Application for Inclusion to the 23rd Expert Committee on the Selection and Use of Essential Medicines for Children: Methylphenidate Hydrochloride

Submitted: November 25, 2020 by:

Stephen V. Faraone, Ph.D.
Distinguished Professor and Vice Chair for Research
Department of Psychiatry, SUNY Upstate Medical University;
President, World Federation of Attention Deficit Hyperactivity Disorder
Contact: faraones@upstate.edu

Additional Contributing Authors:

Tobias Banaschewski, MD, PhD
Professor of Child and Adolescent Psychiatry
Medical Faculty Mannheim of the University of Heidelberg, Germany;
Chair, European Network for Hyperkinetic Disorders;
Coordinator, Evidenced-based and consensus-oriented German Guidelines on ADHD in children, adolescents and adults of the Association of Medical Scientific Societies in Germany (AWMF)

David Coghill, MB ChB, MD, FRCPsych FRANZCP
Professor of Child and Adolescent Psychiatry
Royal Children's Hospital, Melbourne, Australia;
Financial Markets Foundation Chair of Developmental Mental Health, University of Melbourne;
Vice President, Australian ADHD Professionals Association

Samuele Cortese MD, PhD
Professor of Child and Adolescent Psychiatry
University of Southampton, UK;
Honorary Consultant in Child and Adolescent Psychiatry, Solent NHS Trust, UK;
Member of European ADHD Guidelines Group

Jeffrey H. Newcorn, MD
Professor of Psychiatry and Pediatrics
Director, Division of ADHD and Learning Disorders,
Icahn School of Medicine at Mount Sinai, New York, NY
Director, Pediatric Psychopharmacology
Mount Sinai Health System
President, American Professional Society of ADHD and Related Disorders

Patricia Moscibrodzki, MPH
Department of Clinical Research
London School of Hygiene and Tropical Medicine
London, UK

Craig L. Katz, MD
Clinical Professor of Psychiatry, Medical Education, System Design & Global Health,
Icahn School of Medicine at Mount Sinai, New York, NY
Founder and Director of Mount Sinai's Program in Global Mental Health, Icahn School of Medicine at Mount Sinai, New York, NY

Author Disclosures of Potential Conflicts of Interest

In the past year, Dr. Faraone received income, potential income, travel expenses continuing education support and/or research support from Takeda, OnDosis, Tris, Otsuka, Arbor, Ironshore, Rhodes, Akili Interactive Labs, Sunovion, Supernus and Genomind. With his institution, he has US patent US20130217707 A1 for the use of sodium-hydrogen exchange inhibitors in the treatment of ADHD. He also receives royalties from books published by Guilford Press: Straight Talk about Your Child's Mental Health, Oxford University Press: Schizophrenia: The Facts and Elsevier: ADHD: Non-Pharmacologic Interventions. He is Program Director of www.adhdinadults.com.

Dr. Banaschewski served in an advisory or consultancy role for Lundbeck, Medice, Neurim Pharmaceuticals, Oberberg GmbH, Takeda, and Infectopharm. He received conference support or speaker's fee by Lilly, Medice, and Takeda. He received royalities from Hogrefe, Kohlhammer, CIP Medien, Oxford University Press.

Dr Coghill served in an advisory or consultancy role for Medice and Takeda. He received conference support or speaker's fee from Jannsen, Medice, Servier and Takeda. He received royalties from Cambridge University Press and Oxford University Press.

Dr. Newcorn is/has been an advisor and/or consultant for Adlon Therapeutics, Arbor, Eisai, Medice, Myriad Neuroscience, NLS, OnDosis, Rhodes, Shire/Takeda, and Supernus, and was a DSMB member for Sunovion. He has received research support from the National. Institute on Drug Abuse (NIDA), the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), Otsuka, Shire and Supernus. He also has received speaker fees from Shire/Takeda for disease-state presentations, and served as a consultant for the US National Football League.

Dr Cortese declares honoraria and reimbursement for travel and accommodation expenses for lectures from the following non-profit associations: Association for Child and Adolescent Central Health (ACAMH), Canadian ADHD Alliance Resource (CADDRA), British Association of Pharmacology (BAP), and from Healthcare Convention for educational activity on ADHD

Drs. Katz and Moscibrodzki have no potential conflicts of interest to declare.

Table of Contents

1. Summary Statement of the Proposal for Inclusion of Methylphenidate

Methylphenidate (MPH), a central nervous system (CNS) stimulant, of the phenethylamine class, is proposed for inclusion in the WHO Model List of Essential Medications (EML) & the Model List of Essential Medications for Children (EMLc) for treatment of Attention-Deficit/Hyperactivity Disorder (ADHD) under ICD-11, 6C9Z mental, behavioral or neurodevelopmental disorder, disruptive behavior or dissocial disorders. To date, the list of essential medications does not include stimulants, which play a critical role in the treatment of ADHD. Methylphenidate is proposed for inclusion on the complimentary list for children. This application provides a systematic review of the use, efficacy, safety, availability, and cost-effectiveness of methylphenidate compared with other stimulant (first-line) and non-stimulant (second-line) medications.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for children world-wide, not just those in industrialized or western countries. For most patients, the impairing symptoms of ADHD persist into adulthood (Faraone et al., 2006). Annual incremental costs of ADHD have been estimated at $143-$266 billion in the US (Doshi et al., 2012), $12.8 billion in Australia (Australian ADHD Professionals Association, 2019) and (Sciberras et al., 2020) are substantial in other countries as well (Le et al., 2014). Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children (Polanczyk et al., 2014) and 2.8% of adults (Fayyad et al., 2017) worldwide, limiting access to methylphenidate has profound repercussions.

In 2018 the European ADHD Guidelines Group (EAGG) published the most comprehensive meta-analysis of short-term RCTs of ADHD medications across the lifespan (Cortese et al., 2018). When assessing efficacy, the standardized mean differences (SMDs) comparing methylphenidate to placebo were 0.78 for children (95% CI: 0.62-0.93) and 0.49 for adults (0.35-0.64). Both SMDs were based on clinician ratings of outcome in double-blinded RCTs. These SMDs are not only statistically significant, they are among the highest in psychiatry and other areas of medicine (Leucht et al., 2012). Because long-term RCTs are not ethical, we rely on large, naturalistic population registry studies to assess longer term functional outcomes. These show that methylphenidate treatment for ADHD reduces accidental injuries, traumatic brain injury, substance abuse, cigarette smoking, educational underachievement, bone fractures, sexually transmitted infections, depression, suicide, criminal activity and teenage pregnancy Given this strong evidence for efficacy from RCTs and effectiveness, in the longer term, from naturalistic studies along with a profile of minor, adverse effects, methylphenidate warrants inclusion in WHO's list of Essential Medicines for Children.

In 2020, WHO rejected a request to place methylphenidate on the list of Essential Medicines for Children. The Expert Committee's decision to exclude methylphenidate from their list stands in stark contrast to the decisions of many regulatory agencies and professional groups around the world. As regards regulatory agencies, the safety and efficacy of methylphenidate have been approved by the US Food and Drug Administration, the European Medicine Agency, The Chinese National Medical Products Administration, Health Canada, the Australian Therapeutic Goods Administration, the Japanese Pharmaceuticals and Medical Devices Agency and the Israeli Ministry of Health, Pharmaceutical Division, Medical Preparations Registration Department.

The Expert Committee cited the meta-analysis of randomized controlled trials (RCTs) of methylphenidate for children with ADHD by Storebø et al. (2015) as a source supporting the notion that the evidence for the use of methylphenidate for ADHD is of poor quality, likely overestimates the positive effects of methylphenidate and underestimates its harms. However, relying on the Storebø et al. (2015) meta-analysis is problematic for several reasons. That meta-analysis is flawed due to its use of idiosyncratic methods to assess the quality of the evidence and factual errors, such as inappropriate study

inclusion, incorrect downgrading of the evidence based on the GRADE system, and incorrect data imputation. For further details, see Banaschewski et al. (2016) and Hoekstra et a. (2016),.

The 2018 European ADHD Guidelines Group (EAGG) meta-analysis of RCTs of ADHD across the lifespan (Cortese et al., 2018) was based on a more advanced and precise meta-analytic method (network meta-analysis) compared with the standard approach (pairwise) used by Storebø and colleagues. Cortese et al. concluded that, considering all the included outcomes related to efficacy/safety, methylphenidate should be considered the first line pharmacological option for ADHD in children and adolescents.

In Cortese et al.'s meta-analysis, the quality of the evidence of the RCTs on methylphenidate on the primary outcome (clinicians rating) was judged as moderate, as opposed to the very low quality of evidence reported by Storebø and colleagues. This difference stems from two sources. First, Storebø et al.'s use of the GRADE system for rating risk of bias in meta-analysis did not follow usual practice. For example, they rated overall study bias as 'high risk' if only one item was uncertain. Most guidelines for rating quality define 'high risk' if one item clearly indicates a high risk of bias, and this procedure was followed in Cortese et al. Second, the rating of the quality of the evidence is based on the information available to the researchers who perform the rating. Cortese et al. gathered unpublished data after systematically contacting study authors and drug manufacturers. After including this information, which was not available to Storebø et al., the overall number of uncertain quality items across all items of the Risk of Bias decreased from 63.5% to 35.2%. This suggests that what previous meta-analyses assessed as "very low" may refer more to the quality of the study reporting, rather than the evidence per se.

We acknowledge that there are gaps in the evidence for almost all medicines used to treat both physical and mental health problems. It is however important that the decision-making process about which treatments should be made available is applied consistently across different disorders and in such a way that ensures parity between physical and mental disorders. As pointed out by Leucht et al. (2012) medications for mental and behavioural disorders have a similar range of efficacies to those for physical health problems. For example, when investigating the effects of digoxin on atrial fibrillation and flutter Sethi and colleagues (Sethi et al., 2018) were unable to identify any trials with follow-up longer than 24 weeks. We also note that state-of-the-art tools to rate the quality of the evidence, such as GRADE used by Storebo et al. and Cortese et al., set the highest standards of reporting. Indeed, using GRADE, the UK National Institute for Clinical Care and Excellence failed to rate as high level most of the evidence from studies on the efficacy and tolerability of some commonly used treatments in general medicine, such as antihypertensive (https://www.nice.org.uk/guidance/ng136) and anti-asthmatic drugs (https://www.nice.org.uk/guidance/ng80), yet these drugs are still recommended for use.

The decision by the Expert Committee to not recommend the addition of methylphenidate to the complementary list of the EML and EMLc for the treatment of ADHD will continue to make access to methylphenidate challenging for millions of people around the world. Your decision will disproportionately affect the poorest and highest risk of children due to economic and educational disadvantages. This will increase morbidity, create chaos in families and drive up health care costs.

Considering the evidence given above, we urge the Expert Committee to reconsider their decision regarding the inclusion of methylphenidate in the complementary list of the EML and EMLc.

2. Relevant WHO technical department and focal point

Dr. Lorenzo Moja, Technical Officer
Policies, Access and Use (PAU) Team
Essential Medicines and Health Products (EMP)
World Health Organization

3. Names of the Organization(s) Consulted and Supporting the Application

This application has been submitted by Stephen V. Faraone, President of the World Federation of ADHD, https://www.adhd-federation.org/, on behalf of the following organizations. See Appendix A for letters of support.

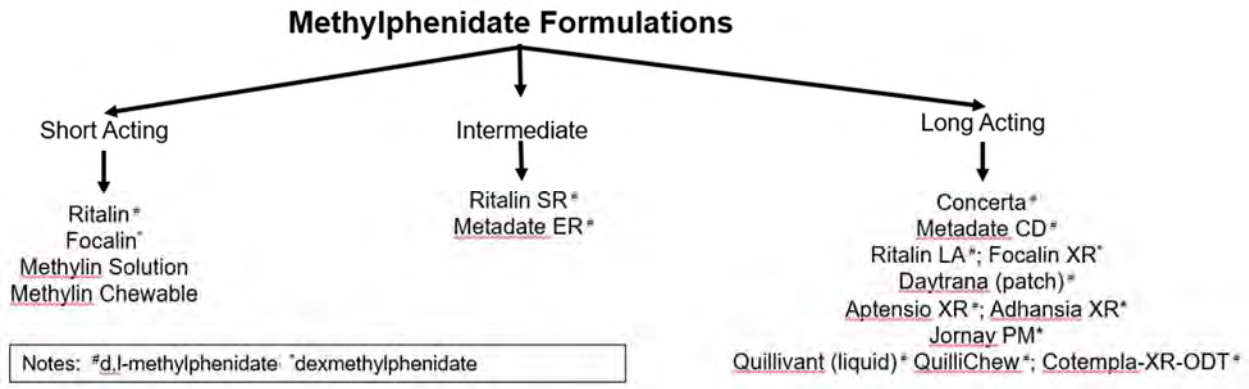
1. ADHD, ASC & LD, Belgium
2. ADHD Association Axarquia, Spain
3. ADHD Association Iceland
4. ADHD Association Palencia, Spain
5. ADHD Europe
6. ADHD Germany
7. ADHD Ireland
8. ADHD Malta, European Union
9. ADHD Solutions CIC, UK
10. ADHD Terres de L'Ebre, Spain
11. Andalusian Federation of Associations for Aid to Hyperkinetic Disorder and Attention Deficit, Spain
12. Asian Federation of ADHD
13. Association for Attention Deficit Hyperactivity, Spain
14. Association for ADHD, Spain
15. Association for Understanding ADHD, Croatia
16. Association of Mothers and Fathers of Children and Adolescents with ADHD, Spain
17. Association of Parents of Hyperactive Children, Spain
18. Association of People with ADH of Bizkaia, Spain
19. Australian ADHD Professionals Association
20. Bahía de Cádiz ADHD Association, Spain
21. Belize Ministry of Health, Mental Health Unit, Central America
22. Brazilian Association for Attention Deficit Disorder
23. Canadian ADHD Resource Alliance
24. Catalan Federation of Relatives and People Affected by ADHD, Catalonia, Spain
25. Centre for ADHD Awareness, Canada
26. Children and Adults with ADHD, USA
27. Chinese Society of Child and Adolescent Psychiatry
28. Danish ADHD Organization
29. Eunethydis Network, European Union
30. European Society for Child and Adolescent Psychiatry
31. Federation of ADHD Castilla y Leon Associations, Spain
32. Fundación Cultural Federico Hoth, A.C. (Proyectodah, seeks knowledge and solutions around ADHD in all Spanish-speaking countries)
33. Galician Federation of Associations for Attention Deficit and Hyperactivity, Spain
34. Geha Mental Health Center, Israel
35. German Society for Child and Adolescent Psychiatry, Psychosomatics, and Psychotherapy (DGKJP)
36. GMERS Medical College and Hospital, India
37. Grenada Ministry of Health
38. HyperSupers - ADHD France
39. Impuls en Woortblind, Organisation for Individuals with ADHD and Dyslexia, Netherlands
40. Israeli Society of ADHD
41. Italian Association of ADHD Families
42. Japanese Society of ADHD
43. Latin American League for the Study of ADHD
44. Latin American Federation and Association of Child and Adolescent Psychiatric and Related Professions
45. Madrid Association of ADHD, Spain
46. Meeting Point ADHD, Luxemburg
47. National Attention Deficit Disorder Information and Support Service, UK
48. Network of Child Adolescent Neuropsychopharmacology, European Union
49. Neurodevelopmental Disorders Across Lifespan, European Psychiatric Association
50. Paediatric Neurology and Development Association of South Africa
51. Possibilities Clinic for assessment and treatment of ADHD, Canada
52. PsyQ, Netherlands
53. Saudi ADHD Society, Saudi Arabia
54. Spanish Federation of Associations of Attention Deficit and Hyperactivity
55. Swiss Society for ADHD
56. The American Professional Society of ADHD and Related Disorders, International
57. The Icelandic Disability Alliance

4. International Nonproprietary Name (INN, generic name) of the medicine

Methylphenidate Hydrochloride, ATC Code: N06BA04

5. Dose forms(s) and strength(s) proposed for inclusion; including adult and age-appropriate paediatric dose forms/strengths (if appropriate).

