| Classification | ICD-10 Code | Frequency |
|----------------|-------------|-----------|
| Upper FGID     | E13.43      | 1         |
| diagnoses      | G43.A0      | 1         |
|                | G43.D0      | 1         |
|                | K21.0       | 2         |
|                | K21.00      | 1         |
|                | K21.9       | 11        |
|                | K22.4       | 1         |
|                | K29.50      | 1         |
|                | K30         | 31        |
|                | K31.84      | 37        |
|                | K31.9       | 3         |
|                | K92.89      | 1         |
|                | R10.12      | 1         |
|                | R10.13      | 4         |
|                | R11.0       | 4         |
|                | R11.10      | 1         |
|                | R11.15      | 41        |
|                | R11.2       | 17        |
|                | R12         | 1         |
|                | R13.10      | 5         |
|                | R19.8       | 3         |
|                | Z98.84      | 1         |
| Lower FGID     | K50         | 1         |
| diagnoses      | K52.82      | 1         |
|                | K58.0       | 31        |
|                | K58.1       | 33        |
|                | K58.2       | 10        |
|                | K58.9       | 6         |
|                | K59.0       | 1         |
|                | K59.00      | 11        |
|                | K59.01      | 4         |
|                | K59.02      | 2         |
|                | K59.03      | 4         |
|                | K59.04      | 6         |
|                | K59.1       | 3         |
|                | K59.2       | 1         |
|                | K60.2       | 1         |
|                | K62.6       | 1         |
|                | K63.89      | 1         |

