**Supplemental Table 1.** Diagnostic codes from the *International Classification of Diseases*, *Ninth and Tenth Revisions* used to identify anxiety-related diagnoses and physical symptoms of anxiety

|  |  |  |
| --- | --- | --- |
| **Adjustment Reaction** | | |
| **Revision** | **Code** | **Description** |
| ICD-9 | 309.1 | Prolonged depressive reaction |
| ICD-9 | 309.2 | Adjustment reaction with predominant disturbance of other emotions |
| ICD-9 | 309.24 | Adjustment disorder with anxiety |
| ICD-9 | 309.28 | Adjustment disorder with mixed anxiety and depressed mood |
| ICD-9 | 309.29 | Other adjustment reactions with predominant disturbance of other emotions |
| ICD-9 | 309.3 | Adjustment disorder with disturbance of conduct |
| ICD-9 | 309.4 | Adjustment disorder with mixed disturbance of emotions and conduct |
| ICD-9 | 309.8 | Other specified adjustment reactions |
| ICD-9 | 309.81 | Posttraumatic stress disorder |
| ICD-9 | 309.82 | Adjustment reaction with physical symptoms |
| ICD-9 | 309.83 | Adjustment reaction with withdrawal |
| ICD-9 | 309.89 | Other specified adjustment reactions |
| ICD-9 | 309.9 | Unspecified adjustment reaction |
| ICD-10 | F43.10 | Post-traumatic stress disorder, unspecified |
| ICD-10 | F43.12 | Post-traumatic stress disorder, chronic |
| ICD-10 | F43.21 | Adjustment disorder with depressed mood |
| ICD-10 | F43.22 | Adjustment disorder with anxiety |
| ICD-10 | F43.23 | Adjustment disorder with mixed anxiety and depressed mood |
| ICD-10 | F43.24 | Adjustment disorder with disturbance of conduct |
| ICD-10 | F43.25 | Adjustment disorder with mixed disturbance of emotions and conduct |
| ICD-10 | F43.29 | Adjustment disorder with other symptoms |
| **Anxiety, dissociative, and somatoform disorders** | | |
| **Revision** | **Code** | **Description** |
| ICD-9 | 300.0 | Anxiety states |
| ICD-9 | 300.00 | Anxiety state, unspecified |
| ICD-9 | 300.01 | Panic disorder without agoraphobia |
| ICD-9 | 300.02 | Generalized anxiety disorder |
| ICD-9 | 300.09 | Other anxiety states |
| ICD-9 | 300.10 | Hysteria, unspecified |
| ICD-9 | 300.20 | Phobia, unspecified |
| ICD-9 | 300.8 | Somatoform disorders |
| ICD-9 | 300.81 | Somatization disorder |
| ICD-9 | 300.82 | Undifferentiated somatoform disorder |
| ICD-9 | 300.89 | Other somatoform disorders |
| ICD-9 | 300.9 | Unspecified nonpsychotic mental disorder |
| ICD-10 | F40.9 | Phobic anxiety disorder, unspecified |
| ICD-10 | F41.0 | Panic disorder [episodic paroxysmal anxiety] |
| ICD-10 | F41.1 | Generalized anxiety disorder |
| ICD-10 | F41.8 | Other specified anxiety disorders |
| ICD-10 | F41.9 | Anxiety disorder, unspecified |
| ICD-10 | F44.9 | Dissociative and conversion disorder, unspecified |
| ICD-10 | F45.0 | Somatization disorder |
| ICD-10 | F45.1 | Undifferentiated somatoform disorder |
| ICD-10 | F45.8 | Other somatoform disorders |
| ICD-10 | F45.9 | Somatoform disorder, unspecified |
| ICD-10 | F48.8 | Other specified nonpsychotic mental disorders |
| ICD-10 | F48.9 | Nonpsychotic mental disorder, unspecified |
| ICD-10 | F99 | Mental disorder, not otherwise specified |
| **Physical symptoms of anxiety** | | |
| **Revision** | **Code** | **Description** |
| ICD-9 | 306.2 | Cardiovascular malfunction arising from mental factors |
| ICD-9 | 306.3 | Skin disorder arising from mental factors |
| ICD-9 | 306.4 | Gastrointestinal malfunction arising from mental factors |
| ICD-9 | 306.5 | Genitourinary malfunction arising from mental factors |
| ICD-9 | 306.6 | Endocrine disorder arising from mental factors |
| ICD-9 | 306.7 | Disorder of organs of special sense arising from mental factors |
| ICD-9 | 306.8 | Other specified psychophysiological malfunction |
| ICD-9 | 599.9 | Unspecified disorder of urethra and urinary tract |
| ICD-9 | 600.0 | Unspecified disorder of urethra and urinary tract |
| ICD-9 | 719.49 | Unspecified inflammatory polyarthropathy |
| ICD-9 | 719.40 | Pain in the unspecified joint |
| ICD-9 | 714.9 | Unspecified inflammatory polyarthropathy |
| ICD-9 | 729.1 | Myalgia and myositis, unspecified |
| ICD-9 | 339.10 | Tension type headache, unspecified |
| ICD-9 | 339.89 | Other headache syndromes |
| ICD-9 | 346.90 | Migraine, unspecified, without mention of intractable migraine |
| ICD-9 | 780.50 | Unspecified sleep disturbance |
| ICD-9 | 780.52 | Insomnia, unspecified |
| ICD-9 | 782.0 | Disturbance of skin sensation |
| ICD-9 | 784.0 | Headache |
| ICD-9 | 785.0 | Tachycardia unspecified |
| ICD-9 | 785.1 | Palpitations |
| ICD-9 | 786.06 | Tachypnea |
| ICD-9 | 786.50 | Unspecified chest pain |
| ICD-9 | 789.07 | Abdominal pain generalized |
| ICD-10 | F458 | Other somatoform disorders |
| ICD-10 | F459 | Somatoform disorder, unspecified |
| ICD-10 | F59 | Unspecified behavioral syndromes associated with physiological disturbances and physical factors |
| ICD-10 | G43.909 | Migraine, unspecified, not intractable, without status migrainosus |
| ICD-10 | G44.209 | Tension-type headache, unspecified, not intractable |
| ICD-10 | G44.89 | Other headache syndrome |
| ICD-10 | G47.00 | Sleep disorders unspecified |
| ICD-10 | G47.9 | Sleep disorder, unspecified |
| ICD-10 | M06.4 | Inflammatory polyarthropathies |
| ICD-10 | M25.50 | Pain in unspecified joint |
| ICD-10 | M60.9 | Myositis, unspecified |
| ICD-10 | N36.9 | Urethral disorder, unspecified |
| ICD-10 | N39.9 | Disorder of urinary system, unspecified |
| ICD-10 | R00.0 | Tachycardia, unspecified |
| ICD-10 | R00.2 | Palpitations |
| ICD-10 | R06.82 | Tachypnea, not elsewhere classified |
| ICD-10 | R07.9 | Chest pain, unspecified |
| ICD-10 | R10.84 | Generalized abdominal pain |
| ICD-10 | R20.8 | Other disturbances of skin sensation |
| ICD-10 | R20.9 | Unspecified disturbances of skin sensation |
| ICD-10 | R51 | Headache |
| **Stress disorders** | | |
| **Revision** | **Code** | **Description** |
| ICD-9 | 308 | Acute reaction to stress |
| ICD-9 | 308.0 | Predominant disturbance of emotions |
| ICD-9 | 308.1 | Predominant disturbance of consciousness |
| ICD-9 | 308.2 | Predominant psychomotor disturbance |
| ICD-9 | 308.3 | Other acute reactions to stress |
| ICD-9 | 308.4 | Mixed disorders as reaction to stress |
| ICD-9 | 308.9 | Unspecified acute reaction to stress |
| ICD-9 | 300.89 | Other somatoform disorders |
| ICD-9 | 300.9 | Unspecified nonpsychotic mental disorders |
| ICD-10 | F43.0 | Acute stress reaction |