The Figure below gives an overview of current methylphenidate formulations:



Doses Available for each Formulation (from www.pdr.net):

- Adhansia XR/Aptensio XR/Jornay/Metadate CD/Methylphenidate Hydrochloride/Ritalin LA Oral Cap ER: 10mg, 15mg, 20mg, 25mg, 30mg, 35mg, 40mg, 45mg, 50mg, 55mg, 60mg, 70mg, 80mg, 85mg, 100mg
- Concerta/Metadate ER/Methylin/Methylphenidate Hydrochloride/RELEXXII/Ritalin SR Oral Tab ER: 10mg, 18mg, 20mg, 27mg, 36mg, 54mg, 72mg
- Daytrana Topical Film ER: 1h, 1.1mg, 1.6mg, 2.2mg, 3.3mg
- Methylin/Methylphenidate Hydrochloride Oral Sol: 5mL, 5mg, 10mg
- Methylin/Methylphenidate Hydrochloride Oral Tab Chew: 2.5mg, 5mg, 10mg
- Methylin/Methylphenidate Hydrochloride/Ritalin Oral Tab: 5mg, 10mg, 20mg
- Methylphenidate Oral Tab Orally Dis DR: 8.6mg, 17.3mg, 25.9mg
- QuilliChew ER Oral Tab Chew ER: 20mg, 30mg, 40mg
- Quillivant XR Oral Susp ER: 5mL, 25mg

Note: the above are names in the USA. Other countries may use different names for the same formulation.

6. Whether listing is requested as an individual medicine or as representative of a pharmacological class.

We request that methylphenidate be listed as a representative of a pharmacologic class. It represents all products containing methylphenidate approved for use by any government regulatory agency for the treatment of ADHD.

7. Treatment details (requirements for diagnosis, treatment and monitoring).

Diagnosis

ADHD can only be diagnosed by a licensed clinician who interviews the parent or caregiver and/or patient to document criteria for the disorder (American Psychiatric Association, 2013; Chinese Society of Psychiatry, 2001; Faraone et al., 2015; Feldman and Reiff, 2014; Pearl et al., 2001; Stein, 2008; World Health Organization, 2018a). It cannot be diagnosed by rating scales alone, neuropsychological tests or methods for imaging the brain. Professional associations have endorsed and published guidelines for diagnosing ADHD (Alliance, 2011; Banaschewski T, 2018; Bolea-Alamanac et al., 2014; Crunelle et al., 2018; Flisher, 2013; Graham et al., 2011; Kooij et al., 2019; National Collaborating Centre for Mental Health, 2018; National Institute for Health Care and Excellence, 2018; Pliszka, 2007; Schoeman and Liebenberg, 2017; Seixas et al., 2012; Taylor et al., 2004; Wolraich et al., 2011). The diagnosis requires: 1) the presence of developmentally inappropriate levels of hyperactive-impulsive and/or inattentive symptoms for at least 6 months; 2) symptoms occurring in different settings (e.g., home and school); 3) symptoms that cause impairments in living; 4) some of the symptoms and impairments first occurred in early to mid-childhood; and 4) no other disorder better explains the symptoms (American Psychiatric Association, 2013; World Health Organization, 2018a; Yi and Jing, 2015).

Treatment

As determined by governmental regulatory agencies around the world, methylphenidate is safe and effective for treating ADHD symptoms as determined by randomized controlled clinical trials that typically study patients for several weeks.

Dosage Guidelines for Pediatric Patients with ADHD from www.pdr.net

Children and Adolescents 6 years and older not currently taking methylphenidate

Initially, 18 mg PO once daily in the morning. Dose may be increased by 18 mg increments at weekly intervals. A 27-mg tablet is available for prescribers who wish to utilize a dosage between 18 to 36 mg. FDA-approved Max: 54 mg/day in children and 72 mg/day (not to exceed 2 mg/kg/day) in adolescents; however, some experts recommend doses up to 108 mg, which may be appropriate in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Children and Adolescents 6 years and older currently taking 10 to 15 mg/day methylphenidate

Initially, 18 mg PO once daily in the morning. Titrate dose by 18 mg increments at weekly intervals as needed. A 27-mg tablet is available for patients who may benefit from a dosage between 18 to 36 mg. FDA-approved Max: 54 mg/day in children and 72 mg/day (not to exceed 2 mg/kg/day) in adolescents; however, some experts recommend doses up to 108 mg, which may be appropriate in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Children and Adolescents 6 years and older currently taking 20 to 30 mg/day methylphenidate

Initially, 36 mg PO once daily in the morning. Titrate dose by 18 mg increments at weekly intervals as needed. FDA-approved Max: 54 mg/day in children and 72 mg/day (not to exceed 2 mg/kg/day) in adolescents; however, some experts recommend doses up to 108 mg, which may be appropriate in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Children and Adolescents 6 years and older currently taking 30 to 45 mg/day methylphenidate

Initially, 54 mg PO once daily in the morning. Titrate dose by 18 mg increments at weekly intervals as needed and as clinically appropriate. FDA-approved Max: 54 mg/day in children and 72 mg/day (not to exceed 2 mg/kg/day) in adolescents; however, some experts recommend doses up to 108 mg, which may be appropriate in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Adolescents currently taking 40 to 60 mg/day methylphenidate

Initially, 72 mg PO once daily in the morning. While the FDA-approved maximum dosage is 72 mg/day (not to exceed 2 mg/kg/day), some experts recommend doses up to 108 mg, which may be appropriate in patients weighing more than 50 kg. Titrate dosage by 18 mg increments no more frequently than weekly intervals as clinically appropriate. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release once-daily capsules; Metadate CD)

Children and Adolescents 6 years and older not currently taking methylphenidate

Initially, 20 mg PO once daily in the morning. Dose may be increased by 10 to 20 mg increments at weekly intervals. FDA-approved Max: 60 mg/day; however, some experts recommend doses up to 100 mg/day for patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Children and Adolescents 6 years and older currently taking other dosage forms of methylphenidate

Initially, 20 mg PO once daily in the morning. Alternatively, give no more than the equivalent total daily dose of the previous methylphenidate product, rounded to the nearest available capsule size, PO once daily. For example, patients already taking 10 mg of immediate-release methylphenidate twice daily (20 mg/day) should start with 20 mg Metadate CD once daily; those taking 20 mg twice daily (40 mg/day) could start with 40 mg Metadate CD once daily. Dose may be increased by 10 to 20 mg increments at weekly intervals. FDA-approved Max: 60 mg/day; however, some experts recommend doses up to 100 mg/day for patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release once-daily capsules; Ritalin LA)

Children and Adolescents 6 years and older not currently taking methylphenidate

Initially, 20 mg PO once daily in the morning. If a lower initial dose is desired, 10 mg PO once daily may be used. Dose may be increased by 10 mg increments at weekly intervals. FDA-approved Max: 60 mg/day; however, some experts recommend doses up to 100 mg/day in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Children and Adolescents 6 years and older currently taking other dosage forms of methylphenidate

Initially, give no more than the total daily dosage of the previous methylphenidate product PO once daily in the morning. For example, patients already taking 10 mg of immediate-release methylphenidate twice daily (20 mg/day) should start with 20 mg Ritalin LA once daily; those taking 20 mg of extended-release methylphenidate once daily (20 mg/day) should also start with 20 mg of Ritalin LA once daily. Dose may be increased by 10 mg increments at weekly intervals. FDA-approved Max: 60 mg/day; however, some experts recommend doses up to 100 mg/day in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release once-daily capsules; Aptensio XR)

Children and Adolescents 6 years and older

Initially, 10 mg PO once daily in the morning. Dose may be increased by 10 mg increments at weekly intervals. FDA-approved Max: 60 mg/day; however, some experts have recommended doses up to 100 mg/day of other methylphenidate formulations in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release once-daily chewable tablets; QuilliChew ER)

Children and Adolescents 6 years and older

Initially, 20 mg PO once daily in the morning. Dose may be titrated up or down in increments of 10 mg, 15 mg, or 20 mg at weekly intervals. The 10 mg and 15 mg doses can each be achieved by breaking in half the functionally scored 20 mg and 30 mg tablets, respectively. FDA-approved Maximum: 60 mg/day PO; however, some experts have recommended doses up to 100 mg/day of other methylphenidate formulations in patients weighing more than 50 kg. If switching from another methylphenidate product, discontinue that treatment and titrate with QuilliChew ER as previously described; do not substitute QuilliChew ER for other methylphenidate products on a mg-for-mg basis. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release once-daily suspension; Quillivant XR)

Children and Adolescents 6 years and older

Initially, 20 mg PO once daily in the morning. Dose may be increased by 10 to 20 mg increments at weekly intervals. FDA-approved Max: 60 mg/day; however, some experts have recommended doses up to 100 mg/day of other methylphenidate formulations in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release orally disintegrating tablets; Cotempla XR-ODT)

Children and Adolescents 6 years and older

Initially, 17.3 mg PO once daily in the morning; take consistently with or without food. Dose may be increased by 8.6 to 17.3 mg increments at weekly intervals. FDA-approved Max: 51.8 mg/day. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Transdermal dosage (transdermal system; Daytrana)

Children and Adolescents 6 years and older

Initially, apply a 10 mg/9-hour patch topically once daily in the morning, 2 hours before an effect is needed, regardless of previous methylphenidate therapy. If response is not maximized after 1 week, titrate to the next available patch strength in weekly intervals. The suggested upward titration schedule is Week 1: apply 10 mg/9-hour patch once daily; Week 2: apply 15 mg/9-hour patch once daily; Week 3: apply 20 mg/9-hour patch once daily; Week 4: apply 30 mg/9-hour patch once daily. Dose titration, final dosage, and wear time should be individualized according to the needs and response of the patient. Maximum: 30 mg/9-hour patch once daily. In clinical trials, there was no additional benefit of increasing the patch dose from 20 mg/9-hours to 30 mg/9-hours. Remove the patch 9 hours after application or may remove earlier if late day side effects appear and shorter duration of effect is desired.

Oral dosage (extended-release once-daily capsules; Jornay PM)

Children and Adolescents 6 years and older

Initially, 20 mg PO once daily in the evening. Dose may be titrated in increments of 20 mg at weekly intervals. Max: 100 mg/day. If switching from another methylphenidate product, discontinue that treatment and titrate with Jornay PM as previously described; do not substitute Jornay PM for other methylphenidate products on a mg-for-mg basis. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse reactions occur, reduce dosage or discontinue the drug.

Oral dosage (extended-release once-daily capsules; Adhansia XR)

Children and Adolescents 6 years and older

Initially, 25 mg PO once daily in the morning. Dose may be titrated in increments of 10 to 15 mg at intervals of no less than 5 days. Max: 85 mg/day. Although 85 mg was efficacious in short-term controlled trials, dosages above 70 mg daily were associated with a disproportionate increase in the

incidence of certain adverse reactions. If switching from another methylphenidate product, discontinue that treatment and titrate with Adhansia XR as previously described; do not substitute Adhansia XR for other methylphenidate products on a mg-for-mg basis. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse reactions occur, reduce dosage or discontinue the drug.

Oral dosage (immediate-release preparations; Ritalin, Methylin, Methylin oral solution, Methylin chewable tablets).

Children and Adolescents 6 years and older

Initially, 5 mg PO twice daily before breakfast and lunch. Dose may be increased by 5 to 10 mg/day at weekly intervals; some patients may require dosing up to 3 times daily (administer last dose of day before 6 pm to limit sleep interference). Max: 60 mg/day per FDA-approved labeling; however, some experts state that doses up to 100 mg/day may be needed in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If no improvement within 1 month, discontinue methylphenidate and consider an alternative treatment/therapy. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Children 3 to 5 years†

The National Institute of Mental Health's Preschool ADHD Treatment Study (PATS) provides clinical guidance for children with ADHD 3 to 5 years of age. In the PATS, the initial dose of immediate-release methylphenidate was 1.25 mg PO 3 times daily. Doses were increased gradually up to a maximum of 10 mg PO 3 times daily to reach optimum therapeutic response. The mean optimal total daily dose was 14.2 +/- 8.1 mg (0.7 +/- 0.4 mg/kg/day). Max: 30 mg/day. In all cases, treatment should start with a low dose and be titrated upward slowly. Use lowest effective dose. Higher doses have lead to social withdrawal in some children. Behavior therapy, parental training, and a structured preschool environment are considered first line treatment for preschool-aged children with ADHD; lack of significant improvement with such modalities may warrant the addition of methylphenidate.

Oral dosage (extended-release tablets; Ritalin SR, Metadate ER, Methylin ER)

The extended-release (ER) tablets have a duration of action of approximately 8 hours. Use in place of immediate-release (IR) tablets when the 8-hour dosage of the ER tablets corresponds to the previously titrated 8-hour dosage of the IR tablets. Alternatively, some experts recommend an initial dose of 10 mg PO once daily. Ritalin SR may be administered once or twice daily. Max: 60 mg/day per FDA-approved labeling; however, some experts state that doses up to 100 mg/day may be needed in patients weighing more than 50 kg. Individualize dosage based on psychosocial and comorbid factors; use lowest effective dose. If paradoxical aggravation of symptoms or other adverse effects occur, reduce dosage or discontinue the drug.

Maximum Doses

(from www.pdr.net):

Adolescents

85 mg/day PO for Adhansia XR; 72 mg/day (Max: 2 mg/kg/day) PO for Concerta (FDA-approved labeling); 60 mg/day PO for all other oral formulations excluding Cotempla XR-ODT and Jornay PM (FDA-approved labeling); 51.8 mg/day PO for Cotempla XR-ODT and 100 mg/day PO for

Jornay PM; however, doses up to 100 to 108 mg/day PO have been used in patients weighing more than 50 kg for some formulations. For the transdermal patch, 30 mg/9-hour patch per day is the maximum.

Children

6 to 12 years: 85 mg/day PO for Adhansia XR; 54 mg/day PO for Concerta (FDA-approved labeling); 60 mg/day PO for all other oral formulations excluding Cotempla XR-ODT and Jornay PM (FDA-approved labeling); 51.8 mg/day PO for Cotempla XR-ODT and 100 mg/day PO for Jornay PM; however, doses up to 100 to 108 mg/day PO have been used in patients weighing more than 50 kg for some formulations. For the transdermal patch, 30 mg/9-hour patch per day is the maximum.

3 to 5 years: Safety and efficacy have not been established. Maximum doses have not been adequately studied; however, The Preschool ADHD Treatment Study (PATS) has suggested immediate-release doses up to 30 mg/day PO.

1 to 2 years: Safety and efficacy have not been established.

Infants

Safety and efficacy have not been established.

Neonates

Safety and efficacy have not been established.