**Supplementary Table 1A**: Classification of FGID diagnosis by primary *ICD-10* code.

| $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  |                      |         |    |
|--|----------------------|---------|----|
| $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$   |                      |         |    |
| R10.2   1     R10.30   3     R10.31   3     R10.32   1     R10.32   1     R10.84   1     R10.9   10     R14.0   2     R19.4   3     R19.5   3     R19.7   5     R27.8   1     Other GI disorder   K50.00     with functional pain   K50.10     K50.118   1     K50.80   3     K50.818   1     K50.818   1     K51.0   1     K51.0   1     K51.011   1     K51.011   1     K51.011   1     K51.011   1     K51.012   1  |                      |         |    |
| R10.30   3     R10.31   3     R10.32   1     R10.9   10     R14.0   2     R19.4   3     R19.5   3     R19.5   3     R19.7   5     R27.8   1     Other GI disorder   K50.00     with functional pain   K50.10     K50.118   1     K50.80   3     K50.818   1     K50.818   1     K51.0   1     K51.0   1     K51.00   2     K51.011   1     K51.012   1     K51.2   1 |                      |         |    |
| R10.31   3     R10.32   1     R10.84   1     R10.9   10     R14.0   2     R19.4   3     R19.5   3     R19.7   5     R27.8   1     Other GI disorder   K50.00     with functional pain   K50.10     K50.118   1     K50.80   3     K50.818   1     K50.818   1     K50.819   2     K51.0   1     K51.01   1     K51.01   1     K51.012   1  |                      |         | 1  |
| R10.32   1     R10.84   1     R10.9   10     R14.0   2     R19.4   3     R19.5   3     R19.7   5     R27.8   1     Other GI disorder   K50.00     with functional pain   K50.10     K50.118   1     K50.80   3     K50.818   1     K50.818   1     K51.0   1     K51.0   1     K51.011   1     K51.011   1     K51.012   1   |                      | R10.30  | 3  |
| R10.84 1   R10.9 10   R14.0 2   R19.4 3   R19.5 3   R19.7 5   R27.8 1   Other Gl disorder K50.00   with functional pain K50.10   K50.118 1   K50.80 3   K50.818 1   K50.818 1   K50.819 2   K51.0 1   K51.011 1   K51.012 1   K51.22 1   |                      | R10.31  |    |
| R10.9   10     R14.0   2     R19.4   3     R19.5   3     R19.7   5     R27.8   1     Other Gl disorder   K50.00   1     with functional pain   K50.10   1     K50.118   1     K50.80   3     K50.818   1     K50.818   1     K50.819   2     K51.0   1     K51.011   1     K51.02   1     K51.011   1     K51.012   1  |                      | R10.32  | 1  |
| R14.0   2     R19.4   3     R19.5   3     R19.7   5     R27.8   1     Other Gl disorder   K50.00   1     with functional pain   K50.10   1     K50.118   1     K50.80   3     K50.818   1     K50.819   2     K51.0   1     K51.011   1     K51.011   1     K51.012   1  |                      | R10.84  | 1  |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $   |                      | R10.9   | 10 |
| R19.5   3     R19.7   5     R27.8   1     Other GI disorder   K50.00   1     with functional pain   K50.10   1     K50.118   1   K50.118   1     K50.119   2   K50.80   3     K50.818   1   K50.819   2     K51.0   1   K51.00   2     K51.011   1   K51.011   1     K51.012   1   K51.012   1   |                      | R14.0   |    |
| R19.7   5     R27.8   1     Other GI disorder with functional pain   K50.00   1     K50.10   1   K50.118   1     K50.118   1   K50.119   2     K50.80   3   K50.818   1     K50.818   1   K50.819   2     K51.0   1   K51.00   2     K51.011   1   K51.011   1     K51.012   1   K51.2   1   |                      |         |    |
| R27.8   1     Other GI disorder<br>with functional pain   K50.00   1     K50.10   1   K50.10   1     K50.118   1   K50.118   1     K50.119   2   K50.80   3     K50.818   1   K50.819   2     K51.0   1   K51.00   2     K51.011   1   K51.011   1     K51.012   1   K51.2   1   |                      |         |    |
| K50.00   1     with functional pain   K50.10   1     K50.118   1     K50.118   1     K50.119   2     K50.80   3     K50.818   1     K50.819   2     K51.0   1     K51.011   1     K51.012   1     K51.2   1  |                      | R19.7   |    |
| with functional pain   K50.10   1     K50.118   1     K50.119   2     K50.80   3     K50.818   1     K50.819   2     K51.0   1     K51.011   1     K51.012   1     K51.2   1   |                      | R27.8   | 1  |
| K50.1181K50.1192K50.803K50.8181K50.8192K51.01K51.002K51.0111K51.0121K51.21   | Other GI disorder    | K50.00  |    |
| K50.1192K50.803K50.8181K50.8192K51.01K51.002K51.0111K51.0121K51.21   | with functional pain | K50.10  |    |
| K50.803K50.8181K50.8192K51.01K51.002K51.0111K51.0121K51.21   |                      |         | 1  |
| K50.8181K50.8192K51.01K51.002K51.0111K51.0121K51.21  |                      | K50.119 |    |
| K50.8192K51.01K51.002K51.0111K51.0121K51.21  |                      | K50.80  |    |
| K51.01K51.002K51.0111K51.0121K51.21  |                      | K50.818 | 1  |
| K51.002K51.0111K51.0121K51.21  |                      |         |    |
| K51.0111K51.0121K51.21   |                      |         | 1  |
| K51.012 1<br>K51.2 1   |                      | K51.00  |    |
| K51.2 1  |                      |         |    |
|  |                      |         |    |
| K51.20 1   |                      |         |    |
|  |                      |         |    |
| K51.30 1   |                      |         |    |
| K51.50 2   |                      | K51.50  |    |
| K51.90 1   |                      | K51.90  | 1  |
| K52.831 1  |                      | K52.831 | 1  |
| K85.00 1   |                      | K85.00  | 1  |
| K86.1 2  |                      |         | 2  |
| K90.0 1  |                      | K90.0   | 1  |

FGID, functional gastrointestinal disorder; GI, gastrointestinal.

Supplementary Table 1B: FGID diagnoses requiring review of clinic note.

| Classification by <i>ICD-10</i>                                     | ICD-10 | Diagnosis on<br>chart review | Reclassification |
|---|--------|------------------------------|------------------|
| FGID disorder not specified in primary <i>ICD-10</i> required chart | F43.23 | chronic<br>abdominal pain    | Lower FGID       |
| review  | G89.4  | chronic<br>abdominal pain    | Lower FGID       |
|   | K91.89 | chronic<br>abdominal pain    | Lower FGID       |
|   | G54.8  | IBS-C                        | Lower FGID       |
|   | E46    | chronic                      | Lower FGID       |
|   |        | abdominal pain               |                  |
|   | R52    | chronic                      | Lower FGID       |
|   |        | abdominal pain               |                  |
|   | K43.9  | chronic                      | Lower FGID       |
|   |        | abdominal pain               |                  |
|   | R19.8  | chronic                      | Lower FGID       |
|   |        | abdominal pain               |                  |
|   | K59.8  | chronic                      | Lower FGID       |
|   |        | abdominal pain               |                  |
|   | M79.2  | chronic                      | Lower FGID       |
|   |        | abdominal pain               |                  |
|   | F43.20 | cyclic vomiting<br>syndrome  | Upper FGID       |

FGID, functional gastrointestinal disorder.

