The coding of patient reported outcome measures and psychological therapies for anxiety disorders and depression

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Background and aims

- Anxiety disorders and depression are the most common mental disorders impacting individuals and services[1]
- Exploring patterns of code usage of Patient Reported Outcome Measures (PROMS) (e.g., PHQ-9) and psychological support and treatments offers key insights for conducting research on depression and anxiety using primary care electronic health records (EHR).

We aimed to explore the use of SNOMED CT codes for PROMs and psychological support and treatments in primary care to inform future research using EHR data.

What did we do?

- Created codelists for PROMs and psychological support and treatments for anxiety disorders and depression by reviewing recommendations in NICE guidelines[2,3,4] and existing codelists[5,6,7]
- We used the ***opencodecounts*** R package to explore data published by NHS England on SNOMED CT code usage in English primary care, and developed a new functionality to extract semantic tags.
- We described trends of usage from 1st August 2011 to 31st July 2024. We identified most frequently used codes and described pattern of use over time.

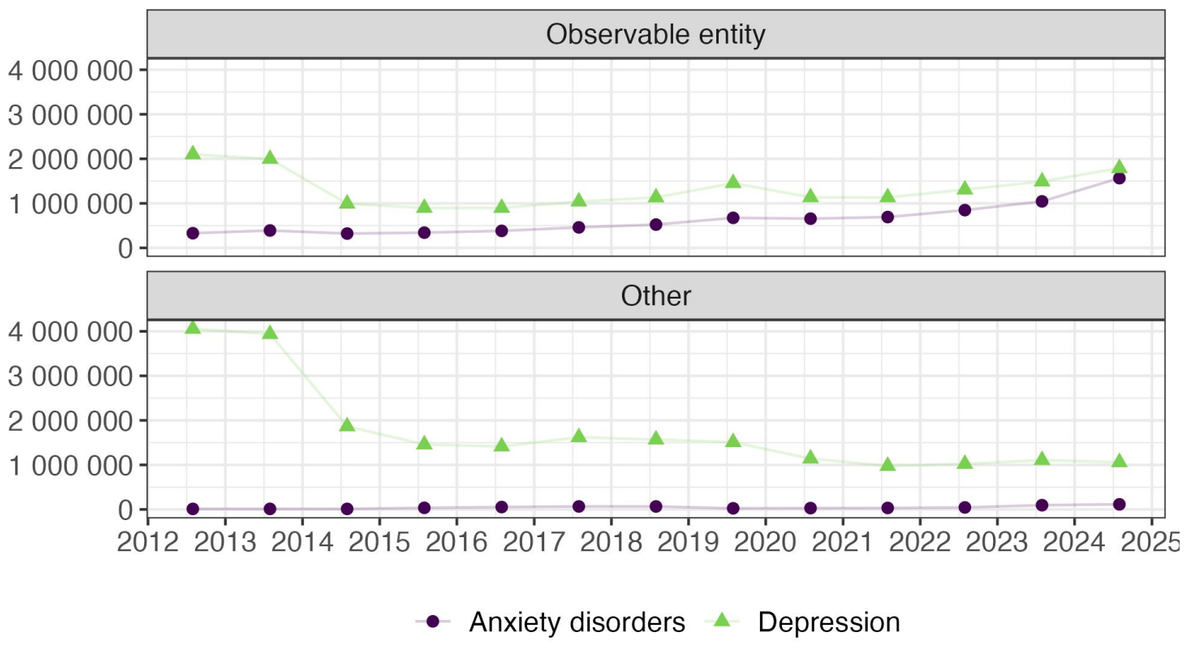
1. PROMs for anxiety disorders and depression

Table 1: *Total counts of code usage for PROMs for anxiety disorders and depression (2011 - 2024)*

SNOMED CODE	Description	Semantic tag	Usage	%
Anxiety Disorder				
44545505	GAD[1]-7 score	Observable entity	6,288,000	**71.2**
836571000000106	GAD[1]-2 score	Observable entity	1,136,480	**12.9**
401319005	HADS[2] anxiety	Observable entity	728,020	**8.2**
Depression				
200971000000100	Dep[3] screening	Procedure	21,510,040	**53.6**
720433000	PHQ[4]-9 score	Observable entity	16,229,920	**40.5**
401320004	HADS Dep[3] score	Observable entity	790,280	**2.0**