Elderly

Some patients may tolerate lower doses better

Special Populations (Stahl, 2018)

Renal Impairment

- No dose adjustment necessary

Hepatic Impairment

- No dose adjustment necessary

Cardiac Impairment

- Use with caution, particularly in patients with recent myocardial infarction or other conditions that could be negatively affected by increased heart rate and/or blood pressure
- Do not use in patients with structural cardiac abnormalities or outflow obstructions
-

Pregnancy

- Effective June 30, 2015, the US FDA requires changes to the content and format of pregnancy and lactation information in prescription drug labels, including the elimination of the pregnancy letter categories; the Pregnancy and Lactation Labeling Rule (PLLR or final rule) applies only to prescription drugs and will be phased in gradually for drugs approved on or after June 30, 2001
- Controlled studies have not been conducted in pregnant women
- Infants whose mothers took methylphenidate during pregnancy may experience withdrawal symptoms
- Racemic methylphenidate has been shown to have teratogenic effects in rabbits when given in doses of 200mg/kg/day throughout organogenesis
- Use in women of childbearing potential requires weighing potential benefits to the mother against potential risks to the fetus.
- For ADHD patients, methylphenidate should generally be discontinued before anticipated pregnancies

Breast Feeding

- Unknown if methylphenidate is secreted in human breast milk, but all psychotropics assumed to be secreted in breast milk
- Recommended either to discontinue drug or bottle feed
- If infants show signs of irritability, drug may need to be discontinued

Other Issues (Stahl, 2018)

Pharmacokinetics (Stahl, 2018)

- Average half-life in adults is 3.5hours (1.3-7.7hours)
- Average half-life in children is 2.5hours (1.5-5hours)
- There is considerable inter-individual variability in metabolism and dosing by weight (mg/kg) is not generally recommended
- First-pass metabolism is not extensive with transdermal dosing, thus resulting in notably higher exposure to l-methylphenidate and lower exposure to metabolites as compared with oral dosing

Onset of Action (Stahl, 2018)

- Some immediate effects can be seen with first dosing
- Can take several weeks to attain maximum therapeutic benefit

Long-Term Use (Stahl, 2018)

- Often used long-term for ADHD when ongoing monitoring documents continued efficacy
- Dependence and/or abuse may develop. However, the best current information, controlling for confounding factors, suggests that the therapeutic use of stimulant medications such as methylphenidate decreases the risk for substance use disorders (Chang et al., 2014c).
- Tolerance to therapeutic effects may develop in some patients
- Long-term stimulant use may be associated with growth suppression in children (controversial)
- Periodic monitoring of weight, blood pressure, CBC, platelet counts, and liver function may be prudent

Overdose (Stahl, 2018)

- Vomiting, tremor, coma, convulsion, hyperreflexia, euphoria, confusion, hallucination, tachycardia, flushing, palpitations, sweating, hyperpyrexia, hypertension, arrhythmia, mydriasis

Dependence or Abuse (Stahl, 2018)

- Schedule II drug
- Patient may develop tolerance, psychological dependence
- Treatment with methylphenidate and other stimulants reduces the risk for substance use, abuse and dependence (Chang et al., 2014c; Schoenfelder et al., 2014).

Discontinuation (Stahl, 2018)

- Taper to avoid withdrawal effects
- Withdrawal following chronic therapeutic use may unmask symptoms of the underlying disorder and may require follow-up and reinstitution of treatment
- Careful supervision is required during withdrawal from abusive use since severe depression may occur

Storage and Handling of Methylphenidate (from: www.pdr.net)

Generic:

- Protect from moisture
- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Adhansia XR:

- Protect from light
- Protect from moisture
- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Aptensio XR:

- Store at controlled room temperature (between 68 and 77 degrees F)

Concerta:

- Avoid excessive humidity
- Store at controlled room temperature (between 68 and 77 degrees F)

Cotempla XR:

- Product should always be stored in the blister and only removed immediately before use
- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Daytrana:

- Do not freeze
- Do not refrigerate
- Product should be used within 2 months after opening
- Store at 77 degrees F; excursions permitted to 59-86 degrees F
- Store unused product in foil pouch

Jornay:

- Store at controlled room temperature (between 68 and 77 degrees F)

Metadate CD:

- Store at controlled room temperature (between 68 and 77 degrees F)

Metadate ER:

- Protect from moisture
- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Methylin:

- Protect from moisture
- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

QuilliChew ER:

- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Quillivant XR:

- Store and dispense in original container
- Store reconstituted product in accordance with package insert instructions
- Store unreconstituted product at 77 degrees F; excursions permitted to 59-86 degrees F

RELEXXII:

- Avoid excessive humidity
- Store at 77 degrees F; excursions permitted to 59-86 degrees F

Ritalin:

- Protect from light

- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Ritalin LA:

- Store at controlled room temperature (between 68 and 77 degrees F)

Ritalin SR:

- Protect from moisture
- Store between 68 to 77 degrees F, excursions permitted 59 to 86 degrees F

Need for Special Diagnostics, Treatment or Monitoring Facilities and Skills When Prescribing Methylphenidate

Assessing Cardiovascular Status (Torres-Acosta et al., 2020)

Children, adolescents or adults who are being considered for treatment with stimulant medications should have a careful history (including assessment for family history of sudden death or ventricular arrhythmia) and physical exam to assess for presence of cardiac disease and should receive further cardiac evaluation including baseline heart rate and blood pressure, and an electrocardiogram if personal or family history, or findings on physical exam suggest risk for cardiac disease. Patients who develop symptoms such as exertional chest pain, unexplained syncope, or other symptoms suggestive of cardiac disease during stimulant treatment should undergo a prompt cardiac evaluation. Heart rate and blood pressure should be monitored regularly.

Growth (Faraone et al., 2008)

Careful follow-up of weight and height should be monitored during treatment with stimulants, and patients who are not growing or gaining weight as expected may need to have their treatment adjusted or interrupted.

Other Considerations

Before prescribing methylphenidate, appropriate attention needs to be given to the psychosocial environment. In children, attention should be paid as to whether the family is intact or separated, whether both parents are supportive of the child's treatment, and whether any concerns exist about abuse or maltreatment. Additionally, legal concerns, psychopathology and substance use in the parents, psychosocial stressors (such as financial and medical distress), access to firearms, and the intellectual abilities of the parents are assessed because treatments may not be effective in chaotic or dangerous environments. Access to medications may be an issue due to lack of health insurance or restrictive policies by some governments or managed care formularies. Pharmacotherapy for ADHD will not address these issues, but they can be targeted by appropriate social services or non-pharmacologic treatments. It is important to educate parents and patients about ADHD and its treatments to help them understand the value of treatment options.

Methylphenidate is indicated as an integral part of a comprehensive treatment program for ADHD which typically includes other remedial measures (psychological, educational, social) for a stabilizing effect in children with a behavioral syndrome characterized by the following group of developmentally inappropriate symptoms of inattention, hyperactivity and impulsivity. The diagnosis of

this syndrome should not be made without evidence of impairment in two or more settings and onset prior to age 12 (Faraone et al., 2015; National Institute for Health Care and Excellence, 2018).

Methylphenidate treatment is not indicated for all children with this syndrome. Methylphenidate is not intended for use in the child who exhibits symptoms secondary to environmental factors and/or other primary psychiatric disorders, especially psychotic illness. Psychoeducation should form the foundation of all treatment for ADHD (National Institute for Health Care and Excellence, 2018). Educational accommodations and psychosocial interventions are often attempted before or in conjunction with medication trials. When remedial measures alone are insufficient, the decision to prescribe stimulant medication will depend upon the physician's assessment of the chronicity and severity of the child's symptoms. Methylphenidate should be used cautiously or not at all in patients at risk for diversion or misuse (Faraone et al., 2020).

8. Information Supporting the Public Health Relevance of Methylphenidate

Epidemiological information on disease burden

ADHD is a disorder associated with serious distress and/or impairments in living. Although significant impairment across at least two settings is a prerequisite for a diagnosis of ADHD and, as documented below, many severe adverse outcomes have been associated with ADHD, the typical patient does not experience all, or even most, of these problems and many patients live enjoyable and productive lives, especially if they receive treatment. Much of the following comes from the International Consensus Statement on ADHD (Faraone et al., 2020 Submitted).

Quality of Life

1. A meta-analysis of seven studies with over 5,000 youths and their parents reported large impairments in the quality of life of youths with ADHD relative to typically developing peers, regardless of whether evaluated by the youths themselves or by their parents. Physical functioning was only moderately impaired, but emotional, social and school functioning were strongly impaired. As youths with ADHD grew older, their quality of life, when compared with typically developing peers, grew worse in physical, emotional, and school domains. (Lee et al., 2016b).

2. A meta-analysis of six studies encompassing 647 families evaluated the quality of life of parents whose children had ADHD relative to parents with typically developing children. Parents of the former reported a moderate deficit in quality of life relative to parents of the latter (Dey et al., 2019).

Emotional and Social Impairment

3. A study of over 8,600 youths from the US National Health Interview Survey found that those with ADHD were six times as likely to have a high level of emotional, conduct, and peer problems, and nine times as likely to manifest a high level of impairment including interference with home life, friendships, classroom learning, and leisure activities (Strine et al., 2006).

4. A meta-analysis of 22 studies with almost 22,000 participants found that youth with ADHD were strongly impaired in the ability to modulate their reactivity to novel or stressful events. ADHD was also associated with medium-to-large impairments identifying emotions and expressing empathy (Graziano and Garcia, 2016). Another meta-analysis, combining four studies with over 600 adults, reported a very strong correlation between ADHD symptom severity and emotional dysregulation (Beheshti et al., 2020).

5. A meta-analysis of 109 studies of over a hundred thousand participants found that children with ADHD had medium-to-large impairments in socializing with peers as measured by rejection/likability, popularity, and friendships. They also had medium impairments in social skills (e.g., sharing, cooperating, turn-taking, reciprocity) and social-information processing (e.g., recognizing social cues, identifying problems, generating solutions, and avoiding biases) (Ros and Graziano, 2018).

6. A study of over 53,000 U.S. children from the National Survey of Children's Health found that those with ADHD were 2.4 times as likely to engage in bullying (Montes and Halterman, 2007). A more recent study of some 64,000 children using the same database confirmed this finding, reporting that those with ADHD were 2.8 times more likely to engage in bullying (Benedict et al., 2015).

Accidental Injuries

7. A nationwide cohort study of over 50,000 youths with ADHD and an equal number of age-, sex-, and comorbidity-matched controls drawn from Taiwan's National Health Insurance Research Database reported that having ADHD was associated with a more than three-quarters greater likelihood of burn injury. For those under six years old, the risk was doubled. For youths between six and seventeen years old, the increase in risk was about 70 percent. There were no significant differences between boys and girls (Yeh et al., 2020).

8. A meta-analysis of 32 studies covering more than four million people found that those with ADHD had a 40 to 50% greater risk of accidental physical injuries (Ruiz-Goikoetxea et al., 2018a).

9. A Swedish national registers study followed 17,408 individuals with ADHD from 2006 to 2009 and found that patients with ADHD had an almost 50% greater risk of serious transport accidents (Chang et al., 2014b).

10. A U.S. study of over 8,000 high school and collegiate athletes (predominantly male football players) found that those with ADHD were three times as likely to have had three or more reported concussions (Nelson et al., 2016).

11. A meta-analysis of 32 studies encompassing over 175,000 people estimated that controlling for mileage driven, those with ADHD were 23% more likely to be involved in vehicular crashes (Vaa, 2014).

12. A retrospective cohort study of over 18,000 New Jersey drivers found that the crash risk for those with ADHD was a third greater than for those without (Curry et al., 2017).

13. A meta-analysis of five studies, comprising over three thousand patients with minor traumatic brain injury (mTBI) and over nine thousand controls found that those with mTBI were twice as likely to have ADHD than those without mTBI (Adeyemo et al., 2014).

Premature Death and Suicide

14. A Danish study of almost two million people found ADHD is associated with a small risk for premature death, mostly due to accidents. When ADHD was accompanied by other psychiatric and substance use disorder, the chances of premature death increased (Dalsgaard et al., 2015b).

15. A cohort study of more than 2.2 million Taiwanese found no increased risk of death from natural-causes associated with ADHD. But people with ADHD had twice the rate of suicide, twice the rate of death by homicide, and a 30% greater rate of death from unintentional injury (Chen et al., 2019).

16. Using nationwide registers in Denmark, a cohort study of 2.9 million people reported a fourfold higher rate of suicide attempts and deaths in patients with ADHD. The risk was over tenfold in those with ADHD plus another psychiatric diagnosis (Fitzgerald et al., 2019).

17. A meta-analysis of 57 studies with over 330,000 people found that those with ADHD attempted suicide at twice the rate of typically developing people, had over three times the rate of suicidal ideation, and over six times the rate of completed suicide (Septier et al., 2019).

18. A Taiwanese study of over 20,000 adolescents and young adults with ADHD and over 61,000 age- and sex-matched non-ADHD individuals found that those with ADHD were almost four times as likely to attempt suicide, and over six times as likely to repeat suicide attempts. Methylphenidate or atomoxetine treatment did not increase the risk of suicide attempts or repeated suicide attempts. Long-term methylphenidate treatment was associated with a lower risk for repeated suicide attempts among men (Huang et al., 2018).

19. In a prospective cohort study of more than 2.6 million Swedes, adults with ADHD had a small increase in premature death, mostly due to accidents and suicide. There was no significant association for children with ADHD (Sun et al., 2019b).

Crime and Delinquency

20. A study of the Danish population using nationwide registers found that, compared with other youth, those diagnosed with ADHD were more than twice as likely to be convicted of criminal offenses and were three times as likely to be incarcerated. After adjusting for other risk factors, those with ADHD were 60% more likely to have been convicted of a crime, and 70% more likely to have been incarcerated (Mohr-Jensen et al., 2019).

21. A meta-analysis reported the prevalence of ADHD among adolescents in juvenile detention to be just over 17%, both for males (24 studies, over 24,000 individuals) and females (12 studies, over 3,900 individuals), which is much higher than the prevalence in the population (Beaudry et al., 2020). Another meta-analysis comprising 21 studies and 19,575 prison inmates found that the prevalence of ADHD in prisons was 20.5% with no differences observed between males and females or adolescents and adults (Young et al., 2015).

22. A study using a nationally representative American sample of over 5,000 adults found that those with ADHD were over twice as likely to be perpetrators of physical dating violence, and 65% more likely to be victims of such violence (McCauley et al., 2015).

23. In a nationwide study of over 21,000 Icelandic adolescents and young adults, 14% reported having been interrogated at a police station. Of these, 15% reported making a false confession. Those with ADHD were twice as likely to make a false confession (Gudjonsson et al., 2016).

24. A study using the Danish national registries looked at violent crimes against youth aged 7-18 years, among a total of 678,000 individuals. Children with ADHD were 2.7 times more likely to be victims of violent crimes than their typically developing peers, after adjusting for confounding risk factors (Christoffersen, 2019).

Educational Underachievement

25. A study of a U.S. sample of almost 30,000 adults found that those with ADHD were twice as likely not to have graduated from high school on time, after adjusting other psychiatric disorders (Breslau et al., 2011).