**Supplementary Table 2**: Correlation of change in GAD7 and PHQ8 score with patient interactions with RxWell and coaches

|  | Spearman<br>Correlation | <i>P</i> -value |  |  |
|--|-------------------------|-----------------|--|--|
| Correlations with Techniques           |                         |                 |  |  |
| GAD Pre - 1m                           | 0.064                   | 0.631           |  |  |
| GAD Pre- Post (last score within 3 mo) | -0.062                  | 0.640           |  |  |
| PHQ Pre - 1m                           | 0.002                   | 0.988           |  |  |
| PHQ Pre- Post (last score within 3 mo) | 0.041                   | 0.787           |  |  |
| Correlations with Messages to Coach    |                         |                 |  |  |
| GAD Pre - 1m                           | 0.057                   | 0.670           |  |  |
| GAD Pre- Post (last score within 3 mo) | -0.063                  | 0.637           |  |  |
| PHQ Pre - 1m                           | 0.047                   | 0.758           |  |  |
| PHQ Pre- Post (last score within 3 mo) | 0.205                   | 0.171           |  |  |
| Techniques vs Message Correlation      |                         |                 |  |  |
| Techniques – Coach                     | 0.729                   | <0.001          |  |  |

Note: Spearman correlations were used due to high skewness in the distribution of the number of techniques used and in messages to coach messages. GAD7, anxiety measure; PHQ8, depression measure. **Supplementary Table 3A**: Change in GAD7 and PHQ8 scores among patients enrolled by gastroenterology providers

|   | Mean<br>Change<br>(SD) | СІ             | t (df)       | P-value<br>(2-<br>tailed) | Cohen's<br>d effect<br>size |
|---|------------------------|----------------|--------------|---------------------------|-----------------------------|
| Pre-GAD7 - Post 1mo<br>GAD7             | 3.1 (5.1)              | (1.3, 5.0)     | 3.46<br>(31) | 0.002                     | 0.52                        |
| Pre-GAD7 to Post GAD7<br>(within 3 mo)  | 4.0 (4.8)              | (2.3, 5.7)     | 4.72<br>(31) | <0.001                    | 0.65                        |
| Pre-PHQ8-Post 1mo PHQ8                  | 1.4 (4.3)              | (-0.4,<br>3.2) | 1.57<br>(24) | 0.129                     | 0.23                        |
| Pre- PHQ8 to Post PHQ8<br>(within 3 mo) | 2.8 (4.9)              | (0.8, 4.8)     | 2.84<br>(24) | 0.009                     | 0.49                        |

CI, confidence interval; GAD7, anxiety measure; PHQ8, depression measure.

**Supplementary Table 3B**: Change in GAD7 and PHQ8 scores among patients enrolled by behavioral health providers

|   | Mean<br>Change<br>(SD) | CI             | t (df)       | <i>P</i> -value<br>(2-<br>tailed) | Cohen's<br>d effect<br>size |
|---|------------------------|----------------|--------------|-----------------------------------|-----------------------------|
| Pre-GAD7 - Post 1mo<br>GAD7             | 2.1 (5.5)              | (-0.1,<br>4.2) | 1.98<br>(26) | 0.059                             | 0.39                        |
| Pre-GAD7 to Post GAD7<br>(within 3 mo)  | 1.2 (6.3)              | (-1.3,<br>3.7) | 0.97<br>(26) | 0.34                              | 0.22                        |
| Pre-PHQ8-Post 1mo<br>PHQ8               | 0.9 (5.6)              | (-1.7,<br>3.4) | 0.70<br>(20) | 0.49                              | 0.15                        |
| Pre- PHQ8 to Post PHQ8<br>(within 3 mo) | 3.0 (4.3)              | (1.0, 4.9)     | 3.13<br>(20) | 0.005                             | 0.57                        |

CI, confidence interval; GAD7, anxiety measure; PHQ8, depression measure.