1. Generalised Anxiety Disorder; 2. Hospital Anxiety Depression scale; 3. Depression; 4. Patient Health Questionnaire.

Figure 1: *Yearly trends of code usage for PROMs broken down by semantic tag*



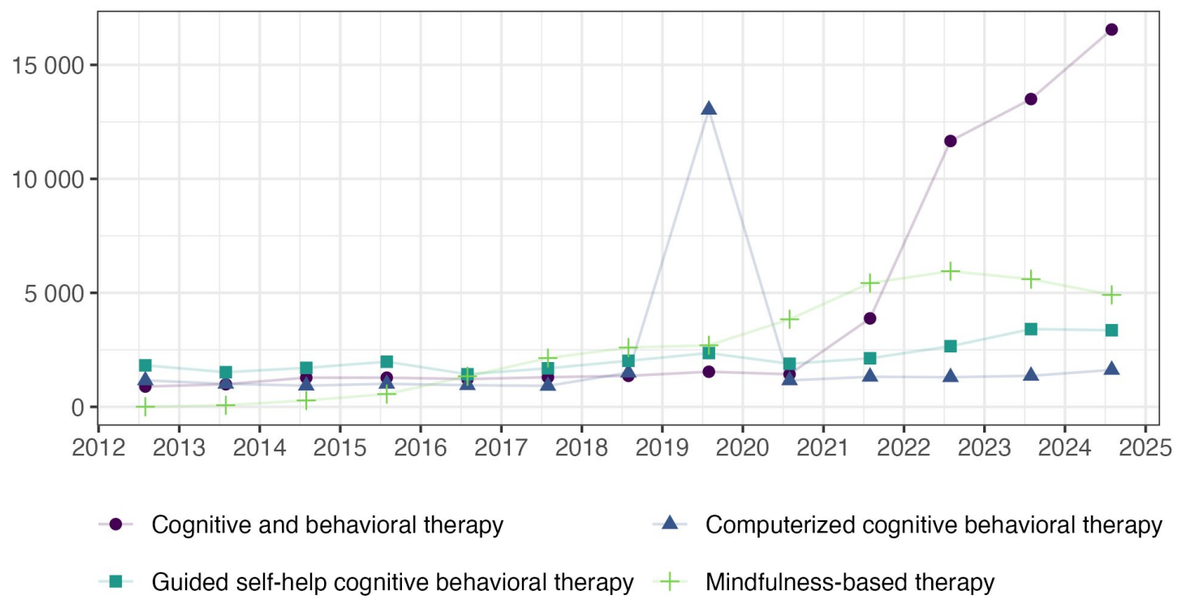
2. Psychological therapies for anxiety disorders and depression

Table 2: *Total counts of most used codes psychological support and treatments for anxiety disorders and depression (2011 - 2024)*

SNOMED CODE	Description	Semantic tag	Usage	%
305693007	Seen by psychiatrist	Finding	1,729,570	24.6
3103488003	Seen by psychologist	Finding	645,020	**9.2**
762481000000100	Seen by PWP[1]	Finding	295,990	**4.2**
380201000000109	Referral to IAPT[2]	Procedure	833,180	**11.8**
1036481000000106	Self-referral to IAPT[2]	Procedure	749,820	**10.7**
183528001	Referral to psychologist for elderly ill	Procedure	201,060	**2.9**
228557008	CBT[3]	Therapy	56,880	**0.8**
933221000000107	MBT[4]	Therapy	35,425	**0.5**
444175001	Guided self-help CBT[3]	Therapy	27,980	**0.4**

1. Psychological wellbeing practitioner; 2. Improving Access to Psychological Therapy; 3. Cognitive Behavioural Therapy; 4. Mindfulness-Based Therapy.

Figure 2: *Yearly trends of most coded psychological treatments*



Implications

- *opencodecounts* represents a rapid way to analyse coding patterns
- Studies should account for the wider set of PROMs codes beyond NICE-recommended codes to improve validity of outcome measurement in EHR research

Limitations

- Data represent code usage and not individual patients

1. Anxiety disorders [Internet]. Geneva: World Health Organization; 2023 [cited 2025 Aug 20]. Available from: https://www.who.int/news-room/fact-sheets/detail/anxiety-disorders
2. NICE Guideline NG222 (2022); 3. NHS Talking Therapies for anxiety and depression Manual (Table 2); 4. NICE Guideline CG113 (2011); 5. Anxiety Screening Codelist (OpenCodelists); 6. Depression screening codelist (OpenCodelists); 7. Anxiety Support and Treatment Codelist (OpenCodelists)