26. A nationwide cohort study of over 750,000 Scottish school children using linked national registers identified those who had been prescribed medicine for ADHD. Even while receiving medication, these children were more than three times as likely as typically developing peers to have low educational achievement, more than twice as likely to drop out of school before age 16, more than eight times as likely to have a record of special educational needs, 50% more likely to get injured, 40% more likely to

be unemployed. These results were adjusted for socioeconomic confounders and other psychiatric conditions (Fleming et al., 2017).

27. A meta-analysis of ten studies and 830 youths found that ADHD was strongly associated with poorer performance on measures of overall, expressive, receptive, and pragmatic language (Korrel et al., 2017).

Substance Use Disorders

28. A meta-analysis of twelve studies covering over 5,400 people found that those with ADHD were almost three times more likely to be nicotine-dependent. Combining eleven studies with almost 2,400 participants, those with ADHD were 50% more likely to develop a drug or alcohol use disorder than those without ADHD (Lee et al., 2011).

29. A meta-analysis of 23 studies with over 22,000 participants found that ADHD was associated with a more than twofold greater risk of addiction, alcohol-related disorders, drug-related disorder, and nicotine-related disorder (Groenman et al., 2017).

30. A Swedish study of over half a million people found a more than threefold association between ADHD and subsequent drug use disorders after adjusting for sex and parental education (Sundquist et al., 2015).

Other

31. Studies of 2.7 million girls from Denmark (Ostergaard et al., 2017), 380,000 from Sweden (Skoglund et al., 2019) and 7,500 from Taiwan (Hua et al., 2020) found that those with ADHD were more likely to have teen pregnancies than those without ADHD. Consistent with these results, large studies from Sweden (Chang et al., 2014a), Finland (Chudal et al., 2015) and a consortium of eight European countries (Pohlabeln et al., 2017) each found ADHD to be more likely among children of teenage mothers than among children of older mothers.

32. A study of over 36,000 people from the US reported that ADHD increased the risks for problem gambling, spending too much money, reckless driving, and quitting a job without a plan for what to do next (Bernardi et al., 2012).

33. A nationwide study using Taiwan's National Health Insurance Research Database compared 675 adults with ADHD and 2,025 without ADHD, matched by age and sex. After adjusting for other psychiatric disorders, urbanization level of residence, and monthly income, those with ADHD had 3.4 times the risk of developing dementia (Tzeng et al., 2019).

34. A meta-analysis of nine studies encompassing almost a million and a half people found that ADHD is associated with a threefold greater risk of poisoning in children (Ruiz-Goikoetxea et al., 2018b). In a study from Taiwan comparing 3,685 children with ADHD with 36,000 controls, those with ADHD had a more than fourfold greater risk of deliberate self-poisoning (Chou et al., 2014).

35. A longitudinal study of some 15,000 U.S. adolescents reported that those with ADHD had a 12% reduction in employment and a 34% reduction in earnings relative to non-ADHD siblings (Fletcher, 2014).

36. Using Danish registers, a nationwide population study of over 675,000 youths between the ages of 7 and 18 found that youths with ADHD were 3.7 times as likely to be reported as victims of sexual crimes than normally developing controls. After adjusting for covariates, such as parental violence, parental inpatient mental illness, parental suicidal behavior or alcohol abuse, parental long-term unemployment, family separation, and child in public care outside the family, youths with ADHD remained almost twice as likely to be reported as victims of sexual crimes (Christoffersen, 2020).

The Economic Burden of ADHD

1. A nationwide population study of over 83,000 persons with ADHD and 334,446 non-ADHD controls matched by age and sex used Danish national registries to calculate the net socioeconomic cost of ADHD. Relative to controls, and summing net direct health costs and net losses from lower income and employment, the yearly average cost per individual with ADHD came to just over €16,000. Including additional social transfers, the total rose to just over €23,000. For partners of persons with ADHD, the additional yearly average cost per individual was almost €5,500. With additional social transfers, the total rose to €8,000 (Jennum et al., 2020).

2. A systematic review of seven European studies of hundreds of thousands of participants estimated total ADHD-related costs in the Netherlands as €9,860 to €14,483 per patient per year, with annual national costs more than €1 billion (Le et al., 2014).

3. A review of the costs of child, youth and adult ADHD in Australia estimated the total annual costs to be over $20 billion Australian dollars, or $25,000 per person with ADHD. This includes financial costs of $12.8 billion, well-being losses of $7.6 billion, and productivity losses of $10.2 billion (Australian ADHD Professionals Association, 2019).

4. A systematic review of 19 U.S. studies of hundreds of thousands of people found that ADHD was associated with overall national annual costs from $143 to $266 billion, mostly associated with adults ($105 to $194 billion). Costs borne by family members of people with ADHD ranged from $33 - $43 billion (Doshi et al., 2012).

5. A study with over 7,000 workers in ten nations found that those with ADHD had an average of 22 annual days of lost role performance compared with those without ADHD (de Graaf et al., 2008).

6. A study of a U.S. national Fortune 100 company's database of over 100,000 beneficiaries compared healthcare costs for youths with ADHD with matched controls without ADHD. The annual average cost per family member was $2,728 for non-ADHD family members of ADHD patients, almost double the $1,440 for family members of matched controls (Swensen et al., 2003).

7. German health insurance records, including over 25,000 patients with ADHD, indicate that patients with ADHD cost roughly €1,500 more annually than those without ADHD. Main cost drivers were inpatient care, psychiatrists, and psychotherapists. Mood, anxiety, substance use disorders, and obesity were significantly more frequent in patients with ADHD. The additional costs resulting from these conditions added as much as €2,800 per patient (Libutzki et al., 2019).

8. Using the National Health Insurance Service claims data for the population aged 19 years or younger in South Korea (69,353 diagnosed with ADHD), the total annual economic burden due to ADHD was estimated to be $47.55 million (Hong et al., 2020).

9. Using the Danish national registers, over 5,000 adults with a diagnosis of ADHD in adulthood who had not received a diagnosis in childhood were identified. Excluding cases with missing data, other psychiatric diagnoses, and cases without a same-sex sibling free of any diagnosed psychiatric diagnoses, a final cohort was formed consisting of 460 sibling pairs. On average, adults with ADHD had an annual economic burden of just over €20,000 compared with their normally developing siblings (Daley et al., 2019).

10. A nationwide cohort study of over 445,000 people in the Swedish national registers compared healthcare costs for three groups: those with childhood ADHD that persisted into adulthood, those whose ADHD remitted in adulthood, and those who never had ADHD. Those who never had ADHD had average annual healthcare costs of €304. Those in remission had double the cost, and those with persistent ADHD over triple the cost (Du Rietz et al., 2020).

Assessment of current use

Methylphenidate is recommended as a first line treatment for ADHD in many treatment guidelines for ADHD from around the world. (Alliance, 2011; Banaschewski T, 2018; Bolea-Alamanac et al., 2014; Crunelle et al., 2018; Flisher, 2013; Graham et al., 2011; Kooij et al., 2019; National Collaborating Centre for Mental Health, 2018; National Institute for Health Care and Excellence, 2018; Pliszka, 2007; Schoeman and Liebenberg, 2017; Seixas et al., 2012; Taylor et al., 2004; Wolraich et al., 2011). As a result, it is widely used in many countries.

Table 10. Methylphenidate: rates of consumption in the 20 countries and territories reporting the highest consumption in 2018, compared with 2016 and 2017

	(S-DDD per 1,000 inhabitants per day)		
Country or territory	*2016*	*2017*	*2018*
Iceland	25.10	31.94	29.05
Israel	16.14	13.95	11.75
Canada	8.21	8.09	9.49
Sweden	8.35	7.83	8.00
Netherlands	7.97	7.40	7.98
United States	7.91	6.82	7.60
Denmark	6.60	7.04	7.31
Switzerland	3.85	3.90	4.11
New Zealand	4.56	2.62	3.92
Finland	2.38	2.73	3.23
Belgium	2.71	2.36	2.86
Germany	1.84	1.26	1.68
Chile	2.14	1.61	1.60
Falkland Islands (Malvinas)	—	1.70	1.46
South Africa	1.04	1.22	1.45
Sint Maarten	1.59	0.94	1.04
Portugal	—	0.98	1.02
Turkey	0.83	0.00	0.96
Gibraltar	0.88	0.99	0.89
Turks and Caicos Islands	—	0.92	0.83

The following Table was extracted from a Technical Publication of the International Narcotics Control Board. It lists methylphenidate rates of consumption in the 20 countries and territories reporting the highest rates of consumption in 2018 and compares those rates with rates in 2016 and 2017. Rates are expressed in 'defined daily dose for statistical purposes' (S-DDD) per 1,000 inhabitants per day. DDD is the assumed average maintenance dose per day for a drug used for its main indication.

By comparison and although its dosing range is different than methylphenidate, another controlled substance already among the psychotropic medications on the EML is diazepam. Historically the most produced benzodiazepine in the world, the consumption of diazepam was reported by 92 countries in 2018. Rates of reported consumption were higher than 10 S-DDD by Uruguay, Montenegro, Brazil, Serbia, Portugal and Ghana. A further 27 countries, most of them in Europe, reported rates of consumption higher than 2 S-DDD.

Target population(s)

The target population for methylphenidate comprises all patients diagnosed with ADHD. In guidelines, it is typically recommended as a first line treatment (Alliance, 2011; Banaschewski T, 2018; Bolea-Alamanac et al., 2014; Crunelle et al., 2018; Flisher, 2013; Graham et al., 2011; Kooij et al., 2019; National Collaborating Centre for Mental Health, 2018; National Institute for Health Care and Excellence, 2018; Pliszka, 2007; Schoeman and Liebenberg, 2017; Seixas et al., 2012; Taylor et al., 2004; Wolraich et al., 2011; Zheng and Liu, 2015) except for children younger than six for whom a trial of behavior therapy is recommended first.

Likely impact of treatment on the disease

As determined by governmental regulatory agencies around the world, methylphenidate is safe and effective for treating ADHD symptoms as determined by randomized controlled clinical trials that

typically study patients for several weeks. Methylphenidate is as efficacious, or more efficacious, than many medications used in physical medicine (Leucht et al., 2012).

Randomized Controlled Clinical Trials Comparing Methylphenidate and Placebo in Patients with ADHD

A network meta-analysis of 133 RCTs including more than 24,000 participants found stimulants to be highly effective in reducing the symptoms of ADHD. Compared with placebo, methylphenidate treatment led to large improvements in youths with a mean standardized mean difference of -0.78 (-0.93 to -0.62) (Cortese et al., 2018).

A meta-analysis of 19 parallel group trials with over 1,600 participants, found methylphenidate produced moderate to large improvements in teacher-rated ADHD symptoms, teacher-rated behavior and parent-rated quality of life. There was no evidence of serious adverse events, and just a slightly elevated risk of non-serious side effects (Storebo et al., 2015).

A meta-analysis of 21 studies with over 2,300 adult participants found that methylphenidate led to small-to-moderate reductions in symptoms of emotional dysregulation (Lenzi et al., 2018).

A meta-analysis of eight studies with 423 participants reported moderate-to-strong improvements in ADHD symptoms with methylphenidate in ADHD patients with borderline intellectual functioning or intellectual disability. It was equally effective for hyperactivity and inattention. It also led to small-to-moderate improvements on a continuous performance test (Sun et al., 2019a).

Clinical Trials Comparing Methylphenidate and Placebo in ADHD & Tic Disorder

A Cochrane review included eight randomized controlled trials to assess the effects of pharmacological treatments for ADHD in children with comorbid tic disorder on symptoms of ADHD and tics (Osland et al., 2018). Standard methodological procedures of Cochrane were utilized, in that two review authors independently selected studies, extracted data using standardized forms, assessed risk of bias, and graded the overall quality of the evidence by using the GRADE approach. Risk of bias of included studies was low for blinding; low or unclear for random sequence generation, allocation concealment, and attrition bias; and low or high for selective outcome reporting. Meta-analysis was unable to be performed due to important clinical heterogeneity and unit-of-analysis issues. Participants in these studies were children with both ADHD and a chronic tic disorder (n=500; 443 boys and 67 girls). Medications assessed included methylphenidate, clonidine, desipramine, dextroamphetamine, guanfacine, atomoxetine, and deprenyl. Safety was evaluated by adverse effects including: cardiovascular effects such as changes in heart rate, blood pressure or electrocardiogram; and weight changes. There was appetite suppression or weight loss in association with methylphenidate, dextroamphetamine, atomoxetine, and desipramine. There was insomnia associated with methylphenidate and dextroamphetamine, and sedation associated with clonidine.

Clinical Trials Comparing Methylphenidate and Placebo in ADHD & Mental Retardation

In a 4-week, single-blind, parallel-group trial, 45 subjects with moderate mental retardation and ADHD were randomized to risperidone or methylphenidate and assessed using objective rating scales for efficacy (SNAP [Swanson, Nolan, and Pelham]-IV and Nisonger Child Behavior Rating Form) (Correia Filho et al., 2005). Subjects enrolled in the study were between the ages of 6 and 16. The study was a 28 day randomized single-blind, parallel-group clinical trial. Subjects were randomly assigned to either risperidone or methylphenidate for 4 weeks. An individualized flexible titration procedure was used to adjust the dose for optimal efficacy and tolerability. Risperidone was titrated to a maximum tolerable dose with a minimum target dose of 0.5 mg/day at the beginning of the trial. The overall upper dose limit was 4 mg/day. methylphenidate was titrated to a maximum daily dose of 0.7 mg/kg/day at the end of the trial

administered twice daily (8 A.M. and noon). At the end of any of the 4 weeks, the principal investigator could increase the dose of either medicine, depending on efficacy and tolerability. Compliance was checked by returning the blister packs used each week, when pills were counted. Both groups had reduced ADHD symptoms during trial, but findings suggested that risperidone is associated with greater reductions in ADHD total score ($F = 3.26$; $p = .05$) than methylphenidate in children with moderate mental retardation and ADHD. Comorbidity and side effects profile might be of importance in choosing between medications, although it is usually prudent to try stimulants before antipsychotics in such children.

Clinical Trials Comparing Methylphenidate and Placebo in ADHD & Autism Spectrum Disorders

A Cochrane systematic review investigated the effects of methylphenidate for symptoms of ADHD and autistic spectrum disorder (ASD) in children and adolescents aged 6 to 18 years (Sturman et al., 2017). Four cross-over randomized clinical trials were included with a total of 113 children. The primary outcome was clinical efficacy, defined as an improvement in ADHD-like symptoms (inattention, impulsivity and hyperactivity) and in the core symptoms of ASD (impaired social interaction, impaired communication, and stereotypical behaviors) and overall ASD. The meta-analysis suggested that high-dose methylphenidate had a significant and clinically relevant benefit on hyperactivity as rated by teachers (SMD −0.78, 95% confidence interval (CI) −1.13 to −0.43; 4 studies, 73 participants; P < 0.001; low-quality evidence) and parents (mean difference (MD) −6.61 points, 95% CI −12.19 to −1.03, rated on the hyperactivity subscale of the Aberrant Behavior Checklist, range 0 to 48; 2 studies, 71 participants; P = 0.02; low-quality evidence)and a significant but not clinically relevant benefit on teacher-rated inattention (MD −2.72 points, 95% CI −5.37 to −0.06, rated on the inattention subscale of the Swanson, Nolan and Pelham, Fourth Version questionnaire, range 0 to 27; 2 studies, 51 participants; P = 0.04; low-quality evidence). There was no evidence that methylphenidate worsens the core symptoms of ASD or benefits social interaction (SMD −0.51, 95% CI −1.07 to 0.05; 3 studies, 63 participants; P = 0.07; very low-quality evidence), stereotypical behaviors (SMD −0.34, 95% CI −0.84 to 0.17; 3 studies, 69 participants; P = 0.19; low-quality evidence), or overall ASD (SMD −0.53, 95% CI −1.26 to 0.19; 2 studies, 36 participants; P = 0.15; low-quality evidence), as rated by teachers.

