

Recommendation from the Danish Health Technology Council concerning

# **Guided, internet-based cognitive behavioral therapy for the treatment of adults with mild or moderate depression**

## **Recommendation from the Danish Health Technology Council::**

The Danish Health Technology Council recommends that iCBT (Internet-based cognitive behavioral therapy) is not further disseminated, as based on the existing evidence, it cannot be concluded whether iCBT is better, equivalent, or worse than standard treatment for adults with mild or moderate depression.

### **About this recommendation:**

The recommendation is based on the understanding that the analysis and the underlying evidence, cannot conclude whether guided internet-based cognitive behavioral therapy (iCBT) has a better, equivalent, or worse clinical effect compared to cognitive behavioral therapy by a trained therapist or counseling by a general practitioner for the treatment of mild or moderate depression. This is due to the statistical uncertainty in the meta-analyses and the generally low quality of evidence assessed using GRADE.

Therefore, the council recommends that the treatment is not further disseminated until the clinical effect of iCBT is supported by robust randomized controlled research comparing iCBT with current treatment options.

The current analysis did not investigate waiting lists as a comparator, but international HTAs suggest that treatment with iCBT has a better clinical effect than if patients are on a waiting list or do not receive any treatment.

The council acknowledges that iCBT contributes to expanding the range of treatment options for a diverse patient group with individual needs and preferences. It also helps meet the current primary care treatment needs, so the current iCBT treatment option should not be reduced or removed.

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| <b>About the technology</b>  | ICBT is a manualized online program or app based on knowledge and exercises from cognitive behavioral therapy. The treatment is supported asynchronously by a trained therapist online. In Denmark, a regionally based iCBT treatment for the treatment of mild to moderate depression and anxiety disorders is provided by the Region of Southern Denmark, the program is called <i>internetpsykiatrien.dk</i> .                                   |
| <b>Patient population</b>    | Adults ( $\geq 18$ years) with symptoms of mild or moderate depression.                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Scope of application</b>  | The recommendation is applicable in all five Danish regions.                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Implementation</b>        | For now, there is one public iCBT treatment offer called <i>internetpsykiatrien.dk</i> . In the event of dissemination of <i>internetpsykiatrien.dk</i> , the payment model should be reconsidered to differentiate between payment for initial consultations and completed courses, as the current payment model has a reverse incentive structure where the full payment is made at the start of the course and not gradually or upon completion. |
| <b>Procurement procedure</b> | No proposal for national procurement                                                                                                                                                                                                                                                                                                                                                                                                                |

## The Expert Committee's summary of the analysis report

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| <b>About the analysis</b>                | <p>This recommendation from the Danish Health Technology Council is based on the expert committee's analysis report regarding Guided, internet-based cognitive behavioral therapy for adults with mild or moderate depression. The report aims to answer the following research questions:</p> <ul style="list-style-type: none"> <li>• Should guided iCBT be used as a treatment for adults with mild or moderate depression?</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Clinical effectiveness and safety</b> | <p>The analysis of Clinical Effect and Safety aims to investigate whether there are differences in clinical effectiveness and safety measures between guided iCBT and the selected comparators for the treatment of depression in Denmark. It is within the committee's mandate that studies having comparators other than currently applied treatments for the same patient group in Denmark are not included. The comparators in the current analysis cover counseling by a general practitioner and CBT by a trained therapist.</p> <p>Nine studies relevant to the analysis of Clinical Effects and Safety have been identified.</p> <p>In the comparison of guided iCBT and counseling by a general practitioner, meta-analyses showed no systematic difference in the effectiveness of the two interventions. The evidence quality, according to GRADE assessment of the respective outcome measures, ranged from low to very low, indicating limited to poor confidence in the evidence.</p> |

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|                                           | <p>For the comparison between guided iCBT and CBT by a trained therapist, meta-analyses also showed no systematic difference in the effectiveness of the two interventions on any of the outcome measures. The GRADE assessment for these outcome measures also ranged from low to very low, indicating limited to poor confidence.</p> <p>Due to the sparse evidence and low evidence quality, the expert committee assesses that confidence in the findings is limited to poor, thus, it is not possible to provide a clear assessment of any effectiveness differences between these interventions.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <p><b>Patient perspective</b></p>         | <p>The Patient Perspective aims to investigate the factors related to adherence contributing to patients initiating and completing treatment with guided iCBT. The perspective is based on the literature within the field.</p> <p>Research question 2 presents the primary themes that cause individuals to refrain from opting for or initiating a treatment course with guided iCBT. The themes include <i>program rigidity</i>, <i>technical difficulties</i>, <i>understanding of information and content</i>, <i>patients' financial costs</i>, and <i>requirements for IT skills</i>. These themes may contribute to particularly vulnerable patients being deterred from treatment with guided iCBT. Lastly, it describes how guided iCBT can be seen as a tool to overcome a barrier to initiating conventional treatment, both for those who refrain from treatment due to practical and physical circumstances, but also for those who have an aversion to conventional therapy and find the self-directed and anonymous internet-based treatment appealing.</p> <p>Research question 3 examines what can cause patients to complete the treatment course or prematurely stop it. Four overarching themes were identified contributing to retaining individuals in the treatment course. These include flexibility in time and place, technological accessibility and convenience, follow-up and support, and the experience of therapeutic benefits</p> <p>In research question 4 the therapeutic alliance is examined. Several studies find that a therapeutic alliance can be similarly established in iCBT to CBT – and several also find that the alliance significantly influences treatment outcomes. Different forms of communication in iCBT are also examined. Optional contact with the therapist results in lower completion rates, but it still leads to significant improvements in symptoms. The quality of the therapeutic alliance and individual preferences play a role in whether patients experience negative effects.</p> <p>The expert committee assesses that the above findings indicate that guided iCBT is a beneficial treatment option for those motivated to be more self-reliant in managing their treatment and who prefer the flexibility and anonymity that internet-based treatment offers. However, the committee emphasizes that guided iCBT should never be the patient's only treatment option. The committee assesses that it should be up to the patient, in consultation with their GP, to choose the treatment format that is best suited for them.</p> |
| <p><b>Organisational implications</b></p> | <p>In the assessment of Organizational Implications, three research questions have been illuminated based on findings from seven studies, two reports, and two focus group interviews. Research question 5 addresses what it takes for an organization to conduct guided iCBT interventions. The response indicates that it requires an IT platform and professional content, both of which can be either purchased or</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

