

# **Implementing digital mental health interventions at scale: One-year evaluation of a national digital CBT service in Ireland**

## **Supplementary Materials**

### **Risk Management Protocol**

Risk is continuously monitored via the suicidality question of the PHQ-9 (i.e. item 9). If a user reports a score of 2 or more on item 9 of the PHQ-9, the P4 screener (Dube et al., 2010) is automatically triggered. The P4 screener asks qualifying questions to obtain a more informed understanding of the level of risk and suitability for the program. If the users' answers to any of the P4 screener questions qualify as high risk, the service user will be automatically excluded and informed that they will receive a phone call from the clinical supervisor within 48 hours. They are also directed to the SCH crisis support centre. Supporters are also trained to monitor and report potential concerning content shared by users. If supporters identify risk they must complete a risk report and risk log, and they must additionally inform the clinical supervisor. The clinical supervisor must then review the risk report within 48 hours, and decide if the service user requires a phone call assessment. If, during the phone call, the service user is deemed unsuitable to continue with the program the clinical supervisor will update the risk report and risk log. SCH will also inform the referrer of the risk and ask for an additional assessment.

**Table S1.** Baseline levels of depression, anxiety and general impairment as measured by the PHQ-9, GAD-7, and WSAS respectively.

|              | Baseline Severity Category  | n (%)        | Caseness n (%) | Overall Mean (SD) |
|--------------|-----------------------------|--------------|----------------|-------------------|
| <b>PHQ-9</b> | Minimal (0-4)               | 232 (7.2%)   | 2122 (68.5%)   | 13.3 (6.2)        |
|              | Mild (5-9)                  | 745 (23.0%)  |                |                   |
|              | Moderate (10-14)            | 796 (24.6%)  |                |                   |
|              | Moderately Severe (15-19)   | 745 (23.0%)  |                |                   |
|              | Severe (20-27)              | 581 (18.0%)  |                |                   |
|              | Unavailable                 | 137 (4.2%)   |                |                   |
| <b>GAD-7</b> | Minimal (0-4)               | 182 (5.6%)   | 2428 (78.6%)   | 12.8 (5.3)        |
|              | Mild (5-9)                  | 771 (23.8%)  |                |                   |
|              | Moderate (10-14)            | 839 (25.9%)  |                |                   |
|              | Severe (15-21)              | 1296 (40.0%) |                |                   |
|              | Unavailable                 | 148 (4.6%)   |                |                   |
| <b>WSAS</b>  | Low Impairment (0-9)        | 455 (14.1%)  | 2605 (85.1%)   | 18.0 (8.2)        |
|              | Moderate Impairment (10-21) | 1316 (40.7%) |                |                   |
|              | Severe Impairment (20-40)   | 1289 (39.8%) |                |                   |
|              | Unavailable                 | 176 (5.4%)   |                |                   |

### Status of Accounts

Of the 3227 service users who activated an account between April 20<sup>th</sup>, 2021 and April 19<sup>th</sup>, 2022, 2255 have now been ‘Discharged,’ and 714 are currently in treatment. A further 194 accounts are ‘Pending’ (i.e. the service user has not yet completed the sign-up process) and six are categorised as ‘New Referral’ (i.e. the service user has completed the sign-up process and is waiting to be assigned a supporter). The remaining accounts have either been ‘Excluded’ (i.e. the service user has been excluded due to various reasons, including a small number cases where suicide risk was flagged), ‘Deleted’ (i.e. the service user has requested for their information to be deleted), or ‘Paused’ (i.e. the service user has requested to temporarily

suspend their treatment). For a more detailed breakdown of the number of accounts under each of these statuses please see Table S2.

**Table S2.** Status of accounts

| <b>Discharged</b> | <b>Deleted</b> | <b>Excluded</b> | <b>Current</b> | <b>Pending</b> | <b>Paused</b> | <b>New Referral</b> |
|-------------------|----------------|-----------------|----------------|----------------|---------------|---------------------|
| 2255 (69.6%)      | 8 (0.3%)       | 57 (1.8%)       | 714 (22.0%)    | 194 (6.0%)     | 2 (0.1%)      | 6 (0.2%)            |

**Table S3.** Program usage metrics for all discharged users (n=2255)

|                                   | <b>Mean (SD)</b> | <b>Min - max</b> | <b>Median</b>  |
|-----------------------------------|------------------|------------------|----------------|
| <b>Number of logins</b>           | 14.6 (20.1)      | 1 – 251          | 8.0 (3-18)     |
| <b>Number of reviews</b>          | 6.2 (1.5)        | 1 – 10           | 6.0 (5-8)      |
| <b>Length of use (minutes)</b>    | 171.2 (267.6)    | 2.7 – 2972.6     | 77.1 (23-206)  |
| <b>Time per session (minutes)</b> | 12.3 (11.0)      | 0.8 – 131.4      | 9.3 (5.6-15.3) |

**Table S4.** Program usage metrics for discharged users with at least 2 assessments (n=1116)

|                                   | <b>Mean (SD)</b> | <b>Min - max</b> | <b>Median (IQR)</b> |
|-----------------------------------|------------------|------------------|---------------------|
| <b>Number of logins</b>           | 23.4 (22.9)      | 2 – 245          | 17.0 (10-28)        |
| <b>Number of reviews</b>          | 7.1 (1.1)        | 2 – 10           | 7.0 (6-8)           |
| <b>Length of use (minutes)</b>    | 279.4 (329.4)    | 4.6 – 2972.6     | 175.3 (85.4-355)    |
| <b>Time per session (minutes)</b> | 12.4 (8.9)       | 1.5 – 91.7       | 10.2 (6.4-15.7)     |