Clinical Trials Comparing Methylphenidate and Placebo in ADHD & Oppositional Defiant Disorder and Aggression

In an open-label comparative study, children with DSM-IV-TR ADHD, aged 8-18years with (n=30) and without (n=30) oppositional defiant disorder (ODD) received methylphenidate treatment for 12 weeks (Golubchik and Weizman, 2018).. The severity of ODD symptoms was assessed by the Kiddie-Schedule for Affective Disorders and Schizophrenia. The severity of ADHD symptoms was assessed by the ADHD-Rating Scale-IV and suspiciousness was assessed at baseline and at endpoint by a scale designed especially for assessment of suspiciousness and named Suspiciousness Rating Scale (SRS). Significant reductions in SRS scores were detected in both groups following methylphenidate treatment (before and after: p = .0012 and p = .0273, respectively). Only in the ADHD/ODD group a significant correlation was found between the rate of improvement in ADHD, as assessed by the ADHD-RS, and the reduction in suspiciousness, as assessed by the SRS (Spearman r = 0.48, p = .0066). In addition to the beneficial effect of methylphenidate treatment on ADHD and ODD symptoms it also diminishes suspiciousness.

Another study aimed to assess the effectiveness of monotherapy with stimulant methylphenidate and risperidone in a consecutive sample of 40 drug-naïve male youths diagnosed as having ADHD-combined presentation, comorbid with ODD and aggression, without psychiatric comorbidities (Masi et al., 2017). Twenty males treated with methylphenidate (mean age, 8.95 ± 1.67 years) and 20 males treated with risperidone (mean age, 9.35 ± 2.72 years) followed up to 6 months, were assessed according to efficacy measures, Child Behavior Checklist (CBCL), Clinical Global Impression-Severity (CGI-S)

and Improvement (CGI-I) and Children Global Assessment Scale. At the end of follow-up, both medications were similarly effective based on subscales of aggression and rule-breaking behaviors, but only methylphenidate was effective on attention problems (8.44 ± 2.55 ($P < 0.001$)) and attention-deficit/hyperactivity problems (7.83 ± 2.36 ($P < 0.001$)).

Longer Term Outcomes Associated with Methylphenidate Treatment in Youth with ADHD

Because methylphenidate has been used for many decades, it has been feasible for researchers to study its longer-term effects using naturalistic study designs. Much of the following comes from the International Consensus Statement on ADHD (Faraone et al., 2020 Submitted)

A Swedish registry study of over 650,000 students found that treatment with ADHD medication for three months resulted in a more than nine-point gain in grade point sum (on a scale of 0 to 320); treatment was associated with an increase in the probability of completing upper secondary school by two-thirds (Jangmo et al., 2019).

A Swedish national register study of over 61,000 youths with ADHD found that their test scores were higher during periods they were taking medication vs non-medicated periods (Lu et al., 2017). A Danish study of over half a million children (over 6,400 with ADHD) found that discontinuation of ADHD medication was associated with a small but significant decline in grade point averages (Keilow et al., 2018). A meta-analysis of nine RCTs comprising 1,463 patients found that discontinuing medications led to a worsening in quality of life for children and adolescents but not adults (Tsujii et al., 2020).

A Swedish cohort study of over 25,000 ADHD patients found a one-third reduction in criminality among men receiving ADHD medication, and a 40% reduction for women (Lichtenstein et al., 2012). A Danish national registry study of over 4,200 individuals with childhood ADHD found that crime rates in adulthood were 30-40% lower during periods of taking ADHD medication (Mohr-Jensen et al., 2019).

A Danish cohort study of over 700,000 people, including 4,557 with ADHD, found that among teenagers with ADHD, stimulant treatment was associated with a decrease in rates of injuries (30% for ten-year olds and 40% for twelve-year olds) (Dalsgaard et al., 2015a).

Using the Swedish national registries, a study followed 9,421 youths with ADHD and 2,986 youths with both ADHD and other psychiatric diagnoses from 2006 to 2013. It compared periods when they were taking ADHD medication with periods when they were not. During medicated periods both groups had a greater than 10% reduction in unintended injuries, and a greater than 70% reduction in traumatic brain injuries (Ghirardi et al., 2020).

A Taiwanese study of over 124,000 youths with ADHD found that methylphenidate treatment decreased the risk for traumatic brain injuries, after adjusting for confounders (Liao et al., 2018).

A nationwide study compared 7,200 Taiwanese youths with ADHD with 36,000 children without ADHD. After adjusting by age, sex, urbanization level, and geographic region, boys with ADHD were almost 40% more likely and girls with ADHD 60% more likely to suffer bone fractures (Guo et al., 2016). Another study from Taiwan identified over 6,200 youths newly diagnosed with ADHD and assessed the effect of methylphenidate treatment. The risk of bone fractures was 20% lower in those who had over half a year of methylphenidate treatment (Chen et al., 2017).

A population-based, electronic medical records database in Hong Kong identified over 17,000 individuals aged 6-19 years who had been prescribed methylphenidate. Of these, almost 5,000 had at least one trauma-related emergency room admission. Researchers found a 9% reduction in such admissions during periods covered by a methylphenidate prescription compared with periods with no active prescription (Man et al., 2015).

A meta-analysis of five studies with over 13,000 participants found that ADHD medications (primarily stimulants) were associated with a greater than 10% reduction in unintentional injuries (Ruiz-Goikoetxea et al., 2018a).

Using Swedish national registers, a study of over 17,000 people with ADHD found that medication for ADHD was associated with a greater than 50% reduction in the risk of serious transport accidents among males but not females. Over 40% of crashes by male patients would have been avoided if they had been receiving treatment during the entire period (Chang et al., 2014b). A U.S. national cohort study of 2.3 million people with ADHD examined emergency room visits for motor vehicle crashes over ten years. Males with ADHD had a 38% lower risk of crashes in months when receiving ADHD medication compared with months when not receiving medication, and females a 42% lower risk in months when receiving ADHD medication. About a fifth of crashes would have been avoided if they had been on medication throughout the period of the study (Chang et al., 2017).

A longitudinal study using the Taiwan Health Insurance Research Database compared almost 18,000 adolescent and young adults with ADHD with over 70,000 age- and sex-matched controls. Short-term use of ADHD medications was associated with a 30% reduction in sexually transmitted infections, and long-term use with a 40% reduction, though these reductions were only among males (Chen et al., 2018).

A nationwide longitudinal cohort study using the Swedish national registers found that among more than 38,000 individuals with ADHD, ADHD medication was associated with a greater than 40% reduction in the risk for depression three years later. The risk decreased with the duration of ADHD medication use. Depression was 20% less common when patients received ADHD medication compared with periods when they did not (Chang et al., 2016).

A Swedish population-based study of 38,000 people with ADHD found a 20% decline in suicide related events among those prescribed stimulants during periods when they were under treatment as opposed to during periods when they were not under treatment. No such benefit was found for non-stimulant medications (Chen et al., 2014).

A Taiwanese study identified 85,000 youths with ADHD using National Health Insurance data to examine whether methylphenidate use affected suicide attempts. After adjusting for relevant variables, it found a 60% lower risk of suicide in those using methylphenidate for 3 months to half a year, and a 70% reduction among those using methylphenidate for more than half a year (Liang et al., 2018b).

A study using the Swedish national registers investigated the association between prescription stimulant medication for ADHD in 2006 and substance abuse during 2009 among all 38,753 people born between 1960 and 1998 and diagnosed with ADHD. After controlling for relevant variables, it found a greater than 30% reduction in indicators of substance abuse among those prescribed stimulants. The longer the duration of medication, the lower the rate of substance abuse (Chang et al., 2014c). A meta-analysis of 14 studies with over 2,300 participants found that people with ADHD were half as likely to smoke cigarettes when regularly treated with stimulant medications (Schoenfelder et al., 2014). A meta-analysis of 15 studies with over 2,500 participants found that stimulants did not increase the risk for alcohol, nicotine, cocaine, or cannabis abuse or dependence (Humphreys et al., 2013).

A nationwide study of over 7,500 Taiwanese adolescents with ADHD and over 30,000 matched controls found that long-term use of ADHD medication use was associated with a 30% decrease in teenage pregnancy (Hua et al., 2020).

A nationwide population-based cohort using Taiwan's National Health Insurance Research Database identified over 68,000 children and adolescents with a diagnosis of ADHD and who were prescribed methylphenidate and compared them with an identical number of controls matched on age, gender and year of first ADHD diagnosis. After controlling for potential confounders, ADHD individuals

prescribed methylphenidate had a one-fifth lower rate of all-cause mortality than ADHD individuals not prescribed methylphenidate. Delayed use of methylphenidate, on the other hand, was associated with slightly higher (5%) mortality. Long-term methylphenidate use was associated with a one-sixth lower rate of all-cause mortality. The authors caution, however, that "information lacking in the database precluded the measurement of other possible confounders, such as family history, psychosocial stressors, effect of behavioural therapy or severity of comorbidities," and thus unmeasured confounding cannot be excluded (Chen et al., 2020a).

A nationwide population-based cohort using Taiwan's National Health Insurance Research Database identified over 90,000 individuals younger than 18 years with a diagnosis of ADHD, and compared risk of burn injury between those not on methylphenidate, those on methylphenidate for less than 90 days, and this on methylphenidate for more than 90 days. The data suggested that fully half the incidence of burn injuries could have been prevented by taking methylphenidate. Compared with patients not taking methylphenidate, those taking it for less than 90 days had a 30% lesser risk of burn injuries, and those taking it for 90 days or more a 57% reduction in risk, after adjusting for confounders (Chen et al., 2020b).

9. Review of benefits: summary of evidence of comparative effectiveness

Identification of Clinical Evidence for Short Term Efficacy from Randomized Controlled Trials (RCTs)

A recent meta-review (Cortese et al., 2019) sought to identify available network meta-analyses (NMAs) aimed at assessing the comparative effectiveness of medications used in child and adolescent psychiatry. The following electronic databases, with no restrictions in terms of date, language, and type of document (e.g., full text paper, conference proceeding, or dissertation, among others): Pubmed (Medline), Ovid databases (PsycInfo, Embase+Embase classic, OVID Medline), and Web of Knowledge Databases (Web of science (science citation index expanded), Biological abstracts, Biosis, Food science and technology abstracts), from inception to 9 January, 2018. Reference lists of relevant retrieved papers were hand-searched to find any additional pertinent NMA. The quality of each included NMA was appraised using the AMSTAR-2 tool. The following NMAs were identified for ADHD medications, including methylphenidate

First author (year)	N trials	Type of included trials	Participants	Eligible treatments	Outcomes
Roskell (2014)	32	Parallel RCTs	Children and/or adolescents with ADHD, with or without comorbid ODD	MPH, LDX ATX, DEX	Efficacy: changes in ADHD-RS, CGI-I Safety: all-cause and AE discontinuations
Locatelli (2016) (conference proceeding only)	34	Parallel double blind RCTs > 2 weeks	Children and/or adolescents with ADHD; no further information	MPH (MPH-I and MPH-MR), LDX ATX, BUP	Efficacy: clinical improvement (decline in ADHD-RS questionnaire score by at least 25% or improved CGI-I)
Catala-Lopez (2017)	190	Parallel RCTs ≥ 3 weeks. (crossover included if they reported pre crossover results)	Children and/or adolescents with ADHD (< 18 y), as per DSM or ICD	Pharmacological treatments: Stimulants; Non-stimulants Antipsychotics Other unlicensed drugs Non-pharmacological interventions: Behavioral therapy Cognitive training Neurofeedback Complementary and alternative medicine interventions	Primary: treatment response (ADHD symptoms or global functioning) and all-cause treatment dis-continuation rates. Secondary outcomes: tolerability, serious AEs and specific adverse events
Joseph (2017)	36	Parallel RCTs, (crossover included if they reported pre crossover results)	Children and/or adolescents aged 6-17	d-AMPH, ATX, CIR, GIR, GXR, LDX, MPH-IR, or MPH-ER/OROS	Efficacy: change in ADHD-RS, CGI-S, CPRSs, or SNAP-IV; achievement of response at the CGI Safety: all cause discontinuation and discontinuation due to AEs
Li (2017)	62	RCTs, regardless of level of blinding	Children and adolescents with ADHD aged 4-17	ATX, BUP, CLON, GXR, LDX, MPH	Efficacy: changes on validated ADHD scales

					Safety: Withdrawals due to all-cause, or AEs and lack of efficacy
Luan (2017)	73	RCTs, regardless of level of blinding, > 3 weeks	Children and adolescents with ADHD as per DSM-I, aged 6-18	ATX, CLON, GXR, BUP, LDX, MPH	Efficacy: changes on ADHD-RS Safety: all cause withdrawals, withdraw due to AEs, withdrawal due to lack of efficacy

Abbreviation for Medications: AMPH: Amphetamines; BUP: Bupropion; CLON: Clonidine; GUA: Guanfacine; GXR: Guanfacine Extended Release LDX: Lisdexamfetamine; MAS: Mixed Amphetamine Salts; MODA: Modafinil; MPH: Methylphenidate (ER: Extended release: SR: sustained release); PBO: Placebo.

Abbreviation for Comorbidity: AD: Aggression/Defiance; A/D: Abuse/Dependence; Adj Dis: Adjustment Disorder with mixed disturbance of emotions and conduct; ASD: Autism Spectrum Disorder; ASPD: Antisocial Personality Disorder; BD: Bipolar Disorder; CD: Conduct Disorder; Comm: Communications Disorder; DD: Depression Disorder; Disr Beh: Disruptive Behavior Disorder; GAD: Generalized Anxiety Disorder; LD: Learning disorder; MD: Major Depression; MOOD: Mood disorder; MSD: Motor Skills Disorder; OCD: Obsessive–Compulsive Disorder; ODD: Oppositional Defiant Disorder; PD: Personality disorder; PHO: Phobia; SAD: Separation anxiety disorder; SPD: Seasonal pattern disorders; SUD: substance use disorder; TD: Tic Disorders.

An additional NMA was published after the search date of this meta-review. The quality of the NMAs identified in the meta-review by Cortese et al. (2018) is described in the accompanying Table.

Quality of Network Meta Analyses	
Author (Year)	**AMSTAR-2 Rating**
Roskell (2014)	Low
Catala-Lopez (2017)	Moderate
Joseph (2017)	Critically Low
Li (2017)	Critically Low
Luan (2017)	Critically Low

By contrast, the quality of the NMA by Cortese et al. (2018) was rated as HIGH in another recent meta-review (Boaden et al., 2020). As such, data on comparative effectiveness of methylphenidate from the network meta-analysis by (Cortese et al., 2018) are presented here as deriving from the highest quality NMA currently available.

