an alert. Alternatively, a client may experience positive change initially, but then have a sudden increase in distress due to a stressful life event, resulting in an alert in the midst of treatment otherwise progressing as expected. These two alerts may generate entirely different conversations with the client.
* After the implementation of the new CCAPS report, therapists who used both the old and new reports noted trickle down effects into how they conducted therapy, beyond the actual changes to the CCAPS report. In a focus group, many indicated that they brought the new CCAPS report into therapy to review with a client more because the report was more interpretable, and the visual depiction of distress scores over time sparked conversations about how therapy was progressing and guided the focus of the session. Although this study makes a contribution to the overall literature on feedback’s effectiveness and begins to answer questions around client contributions to feedback’s effectiveness, as Lambert et al. note, there is still significant work to be done to further identify therapist and contextual factors related to feedback’s effect. In that vein, there are a number of important questions that this study raises but was unable to answer.
* Frequency of CCAPS administration- CFIT says feedback should be delivered as promptly as possible
* Important questions we weren’t able to answer
  + How often were therapists attending to the CCAPS and specifically to the feedback it provided? Does this mediate its effectiveness? We’d hope so!
    - Feedback is only effective if therapists attend to it (de Jong, van Sluis, Nugter, Heiser, & Spinhoven, 2012)
  + Does the effect differ based on whether therapists discussed feedback, or CCAPS scores generally, with clients?
    - It’s not clear whether providing FB to both clients and therapists is more effective than providing to therapists alone
      * No difference (Shimokawa, Lambert, & Smart, 2010)
      * More effective when given to both (Knaup, Koesters, Schoefer, Becker, & Puschner, 2009)
  + At a therapist level and structural center level, is the effectiveness of the new feedback system moderated by attitudes toward outcome monitoring or towards a change in routine? For example, a feeling that the change was imposed top down by center administrators could attenuate its effectiveness, potentially through therapists not attending to the feedback.
  + Is the effectiveness moderated by the way in which the new CCAPS system was introduced and if there was any training surrounding it?
  + Making sense of the mixed literature on whether FB is effective only for NOT clients using these therapist variables
    - It may be that the NOT signal itself is impactful if therapists only attend to feedback when a client alerts. This may be the case in systems where therapists carry higher caseloads. If therapists attend to feedback all throughout treatment, even if a client has not alerted (e.g. comparing a client’s visual trajectory to the expected trajectory, noting if a client is getting worse, even if not enough to alert), they may be more likely to see benefits from a feedback system all along, even in the absence of an alert. This fits with prior research showing that the effectiveness of feedback is moderated by therapists’ belief that FB is useful (de Jong et al., 2012). Further supporting the role of therapist attention to FB, the PCOMS, which explicitly instructs therapists to discuss progress and feedback with patients, has demonstrated positive effects across all patients, not just those who alert ﻿(e.g., Anker, Duncan, & Sparks, 2009; Reese, Norsworthy, & Rowlands, 2009; Reese, Toland, Slone, & Norsworthy, 2010), although this is not conclusive, as the PCOMS varies from other FB systems in other ways as well.
* Limitations
  + Not an RCT, and no true comparison group available to control for temporality
  + Can’t rule out the effect of time, which was confounded with the introduction of the profile report
  + Ceiling effect
    - May have also lacked the range of severity to find a diminishing effect of feedback for higher severity as found in other studies
* Future research
  + Dig more into the effect of alerts for off track cases
    - Differential effects of feedback when alert happens early in treatment?
    - Trajectory of change before and after alert- do alerts help off track clients return to an on track trajectory

**Stuff from the intro that doesn’t currently have a home**

* Giving feedback to both clients and therapists produces better outcomes (Knaup al, 2009)
* OQ predicts deterioration in 85-100% of cases, with some false positives (Lambert, Whipple, & Kleinstäuber, 2018)
* Is it the alert that improves outcomes?
  + Trajectories of NOT patients were similar in FB and NFB conditions until the therapist in the FB condition was signaled that the patient was off track, but from that point forward the outcomes of patients in the FB condition improved significantly more than those in the NFB condition (Probst et al., 2013)
  + Same percentage of clients in feedback and no feedback conditions go off track (Amble, Gude, Stubdal, Andersen, & Wampold, 2015).
  + Clients in feedback and no feedback conditions who went off track had similar trajectories up to the point that the feedback condition clients received feedback, at which point their trajectory departed, indicating that the off track feedback was the effective component (Amble, Gude, Stubdal, et al., 2015)
  + Some research shows that slopes do change after a client receives an alert (Probst et al., 2013; Simon, Lambert, Harris, Busath, & Vazquez, 2012), but other research did not find an effect of feedback alert on slope (Amble, Gude, Ulvenes, Stubdal, & Wampold, 2015)
  + Although clients’ slopes improved after they received feedback, clients in a no feedback condition also had improved slopes after they went off track (when they would have received feedback), and the post-feedback slopes in the two conditions weren’t significantly different, failing to conclusively conclude that feedback results in improved rate of change. Instead, authors posit that signals tend to occur at high scores which are more likely to regress to the mean, potentially accounting for the decreasing slopes in both conditions (Amble, Gude, Ulvenes, et al., 2015)
* Other research on feedback effects
  + (Shimokawa et al., 2010).
  + Ellsworth, Lambert, & Johnson, 2006; Lambert, Whipple, Bishop, et al., ﻿2002; Lutz et al., 2006; Spielmans, Masters, & Lambert, 2006
  + OQ (Harmon et al., 2007; Lambert & Shimokawa, 2011)
  + PCOMS (Duncan, 2012) (Anker, 2009)
  + Meta-analyses
    - Meta- analysis showing effect of *d* = .28 for all clients and *d*  = .53 for NOT clients (Shimokawa et al., 2010)
    - Fortney 2017 meta analysis
    - Lambert 2003 meta analysis
    - Lambert 2011 meta analysis
    - Lambert 2018 meta analysis
    - Østergård 2018 PCOMS meta analysis
  + Although there is a preponderance of research showing feedback to improve outcomes, there are some studies showing less promising results.
    - Meta-analysis showing small effect of *d* =.10 (Knaup et al., 2009)
    - No overall effect, but effect for NOT clients using OQ (de Jong et al., 2012)
    - Kendrick 2016 meta analysis- used very strict inclusion criteria that eliminated studies with a stronger effect