**Supplemental Table 2.** Association of *≥ M4* earthquake in previous six months with anxiety-related diagnoses and physical symptoms of anxiety in Oklahoma, 2010 – 2019.**1,2,3**

|  |  |
| --- | --- |
|  | **Odds Ratio 4**  (95% CI) |
| **All Visits**  **Adjustment Reaction**  **Anxiety-Related**  **Physical Symptoms**  **Stress Disorders** | 1.01 (0.96 – 1.06)  1.05 (0.89 – 1.23)  0.96 (0.90 – 1.03)  1.03 (0.98 – 1.09)  1.27 (1.03 – 1.57) |

1. Odds ratios (OR) and 95% CI correspond to results presented in Figure 2.
2. We used generalized estimating equations with an exchangeable working correlation structure to estimate ORs. All models were controlled for sex, age group, season and calendar year.
3. We defined the number of earthquakes ≥ M4 within the previous six months at the county level.
4. Coefficients were rescaled to reflect an association for a five-earthquake increase.

**Supplemental Table 3.** Association of frequency of *≥ M*4 earthquakes in previous six months with adjustment reaction, anxiety-related disorders, physical symptoms, stress disorders, and all visits combined, 2010 – 2019 1,2

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **All Visits**  OR (95% CI) | **Adjustment Reaction**  OR (95% CI) | **Anxiety-Related**  OR (95% CI) | **Physical Symptoms**  OR (95% CI) | **Stress Disorders**  OR (95% CI) |
| **Zero**  **One**  **Two to seven**  **Eight or more** | 1 (Ref)  1.01 (0.92 – 1.11)  1.02 (0.93 – 1.13)  1.02 (0.90 – 1.16) | 1 (Ref)  1.26 (0.92 – 1.73)  1.11 (0.80 – 1.54)  1.29 (0.85 – 1.97) | 1 (Ref)  0.90 (0.76 – 1.07)  0.98 (0.83 – 1.15)  0.90 (0.73 – 1.11) | 1 (Ref)  1.03 (0.92 – 1.16)  1.02 (0.91 – 1.14)  1.07 (0.92 – 1.24) | 1 (Ref)  2.60 (1.51 – 4.49)  2.08 (1.27 – 3.41)  2.64 (1.37 – 5.09) |

1. We used generalized estimating equations with an exchangeable working correlation structure to estimate odds ratios. All models included controls for sex, age group, and included fixed effects for season and calendar year.
2. We defined the number of earthquakes ≥ *M*4 within the previous six months at the county level.

**Supplemental Table 4.** Association of *≥ M5* earthquake in previous six months with anxiety-related diagnoses and physical symptoms of anxiety in Oklahoma, 2010 – 2019.

|  |  |
| --- | --- |
|  | **Odds Ratio**  (95% CI) |
| **All Visits**  **Adjustment Reaction**  **Anxiety-Related**  **Physical Symptoms**  **Stress Disorders** | 0.99 (0.89 – 1.09)  0.69 (0.48 – 0.99)  0.97 (0.83 – 1.14)  1.03 (0.91 – 1.17)  1.04 (0.89 – 1.22) |

1. We used generalized estimating equations with an exchangeable working correlation structure to estimate ORs. All models were controlled for sex, age group, season and calendar year.
2. We created an indicator variable that equaled one if an earthquake *≥ M5* occurred within the past six months and zero otherwise assigned to individuals based on their county of residence.