Summary of Available Data from RCTs

The following table summarizes the comparative efficacy of methylphenidate on ADHD core symptoms rated by clinicians in the short term (average 12 weeks) in relation to placebo and other medications used to treat ADHD

	Atomoxetine		Bupropion		Clonidine		Guanfacine		Methylphenidate		Modafinil		Placebo	
	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults	Children	Adults
Amphetamines														
Clinicians	**-0·46 (-0·65 to -0·27)***	**-0·34 (-0·58 to -0·10)***	-0·06 (-0·81 to 0·68)†	-0·33 (-0·77 to 0·11)*	-0·31 (-0·81 to 0·18)*	-	**-0·35 (-0·59 to -0·10)***	-	**-0·24 (-0·44 to -0·05)***	**-0·29 (-0·54 to -0·05)***	**-0·39 (-0·67 to -0·12)***	**-0·94 (-1·43 to -0·46)‡**	**-1·02 (-1·19 to -0·85)‡**	**-0·79 (-0·99 to -0·58)‡**
Teachers	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Atomoxetine														
Clinicians	-	-	0·40 (-0·34 to 1·14)*	0·01 (-0·41 to 0·42)*	0·15 (-0·33 to 0·63)*	-	0·11 (-0·09 to 0·32)*	-	**0·22 (0·05 to 0·39)***	0·04 (-0·14 to 0·23)‡	0·07 (-0·17 to 0·31)*	**-0·61 (-1·06 to -0·15)***	**-0·56 (-0·66 to -0·45)***	**-0·45 (-0·58 to -0·32)***
Teachers	-	-	0·00 (-0·90 to 0·90)†	-	-	-	0·31 (-0·79 to 1·42)†	-	0·50 (-0·11 to 1·10)*	-	0·44 (-0·19 to 1·07)*	-	-0·32 (-0·82 to 0·18)†	-
Bupropion														
Clinicians	-	-	-	-	-0·25 (-1·12 to 0·62)†	-	-0·28 (-1·04 to 0·47)†	-	-0·18 (-0·90 to 0·54)†	0·04 (-0·38 to 0·45)*	-0·33 (-1·10 to 0·43)†	**-0·62 (-1·20 to -0·03)***	**-0·96 (-1·69 to -0·22)‡**	**-0·46 (-0·85 to -0·07)***
Teachers	-	-	-	-	-	-	0·31 (-0·92 to 1·55)†	-	0·50 (-0·17 to 1·17)*	-	0·44 (-0·38 to 1·26)*	-	-0·32 (-1·07 to 0·43)†	-
Clonidine														
Clinicians	-	-	-	-	-	-	-0·03 (-0·53 to 0·46)†	-	0·07 (-0·42 to 0·56)†	-	-0·08 (-0·59 to 0·43)†	-	**-0·71 (-1·17 to -0·24)‡**	-
Guanfacine														
Clinicians	-	-	-	-	-	-	-	-	0·11 (-0·13 to 0·34)*	-	-0·05 (-0·32 to 0·23)*	-	**-0·67 (-0·85 to -0·50)‡**	-
Teachers	-	-	-	-	-	-	-	-	0·18 (-0·86 to 1·22)†	-	0·12 (-0·93 to 1·18)†	-	**-0·63 (-1·62 to 0·35)†**	-
Methylphenidate														
Clinicians	-	-	-	-	-	-	-	-	-	-	-0·15 (-0·41 to 0·10)*	**-0·65 (-1·11 to -0·19)***	**-0·78 (-0·93 to -0·62)‡**	**-0·49 (-0·64 to -0·35)‡**
Teachers	-	-	-	-	-	-	-	-	-	-	-0·06 (-0·53 to 0·42)†	-	**-0·82 (-1·16 to -0·48)***	-
Modafinil														
Clinicians	-	-	-	-	-	-	-	-	-	-	-	-	**-0·62 (-0·84 to -0·41)***	0·16 (-0·28 to 0·59)*
Teachers	-	-	-	-	-	-	-	-	-	-	-	-	**-0·76 (-1·15 to -0·37)†**	-

Data are standardised mean difference (95% CI) between treatments. Results in bold are significant. Negative values favour the treatment in the row and positive values favour the treatment in the column. Drugs are reported in alphabetical order. Results are based on network estimates. No data for clonidine and guanfacine in adults are reported because no studies identified by our search tested these two drugs in adults. No teacher ratings were available for clonidine. ADHD=attention-deficit hyperactivity disorder. *Low quality of evidence. †Very low quality of evidence. ‡Moderate quality of evidence.

Table 1: **Effect of ADHD drugs in children and adults at timepoints closest to 12 weeks in terms of efficacy, as rated by clinicians and teachers**

In summary, methylphenidate showed higher SMDs compared with placebo and was slightly inferior to amphetamines in terms of efficacy on ADHD core symptoms rated by clinicians

The quality of the evidence from RCTs of methylphenidate, rated with the GRADE system, was deemed of moderate level for the comparison methylphenidate vs placebo, clinicians ratings.

Identification of Clinical Evidence for Longer Term Effectiveness Observational Studies

Due to lack of randomization, observational, naturalistic studies may be prone to bias. A systematic review focused on within-individual design studies, that account for confounding by indication Chang et al. (2019). They performed a systematic search in PubMed and Embase for studies that investigated the association between ADHD medications and behavioral or neuropsychiatric outcomes using population-based prescription databases between January 1, 2008, and February 1, 2019, with no language restrictions. They used terms related to ADHD (attention-deficit/hyperactivity disorder, ADHD) and medication (medication, stimulant*, treatment) and type of data (regist*, claim*, record*, population*) in combination. They followed the recommendations of the Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement

Summary of Available Data for Longer Term Effectiveness from Observational Studies

These studies reviewed by Chang et al. (2019) showed a significant decrease in negative outcomes, such as unintentional physical injuries, motor vehicle accidents (among male patients), substance use disorder, and criminal acts, as well as an improvement in academic functioning. All of their results are shown in the following Figure, reproduced from their article.

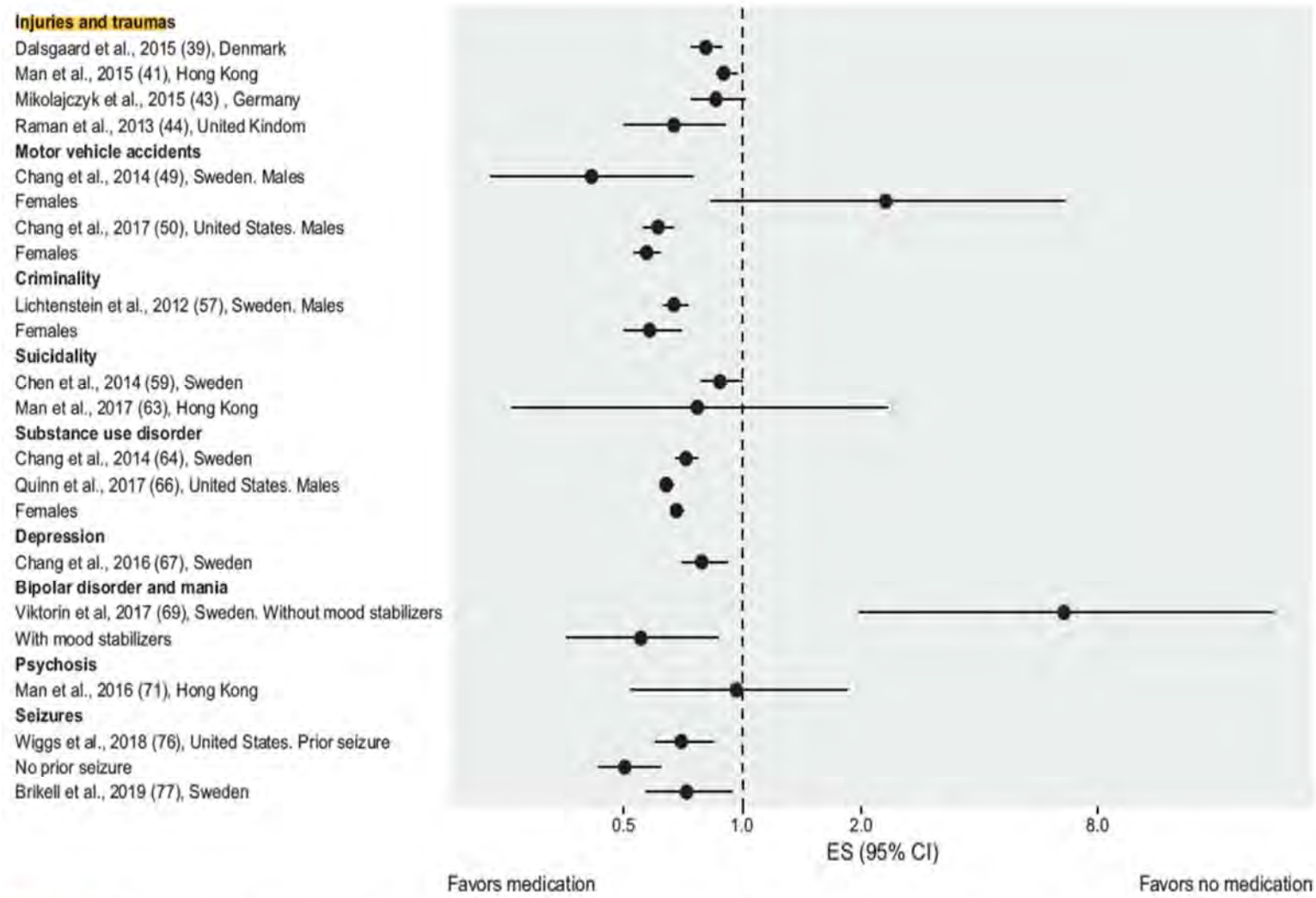


Figure 1. Forest plot of within-individual studies for short-term effects of attention-deficit/hyperactivity disorder medications. Note: Studies on educational outcomes were not included because they used continuous measures of outcome. CI, confidence interval; ES, effect size.

Reference to Methylphenidate in Existing WHO & Other Clinical Guidelines

From the pharmacological interventions section of the World Health Organization's, mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings (World Health Organization, 2018b): "Consider methylphenidate for hyperkinetic disorder only if psychosocial interventions have failed, the child has been carefully assessed and is at least 6 years old, and conditions whose management can be complicated by methylphenidate have been ruled out. Use of stimulant medication must always be part of a comprehensive treatment plan that includes psychological, behavioral and educational interventions"

Key recommendations from other recent guidelines are summarized in the table below from the New England Journal of Medicine (Cortese, 2020).

Table 2. Recommendations for ADHD Treatment from Recent Clinical Guidelines.

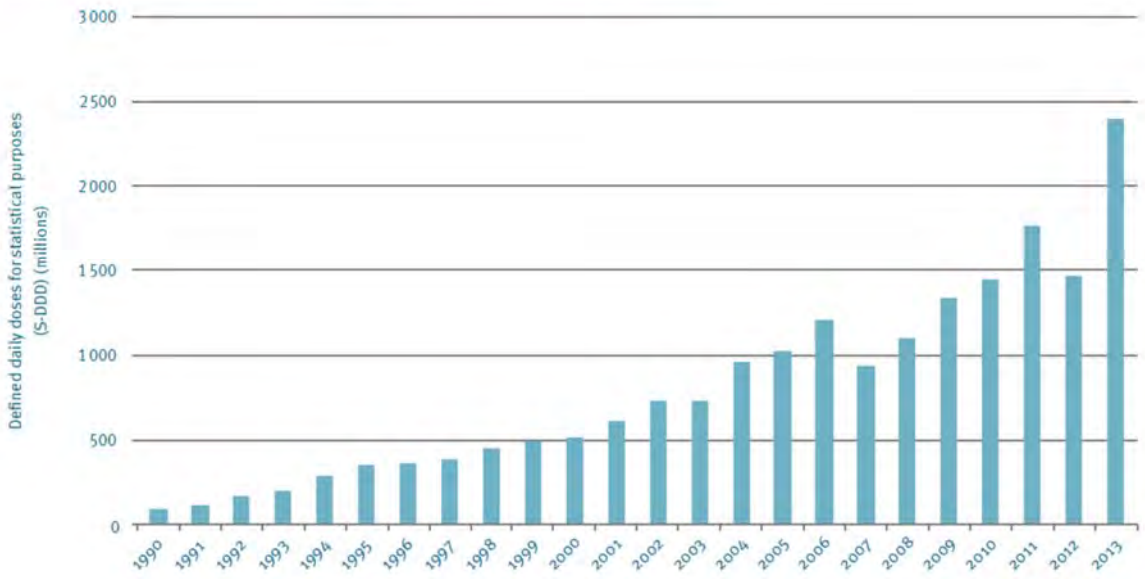
Organization and Patient Age	Treatment Recommendations
American Academy of Pediatrics[3]	
Preschool children (4–5 yr old)	First line: parental training in behavior management, behavioral classroom interventions, or both Second line: methylphenidate (off-label)
Children 6–11 yr old	FDA-approved medications (in descending order according to strength of evidence: stimulants, atomoxetine, extended-release guanfacine, extended-release clonidine) with parental training in behavior management, behavioral classroom interventions, or preferably both; educational interventions
Adolescents 12–17 yr old	FDA-approved medications; training or behavioral interventions, if available, or both; educational interventions
Adults	Recommendations are not included in the guideline
National Institute for Health and Care Excellence, United Kingdom[4]	
Children <5 yr old	First line: ADHD-focused group training for parents Second line: medication only after second specialist opinion
Children ≥5 yr old and young people	ADHD-focused support (e.g., education and information on the causes and effects of ADHD, advice on parenting strategies, and liaison with school) If ADHD symptoms persist in at least one area of functioning after environmental modification, start medication (in descending order of preference): methylphenidate, lisdexamfetamine (or dexamphetamine if unacceptable side effects with lisdexamfetamine), atomoxetine or guanfacine For symptoms of oppositional defiant disorder or conduct disorder: parental training Cognitive behavioral therapy for young people if symptoms still impairing at least one area of functioning after pharmacologic treatment
Adults	If ADHD symptoms persist in at least one area of functioning after environmental modification: medication (in descending order of preference): methylphenidate or lisdexamfetamine (or dexamphetamine if lisdexamfetamine associated with unacceptable side effect profile), atomoxetine Supportive psychological intervention if medication is ineffective or associated with unacceptable side effects
ADHD German Guidelines[5]	
Children <6 yr old	First line: ADHD-focused group or individual training for parents or teachers Second line: medication only after specialist advice for children >3 yr old
Children ≥6 yr old and young people	
Mild-to-moderate ADHD	After psychoeducation, first line: parental training or family-based interventions; if needed, patient-, school-, and workplace-based interventions After psychoeducation, second line: medication (in descending order of preference): stimulants, atomoxetine or guanfacine
Moderate-to-severe ADHD	After psychoeducation, first line: medication (in descending order of preference): stimulants, atomoxetine or guanfacine After psychoeducation, second line: parental training or family-based interventions; if needed, patient-based and school- or workplace-based interventions
Adults	After psychoeducation, first-line: medication; nonpharmacologic treatment if patient chooses it or if medication ineffective or associated with unacceptable side effects

10.Review of harms and toxicity: summary of evidence of safety

Estimate of Total Patient Exposure to Date

According to the 2015 report from the International Narcotics Control Board http://www.incb.org/documents/Publications/AnnualReports/AR2014/English/methylphenidate.pdf, the United States accounted for more than 80% of global consumption. Iceland had the highest per capita consumption of methylphenidate in the world. Other countries with high per capita use were Norway, Sweden, Australia, Belgium, Germany and Canada. Their Figure below shows total consumption has been increasing from 1990 to 2013.