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developed. There are advantages and disadvantages associated with both, including considerations related to data security, operational stability, and flexibility in terms of new professional content. Additionally, requirements for the organization and employees are identified, emphasizing that therapists need to adapt to digital work. To ensure a proper working environment and employee retention, it is also highlighted that the organization should set limits on the number of patients to avoid therapists experiencing 'digital burnout.'

Research question 6 examines the relationship between guided iCBT and the broader healthcare system compared to a standard course for individuals with moderate depression. Interviews with the "Center for digital psykiatri" and the "Afdeling for funktionelle lidelser" indicate that they inform the majority of patients' doctors about the treatment. Furthermore, research question 6 reveals the implications associated with offering treatment without a prior referral. Studies have shown that self-referrers and doctor-referred individuals largely exhibit similar depression symptoms and that the option of self-referral increases participation among certain population groups. Therefore, self-referral can be a feasible option to enhance the accessibility of treatment offerings.

Research question 7 maps out employees' resource consumption. Based on available data, the average employee resource consumption per patient intervention is seven hours for guided iCBT, 2.5 hours for counseling by general practitioners, and 8.9 hours for CBT by private practicing psychologists.

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The Health Economic perspective examines cost differences between guided iCBT and counseling by a general practitioner, and between guided iCBT and CBT, as well as the budgetary consequences of national implementation of guided iCBT.

The results show that iCBT costs 8,223 DKK, counseling by a general practitioner 4,673 DKK, and CBT 11,271 per intervention. The time the patient spends on treatment is one of the most uncertain parameters in this analysis and can be crucial for the final health economic outcome. Similarly, the patient's co-payment for CBT at 3,477 DKK can alter the result.

## Health economics

The expert committee assesses that the cost analysis does not show significant economic differences when excluding the patient's co-payment. This co-payment is not present in guided iCBT, which could be relevant to some patients' preferences and accessibility to guided iCBT. The costs of counseling by a general practitioner represent the cheapest treatment option, but the committee emphasizes that it is not a directly comparable therapeutic course with guided iCBT and CBT.

Patient representatives highlight the considerable uncertainty in the analysis's estimation of patient time consumption, noting that the time spent varies both from module to module in guided iCBT and in the amount of the patient's work between sessions with a psychologist and counseling by a general practitioner. It is therefore challenging to estimate the total time patients spend.

The budget impact analysis examines a gradual up-scaling from 2,500 initial consultations to 10,000 over five years. The result shows a national

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budgetary impact of 96.3 million DKK. The committee does not expect the implementation of guided iCBT to change the demand for CBT and counseling by a general practitioner. The committee emphasizes that with up-scaling, the value for money is still vague, as the results from Clinical Effect and Safety make clear. The committee also notes that payment occurs at an initial consultation and not at the beginning or completion of the intervention.

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### About the recommendation from the Danish Health Technology Council

The Danish Health Technology Council's recommendation is intended as an aid for regions when deciding on the use of a given health technology. The recommendation is based on the expert committee's analysis report. Depending on the health technology under examination, this report includes a review of one or more of the following perspectives: 1) Clinical effectiveness and safety, 2) Patient perspective, 3) Organisational implications, and 4) Health economics.

This recommendation is based on the Danish Health Technology Council's analysis report regarding guided, internet-based cognitive behavioral therapy for the treatment of adults with mild or moderate depression, which was prepared collaboratively by the expert committee and the secretariat. The analysis report was prepared at the outset in the Danish Health Technology Council's process guide and methodological guidelines. The expert committee's terms of reference are available on the Danish Health Technology Council's website.

| Information about this document                           |                                              |                                                  |
|-----------------------------------------------------------|----------------------------------------------|--------------------------------------------------|
| Approved by the Council: Document number: Version number: | 08.02.2024<br>Version number from ESDH: 1.0. |                                                  |
| Version no.:                                              | Date:                                        | Amendment(s):                                    |
| 1.0                                                       | 8. February 2024                             | Approved by the Danish Health Technology Council |