**Supplemtary material for**

**Title:** **Autism: Comorbidities and treatment patterns in real world data**

Table 1. Behavioral and educational interventions procedure codes

|  |  |  |
| --- | --- | --- |
| **Procedure** | **Code** | **Vocabulary** |
| Therapeutic exercises to develop strength and endurance, range of motion and flexibility | 97110 | CPT4 |
| Therapeutic activities, direct (one-on-one) patient contact (use of dynamic activities to improve functional performance) | 97530 | CPT4 |
| Prolonged evaluation and management or psychotherapy service(s) | 99354, 99355 | CPT4 |
| Mental health service plan development by non-physician | H0032 | HCPCS |
| Mental health clubhouse services | H2030- H2030 | HCPCS |
| Psychologic AND/OR psychiatric procedure AND/OR service | 108310004\* | SNOMED |
| Speech therapy | 5154007\* | SNOMED |
| Language promotion therapy | 311602008\* | SNOMED |
| Psychosocial procedure | 72353004\* | SNOMED |
| Counseling | 409063005\* | SNOMED |
| Art therapy | 6515300\* | SNOMED |
| Depression management program | 401174001\* | SNOMED |
| Nutrition therapy | 386373004\* | SNOMED |
| Psychotherapy | 75516001\* | SNOMED |
| Social prescribing for mental health | 515721000000104\* | SNOMED |
| Occupational therapy | 84478008\* | SNOMED |

Table 2. treatments considered in the treatment pathway analysis and it’s corresponding billing code

|  |  |
| --- | --- |
| **Category** | **Specific treatments considered in the treatment pathway analysis** |
| **Behavioral and educational** | All procedures listed in table 1 above grouped together. |
| **Brian stimulation approaches** | Transcranial Magnetic Stimulation (TMS) and transcranial Direct Current Stimulation grouped together-  CTP code : 0160T- 0161T, 90868, 90867,  SNOMED: 271406004\* |
| **Medications** | Selective serotonin reuptake inhibitors |
| Serotonin–norepinephrine reuptake inhibitor |
| Tricyclic Antidepressant |
| Monoamine oxidase inhibitor |
| Other antidepressants |
| Antipsychotics- (excluding other Antipsychotics) |
| Anxiolytics |
| Anticonvulsant |
| Centrally acting sympathomimetics- (including Methylphenidate+ Amphetamine and others) |
| Hypnotics and sedatives |
| NMDA receptor antagonist (Memantine+Amantadine) |
| Acetylcysteine |
| Pentoxifylline |
| Riluzole |
| Celecoxib |
| Simvastatin |
| Baclofen |
| [Imidazoline receptor agonists](https://www.whocc.no/atc_ddd_index/?code=C02AC&showdescription=no) (Guanfacine and Clonidineand others) |
| other Antipsychotics (Risperidone + Aripiprazole) |
| Oxytocin |