Figure I. Global consumption of methylphenidate, 1990-2013



Raman et al. reported a retrospective, observational study using population-based databases from 13 countries and one Special Administrative Region: four in Asia and Australia, two in North America, five in northern Europe, and three in western Europe. They reported their results as follows: "154·5 million individuals were included in the study. ADHD medication use prevalence in 2010 (in children aged 3–18 years) varied between 0·27% and 6·69% in the countries and SAR assessed (0·95% in Asia and Australia, 4·48% in North America, 1·95% in northern Europe, and 0·70% in western Europe). The prevalence of ADHD medication use among children increased over time in all countries and regions, and the absolute increase per year ranged from 0·02% to 0·26%. Among adults aged 19 years or older, the prevalence of any ADHD medication use in 2010 varied between 0·003% and 1·48% (0·05% in Asia and Australia, 1·42% in North America, 0·47% in northern Europe, and 0·03% in western Europe). The absolute increase in ADHD medication use prevalence per year ranged from 0·0006% to 0·12%. Methylphenidate was the most commonly used ADHD medication in most countries." (Raman et al., 2018)

Description of Adverse Effects/Reactions and Estimates of Frequency and Summary of Available Data

The review on this section is based on a) the relevant meta-analyses and within-subject cohort studies identified by the International Consensus Statement on ADHD (Faraone et al., 2020 Submitted),

b) a recent qualitative systematic review of studies that investigated risks and benefits of ADHD medication using linked prescription databases, including 18 within-individual designs accounting for confounding by indication (Chang et al., 2019), c) a recent large scale systematic meta-review of 78 adverse effects of psychotropic medications in children and adolescents with psychiatric disorders (Solmi et al., 2020), d) the most comprehensive network meta-analysis on the tolerability of ADHD medication (Cortese et al., 2018), e) the work of the EU-funded ADDUCE project, that investigated the long-term effects of stimulants on growth, the neurological system, psychiatric states and the cardiovascular system, and f) a systematic review of the PubMed and Cochrane databases (http://adhd-adduce.org/page/view/2/Home).

PubMed and Cochrane catalogues were searched for meta-analyses on the safety of methylphenidate using keywords "methylphenidate", "adverse" and "meta-analysis*" for PubMed and "methylphenidate" and "ADHD" for the Cochrane database search (last search, Nov 10, 2020). There were no specifications on language. A total of 75 abstracts in PubMed and 11 reviews in Cochrane databases were identified initially. Among these, 25 were relevant to comparative evidence on safety for methylphenidate in children and adolescents. Of the 25 relevant articles, 5 were excluded due to being outdated or methodological flaws.

Common side effects of methylphenidate include erythema, weight loss, decrease in appetite, loss in appetite, nausea, vomiting, headache, insomnia, mild labile mood, nasal congestion, and nasopharyngitis with loss of appetite and sleep difficulties being most common (Coghill et al., 2014; Cortese et al., 2013; Faraone et al., 2019; Graham and Coghill, 2008; UpToDate, 2018).

Adverse Effects in Randomized Controlled Clinical Trials

a. In an comprehensive systematic review and network meta-analysis on the tolerability (study drop-outs) of medications for ADHD comparing amphetamines (including lisdexamfetamine), atomoxetine, bupropion, clonidine, guanfacine, methylphenidate, and modafinil with each other or placebo at timepoints closest to 12 weeks, 26 weeks, and 52 weeks, (Cortese et al., 2018) included 82 published and unpublished double-blind randomised controlled trials (11,018 children and adolescents). Summary odds ratios (ORs) and standardised mean differences (SMDs) were estimated using pairwise and network meta-analysis with random effects. Risk of bias of individual studies was assessed with the Cochrane risk of bias tool and confidence of estimates with the Grading of Recommendations Assessment, Development, and Evaluation approach for network meta-analyses. With respect to tolerability, methylphenidate was not statistically different from placebo (OR 1.44, 95% CI 0.90-2.31). Use of methylphenidate was associated with a significantly increased diastolic blood pressure (SMD: 0.24, CI: 0.14–0.33) and decreased weight (SMD: –0.77, CI: –1.09 to –0.45). There was no significant increase in systolic blood pressure (SMD: 0.09, CI: -0.01–0.19).

b. A Cochrane review by (Storebø et al., 2018) on adverse events of methylphenidate to treat ADHD concluded, in contrast to all other meta-analyses, that methylphenidate may be associated with psychotic disorders and arrhythmia. This conclusion was based on two non-randomised comparative studies. One was a Taiwanese cohort study conducted by Shyu et al. (Shyu et al., 2015), which reported that the risk for any psychotic disorder (RR 1.36; CI 1.17 to 1.57; 71,771 participants) was increased. The other study by (Shin et al., 2016) reported increased risk for arrhythmia (RR 1.61, 95% CI 1.48 to 1.74; 1 study, 1224 participants) compared with no intervention. However, according to (Storebø et al., 2018), both studies had serious (Shin et al., 2016) or critical (Shyu et al., 2015) risk for bias due to confounding factors, such as confound by indication to treatment or comorbid disorders. In contrast, two large population-based cohort studies using within-person designs from Swedish and Hong-Kong registries by (Hollis et al., 2019) and (Man et al., 2016) and found no evidence that methylphenidate was associated with psychotic disorders and the Cochrane review on the efficacy of methylphenidate by (Storebø et al.,

2015) found no evidence for an increase in serious adverse events. These latter studies are more convincing because the use of a within-person design eliminates confounding by indication.

c. According to a more recent, comprehensive meta-review on network meta-analyses and meta-analyses of randomized controlled trials (RCTs), individual RCTs, and cohort studies reporting on 78 a priori selected adverse events across 19 categories of 80 psychotropic medications in children and adolescents with mental disorders including data from nine network meta-analyses, 39 meta-analyses, 90 individual RCTs, and eight cohort studies with a total of 337,686 children and adolescents included (Solmi et al., 2020), methylphenidate was associated with significantly worse anorexia (RR: 3.21; 95% confidence interval [CI] 2.61-3.94; (Holmskov et al., 2017), insomnia (OR: 4.66; CI 1.99-10.9; (Ching et al., 2019), weight loss (standard mean difference [SMD] –0.77;CI –1.09 to –0.45; (Cortese et al., 2018), nausea (RR: 1.38; CI 1.04-1.84; (Holmskov et al., 2017)) and abdominal pain (RR: 1.50; CI = 1.26-1.79; (Holmskov et al., 2017)) than placebo. Details are in the following Table from Solmi et al. (2020) (reference citations in the table are in their published paper).

Table 3 Safety of anti-attention-deficit/hyperactivity (ADHD) medications in children and adolescents with any mental illness (adverse events significantly worse than with placebo/controls)

Medication	Adverse events covered by literature	Adverse events worse than placebo	Adverse event	Type of effect size	Effect size	95% CI	Source	Quality	N
Mixed anti-ADHD medications	19 (24.4%)	7 (9.0%)	Abdominal pain[155]	RR	1.44	1.03-2.00	MA	H	2,155
			Anorexia[155]	RR	6.31	2.58-15.5	MA	H	2,467
			Discontinuation due to adverse event[144]	OR	2.30	1.36-3.89	NMA	H	14,346
			Hypertension[144]	SMD	0.09	0.01-0.18	NMA	H	14,346
			Insomnia[155]	RR	3.80	2.12-6.83	MA	H	2,429
			Nausea/vomiting[155]	RR	1.63	1.04-2.56	MA	H	1,579
			Weight loss[144]	SMD	−0.71	−1.15 to −0.27	NMA	H	14,346
Mixed α-2 agonists	5 (6.4%)	1 (1.3%)	Discontinuation due to adverse event[49]	Log OR	−29.6	−95.5 to −2.6	NMA	M	2,623
Atomoxetine	20 (25.6%)	5 (6.4%)	Anorexia[147]	RR	2.51	1.77-3.57	MA	M	2,179
			Gastrointestinal symptoms[147]	RR	1.76	1.51-2.07	MA	M	3,712
			Hypertension[144]	SMD	0.12	0.02-0.22	NMA	H	14,346
			Nausea/vomiting[156]	RR	1.91	1.24-2.94	MA	L	193
			Weight loss[144]	SMD	−0.84	−1.16 to −0.52	NMA	H	14,346
Clonidine	10 (12.8%)	2 (2.6%)	Hypotension[149]	Hedges' g	0.52	0.15-0.89	MA	M	119
			Sedation[164]	OR	7.67	2.92-20.1	RCT	M	230
d-amphetamine	6 (7.7%)	3 (3.8%)	Anorexia[170]	NA	Sig	Sig	RCT	L	81
			Insomnia[170]	NA	Sig	Sig	RCT	L	81
			Irritability[170]	NA	Sig	Sig	RCT	L	81
Guanfacine	16 (20.5%)	4 (5.1%)	Abdominal pain[166]	OR	4.51	1.34-15.2	RCT	M	455
			Discontinuation due to adverse event[144]	OR	2.64	1.20-5.81	NMA	H	14,346
			QT prolongation[149]	Hedges' g	0.33	0.12-0.54	MA	M	785
			Sedation[149]	RR	2.43	1.06-5.58	MA	M	1,059
Lisdexamphetamine	14 (17.9%)	5 (6.4%)	Anorexia[155]	RR	9.83	5.08-19.0	MA	H	1,081
			Discontinuation due to adverse event[145]	RR	3.11	1.20-3.76	NMA	M	6,931
			Dry mouth[169]	OR	8.63	1.13-66.0	RCT	H	547
			Hypertension[144]	SMD	0.14	0.03-0.25	NMA	H	14,346
			Insomnia[155]	RR	5.91	2.84-12.3	MA	H	1,081
Methylphenidate	25 (32.1%)	5 (6.4%)	Abdominal pain[154]	RR	1.50	1.26-1.79	MA	M	5,983
			Anorexia[154]	RR	3.21	2.61-3.94	MA	M	5,983
			Insomnia[148]	OR	4.66	1.99-10.9	MA	M	749
			Nausea/vomiting[154]	RR	1.38	1.04-1.84	MA	M	2,630
			Weight loss[144]	SMD	−0.77	−1.09 to −0.45	NMA	H	14,346
Modafinil	13 (16.7%)	3 (3.8%)	Anorexia[153]	RR	5.02	2.55-9.89	MA	M	921
			Insomnia[153]	RR	6.16	3.40-11.2	MA	M	921
			Weight loss[144]	SMD	−0.93	−1.59 to −0.26	NMA	H	14,346

OR – odds ratio, RR – risk ratio, Log OR – log odds ratio, SMD – standardized mean difference, NMA – network meta-analysis, MA – meta-analysis, RCT – randomized controlled trial, NA – not available, H – high quality, M – medium quality, L – low quality (lower score of either AMSTAR or AMSTAR-Content), Sig – significant difference between medication and placebo without effect size available

Adverse Effects in Observational Studies: Somatic Effects

Much of the following comes from the International Consensus Statement on ADHD (Faraone et al., 2020 Submitted).

a. Children treated with stimulants may show delays in expected height gains averaging two centimeters over one or two years. These sometimes attenuate over time and often reverse when treatment is stopped (Faraone et al., 2008). A medical records study from the USA comparing 32,999 stimulant-treated ADHD children with 11,515 controls found continuing declines in expected height over a four-year period.

b. Carucci et al. (Carucci et al., 2020) conducted a meta-analysis of association of long-term (> six months) methylphenidate exposure with height, weight and timing of puberty, including 18 studies (n = 4868). methylphenidate was associated with consistent statistically significant pre-post difference for both height (SMD = 0.27, CI= 0.16-0.38) and weight (SMD = 0.33, CI= 0.22-0.44) Z scores, with prominent impact on weight during the first 12 months and on height within the first 24-30 months. No significant effects of dose, formulation, age and drug-naive condition as clinical moderators were found.

c. A study using Danish national registers followed over 700,000 individuals for an average period of almost a decade. Looking at 8,300 people with ADHD, stimulant users had more than twice the rate of cardiovascular events (primarily hypertension) than nonusers. These events were rare (Dalsgaard et al., 2014).

d. A recent meta-analysis by Liang et al. (Liang et al., 2018a) found that children and adolescents treated with methylphenidate had more significant post- vs. pretreatment increases in heart rate (11 studies; SMD: 1.56, CI: 0.71–2.41, $z = 3.59$, $p < 0.001$) and systolic blood pressure (10 studies; SMD: 1.61, 95% CI: 0.81–2.41, $z = 3.96$, $p < 0.001$) than those treated by placebo.

e. In a meta-analysis of three studies with over 1.4 million people of all ages methylphenidate was not associated with a higher risk of all-cause death, heart attack or stroke (three studies, over half a million people) (Liu et al., 2019).

f. A cohort study of over 1.8 million pregnancies in the United States and over 2.5 million pregnancies in the health registries of Denmark, Finland, Sweden, Norway, and Iceland reported that use of methylphenidate (but not amphetamines) by pregnant woman was associated with a higher risk for cardiac malformations from 12.9 per thousand infants to 16.5 per thousand infants (Huybrechts et al., 2018). A meta-analysis of four studies of three million women also found that intrauterine exposure to methylphenidate was associated with a higher risk of cardiac malformations (Koren et al., 2020).

Adverse Effects in Observational Studies: Other Psychiatric and Neurological Effects

a. The Hong Kong Clinical Data Analysis & Reporting System, a population-based, electronic medical records database, was used to examine over 25,000 people receiving methylphenidate for ADHD. During the 90-day period prior to initiation of treatment, individuals with ADHD were greater than six times more likely to attempt suicide than after treatment. After ongoing treatment, the risk for attempted suicide was no longer elevated among patients with ADHD (Man et al., 2017).

b. In line with this, a Swedish cohort study examining including 37,936 patients with ADHD found no evidence for an increased risk of suicidal events, regardless of sex or type of medication. Among stimulant users, a reduced within patient rate of suicide related events was seen during treatment periods (0.81, 0.70 to 0.94) (Chen et al., 2014).

c. Another nationwide Swedish longitudinal cohort study including 38,752 patients with ADHD found that ADHD medication was associated with a reduced long-term risk (i.e., 3 years later) for

depression (hazard ratio = 0.58; 95% confidence interval, 0.51-0.67) and 20% reduced rate of unplanned hospital visits due to depression (Chang et al., 2016).

d. Studying children and youths newly diagnosed with ADHD (n=71,080) and age-and gender-matching controls (n=71,080) chosen from Taiwan's National Health Insurance database during the period of January 200 to December 201, Lee and colleagues investigated whether methylphenidate and atomoxetine influence the risk of depression (Lee et al., 2016a). ADHD patients who received longer methylphenidate treatment were found to be at a lower risk for developing any depressive disorder (aOR, 0.91; 99% CI, 0.88–0.94), dysthymic disorder (aOR, 0.89; 99% CI, 0.85–0.94) or major depressive disorder (aOR, 0.82; 99% CI, 0.73–0.93). However, treatment duration with atomoxetine was not significantly correlated with the probability of developing a depressive disorder. Regarding treatment with methylphenidate, a longer duration of methylphenidate use demonstrates significant protective effects against developing a depressive disorder.

e. Using the Hong Kong Clinical Data Analysis & Reporting System, the risk for psychosis did not differ between periods when patients were on and off methylphenidate treatment (Man et al., 2016). A Swedish registry study of over 23,000 adolescents and young adults treated with methylphenidate for ADHD found no evidence for an association between psychosis and methylphenidate treatment. A year after initiation of methylphenidate treatment, the incidence of psychotic events was 36% lower in in those with a history of psychosis and 18% lower in those without a history of psychosis relative to the period immediately before the beginning of treatment (Hollis et al., 2019).

f. Two studies investigating short-term effects reported that ADHD medication was associated with up to 35% reduced risk of substance use disorder (Chang et al., 2014; Quinn et al., 2017). Using Swedish national registers, Chang and colleagues studied all individuals born between 1960 and 1998 and diagnosed with ADHD (38,753 patients) concerning an association between stimulant ADHD medication in 2006 and substance abuse during 2009 and found that ADHD medication was not associated with increased rate of substance abuse (hazard ratio: 0.69; CI=0.57-0.84).

g. The other study adopted a within-individual design using commercial health care claims from 2,993,887 patients (2005-2014) and found statistically significant negative associations for previous treatment and treatment duration with the risk of substance-related events during months in which patients received medication (Quinn et al., 2017). In adjusted within-individual comparisons, relative to periods in which patients did not receive ADHD medication, male patients had 35% lower odds of concurrent substance-related events when receiving medication (odds ratio=0.65, CI=0.64-0.67), and female patients had 31% lower odds of concurrent substance-related events (odds ratio=0.69, 95% CI=0.67-0.71). Moreover, male patients had 19% lower odds of substance-related events 2 years after medication periods (odds ratio=0.81, CI=0.78-0.85), and female patients had 14% lower odds of substance-related events 2 years after medication periods (odds ratio=0.86, 95% CI= 0.82-0.91). If anything, the data suggested a long-term protective effect on substance abuse.

Summary of comparative safety against comparators

a. In the comprehensive systematic review and network meta-analysis on the tolerability, Cortese et al. (2018) no statistically significant differences in tolerability, were noted between active drugs, although amphetamines (odds ratio [OR] 2.30, 95% CI 1.36-3.89) and guanfacine were less well tolerated than placebo (2.64, 1.20-5.81) and tolerability for methylphenidate was not statistically different from placebo (OR 1.44, 95% CI 0.90-2.31). No statistically significant differences were found between methylphenidate and other active drugs regarding effects on systolic blood pressure, diastolic blood pressure (except more increase than modafinil (SMD: 0.09, CI: 0.26-0.45)) and weight (except more loss than guanfacine (SMD: 0.86, CI: 0.26-1.47)).

b. A systematic review and meta-analysis (Hennissen et al., 2017) compared the effects of methylphenidate, amphetamines, and atomoxetine on diastolic and systolic blood pressure (DBP, SBP) and heart rate (HR). Based on 18 clinical trials (n=5837) the investigators found small, but statistically significant pre-post increase of SBP (methylphenidate: SMD 0.25, CI 0.08-0.42, $p < 0.01$; amphetamine: SMD 0.09, 95% CI 0.03-0.15, $p < 0.01$; atomoxetine: SMD 0.16, 95% CI 0.04-0.27, $p = 0.01$) for all medications. methylphenidate did not have a pre-post effect on DBP and HR. amphetamine treatment was associated with a small but statistically significant pre-post increase of DBP (SMD 0.16, CI 0.03-0.29, $p = 0.02$), as was atomoxetine treatment (SMD 0.22, CI 0.10-0.34, $p < 0.01$). amphetamine and atomoxetine were associated with a small to medium statistically significant pre-post increase of HR (amphetamine: SMD 0.37, CI 0.13-0.60, $p < 0.01$; atomoxetine: SMD 0.43, CI 0.26-0.60, $p < 0.01$).

c. The meta-analysis by (Liang et al., 2018a) compared the effects of atomoxetine and methylphenidate on heart rate, systolic blood pressure, and a number of adverse cardiac events. Children and adolescents treated with atomoxetine had more significant post- vs. pre-treatment increases in heart rate (4 studies; 0.86, 95% CI: 0.11–1.62, $z = 2.24$, $p = 0.025$) and systolic blood pressure (3 studies; SMD: 0.366, 95% CI: 0.23–0.51, $z = 5.09$, $p < 0.001$) than those treated with methylphenidate. There was no difference in the number of adverse cardiac events between the participants treated with methylphenidate and atomoxetine (5 studies; OR = 0.88, 95% CI: 0.51–1.51, $z = -0.47$, $p = 0.64$).

d. In a fixed-effects meta-analysis of all double-blind, randomized, placebo-controlled trials examining the risk ratio of irritability reported as an adverse event in children treated with stimulants compared with placebo (32 trials, 3,664 children), the relative risk of irritability significantly differed between stimulant classes (Stuckelman et al., 2017). Methylphenidate derivatives was associated with a significantly decreased risk of irritability compared with placebo (risk ratio [RR] = 0.89 [95% CI, 0.82 to 0.96], $z = -2.87$, $P = .004$, $k = 32$, $I(2) = 50\%$), whereas amphetamine derivatives were associated with a significantly increased risk of irritability (RR = 2.90 [95% CI, 1.26 to 6.71], $z = 2.5$, $P = .01$, $k = 5$, $I(2) = 0\%$).

e. A meta-analysis of ten studies and more than 2,500 participants found that methylphenidate was more than twice as likely to induce insomnia as atomoxetine, but about half as likely to cause nausea and vomiting, and about a sixth as likely to cause drowsiness (Liu et al., 2017).

f. The umbrella systematic review by Solmi et al. (2020) concluded: “Among anti-ADHD medications with '20% of adverse events covered, methylphenidate had the best safety/coverage ratio (5/25 adverse events covered significantly worse), while guanfacine and atomoxetine had the worst safety/coverage ratio (4/16 and 5/20, respectively). Five anti-ADHD medications were associated with significantly worse anorexia (atomoxetine, d-amphetamine, lisdexamphetamine, methylphenidate, modafinil), four with insomnia (d-am-phetamine, lisdexamphetamine, methylphenidate, modafinil), three with weight loss (atomoxetine, methylphenidate, modafinil), two each with abdominal pain (methylphenidate, guanfacine), discontinuation due to adverse event (lisdexamphetamine, guanfacine), hypertension (atomoxetine, lisdexamphetamine), and sedation (clonidine, guanfacine), and one with QT prolongation (guanfacine). (page 218)”

Identification of variation in safety that may relate to health systems and patient factors

ADHD & tic disorder

a. A Cochrane review on the safety of various pharmacological treatments in children with ADHD and a comorbid chronic tic disorder (n=500; 443 boys and 67 girls) with regard to cardiovascular effects and weight changes included eight randomized controlled trials (Osland et al., 2018). Risk of bias of included studies was low for blinding; low or unclear for random sequence generation, allocation concealment, and attrition bias; and low or high for selective outcome reporting. The authors found

appetite suppression or weight loss in association with methylphenidate, dextroamphetamine, atomoxetine, and desipramine, insomnia associated with methylphenidate and dextroamphetamine, and sedation associated with clonidine.

b. Another fixed effects meta-analysis of 22 double-blind, randomized, placebo-controlled trials involving 2,385 children with ADHD examined the risk ratio of new onset or worsening tics in children treated with stimulants compared with placebo (Cohen et al., 2015). The risk of new onset or worsening of tics associated with psychostimulant treatment was similar to that observed with placebo (risk ratio = 0.99, 95% CI = 0.78-1.27, z = -0.05, p = .962). Type of psychostimulant, dose, duration of treatment, recorder, and participant age did not affect risk of new onset or worsening of tics.

ADHD & epilepsy

a. Results from two studies on seizures that used a within-individual design suggest a possible protective short-term effect of ADHD medication in individuals both with and without a history of seizures. Wiggs and colleagues (Wiggs et al., 2018) followed a sample of 801,838 patients with ADHD who had prescribed drug claims from the Truven Health MarketScan Commercial Claims and Encounters databases. In adjusted within-individual comparisons, ADHD medication was associated with lower odds of seizures among patients with (OR = 0.71, 95% CI = 0.60-0.85) and without (OR = 0.71, 95% CI = 0.62-0.82) prior seizures. Long-term within-individual comparisons suggested no evidence of an association between medication use and seizures among individuals with (OR = 0.87, 95% CI = 0.59-1.30) and without (OR = 1.01, 95% CI = 0.80-1.28) a seizure history.

b. Using Swedish population registers including a total of 21 557 individuals with a seizure history (Brikell et al., 2019) found that ADHD medication periods were associated with a reduced rate of acute seizures (hazard ratio [HR] 0.73, 95% confidence interval [CI] 0.57-0.94), compared with non-medication periods within the same individual.

ADHD & autism spectrum disorder

a. A Cochrane review on randomised controlled trials including four cross-over studies (Sturman et al., 2017), with a total of 113 children diagnosed with ASD or pervasive developmental disorder (aged 5 to 13 years) found no evidence that methylphenidate worsens the core symptoms of ASD or benefits social interaction. The only adverse effect that was significantly more likely with treatment was reduced appetite as rated by parents (risk ratio 8.28, 95% CI 2.57 to 26.73; 2 studies, 74 participants; $P < 0.001$; very low-quality evidence).

b. A more recent systematic review and meta-analysis by Rodrigues et al. (Rodrigues et al., 2020) pooling evidence from four randomized controlled trials children and youth with autism spectrum disorder found a non-significant elevated risk of dropout due to adverse events associated with methylphenidate.

ADHD & intellectual impairment

a. There is a paucity of data on tolerability of methylphenidate in children with intellectual impairment (ID). The most recent meta-analysis of 8 studies (average Jadad score = 2.5) by Sun et al. (Sun et al., 2019a) on children with ADHD and borderline intellectual functioning or intellectual disability (242 participants receiving methylphenidate, 181 participants receiving placebo) did not find a significant difference in drop-out rate [odds ratio (OR) = 1.679, p = 0.260] or rate of treatment discontinuation due to adverse events (OR = 4.815, p = 0.053) between subjects receiving methylphenidate (N=242) and those taking placebos (n=181), but due to sample size statistical power was limited.

ADHD & bipolar disorder

a. Retrospective studies have indicated a high prevalence of ADHD comorbidity among the bipolar disorder (BD) population. A nationwide cohort of patients (children and youth) newly diagnosed with ADHD (n-144,920) and age-and gender-matching controls (n=144,920) were found in Taiwan's National Health Insurance database from January 2000 to December 2011 (Wang et al., 2016). compared with ADHD patients that had never taken methylphenidate, patients with long-term use of methylphenidate (> 365 days) were less likely to be diagnosed with BD. However, the duration of exposure to atomoxetine did not have a significant relationship to a BD diagnosis, suggesting that methylphenidate has protective effects.

Summary of Available Estimates of Comparative Safety of Methylphenidate

The adverse effect profiles of methylphenidate and amphetamine-based medication are similar, with decreased appetite and sleep difficulties being most common. Stimulants and atomoxetine can be associated with slight, but in subgroups potentially clinically meaningful increases in systolic and diastolic blood pressure and heart rate, as well as weight loss and delays in expected height gains. Evidence suggests that, for most patients, differences in growth tend to attenuate after stimulant discontinuation (Faraone et al., 2008). Tic development or worsening has been linked to methylphenidate use, but meta-analyses do not support this claim on a group level. Overall, studies suggest that the frequency and severity of adverse events may be somewhat less with methylphenidate products. There is no evidence for an increased risk for serious adverse events for methylphenidate compared with other pharmacologic treatments for ADHD.

A systematic review of all literature on the nonmedical use and diversion of prescription stimulants including a total of 111 studies (most studies examined college students) found a high prevalence of nonmedical use and diversion of stimulants(Faraone et al., 2020). NMU and diversion are highly prevalent; self-reported rates among population samples range from 2.1% to 58.7% and from 0.7% to 80.0%, respectively. The majority of nonmedical use is associated with no, or minor, medical effects; however, adverse medical outcomes, including death, occur in some individuals, particularly when administered by non-oral routes. The issue of misuse has been investigated across the various governing medical bodies and the consensus has been that the benefits of methylphenidate continue to outweigh the risks when used to treat children aged six years and above and adolescents with ADHD. Instead, governing bodies have opted to revise prescribing information for these medicines to make them consistent and in order to maximize their safe usage.

11. Summary of Available Data on Comparative Cost and Cost-Effectiveness of Methylphenidate within its Pharmacological Class/Therapeutic Group

Range of Costs

Year Reported	Source	Package	Package Price	Unit Price
2015	OECS/PPS*	100 Tab-cap (Tablets)	$4.68	0.0468/tab-cap
2015	SAFRICA	30 Tab-cap (Tablets)	$2.01	0.0670/tab-cap
2015	PERU	1 Tab-cap (Tablets)	$0.31	0.3112/tab-cap
2014	CRSS**	100 Tab-cap	$5.14	0.0514/tab-cap

2013	BDS***	100 Tab-cap	$ 6.29	0.0629/tab-cap
2013	NAMIBIA	30 Tab-cap	$ 11.13	0.3710/tab-cap
Note: Data extracted from the International Medical Products Price Guide https://mshpriceguide.org/en/home/ *OECS/PPS Organization of Eastern Caribbean States Pharmaceutical Procurement Services **CRSS=Costa Rica Social Security ***BDS=Barbados Drug Services				

Comparative Cost-Effectiveness

A systematic review of the cost-effectiveness literature on methylphenidate was conducted (last search, Nov 10th 2020). A PubMed search using the keywords "methylphenidate cost effectiveness" yielded 44 articles. Of these, 30 were deemed relevant based on criteria that they expressed cost-effectiveness as a range of cost per routine outcome. 18 of the relevant articles were excluded based on small sample size and/or poor study design. A search of the Cochrane Database of Systematic Reviews using the same keywords yielded 5 articles, all of which were deemed irrelevant based on analyses that only mentioned methylphenidate but did not include as a comparator therapy.

The overall evidence suggests that methylphenidate can be recommended from a cost-effectiveness standpoint as it is at worst cost-neutral compared with other stimulant and non-stimulant medications for the treatment of ADHD in youth.

A Markov model was constructed to compare immediate release methylphenidate to no treatment from the perspective of the Brazilian Unified Health System as payer, and the time horizon was 6 years (Maia et al., 2016). Considering the immediate release methylphenidate monthly cost of I$38, the incremental cost-effectiveness ratio (ICER) of treatment was I$9,103/QALY for children and I$11,883/QALY for adolescents. In two-way sensitivity analysis, considering one Gross National Product per capita (I$11,530) as willingness-to-pay, a cost of no-treatment lower than I$45/month would render immediate release methylphenidate a cost-saving strategy.

A systematic review of the literature was to describe the cost-effectiveness analyses of medications launched in Spain for the treatment of ADHD (Catalá-López et al., 2013). A search was made in PubMed/MEDLINE, SCOPUS, databases of the Centre for Reviews and Dissemination, and the websites of technology assessment agencies from Canada, the United Kingdom and the Spanish Platforms AUnETS. Eleven studies that considered at least methylphenidate or atomoxetine as pharmacological treatment alternatives in children/adolescents with ADHD were examined. Both methylphenidate and atomoxetine were presented as cost-effective alternatives over placebo or no treatment in all studies. However, the incremental cost-effectiveness reasons varied greatly in the various studies. The few direct comparisons between methylphenidate and atomoxetine presented contradictory results according to the source of funding for the study: atomoxetine was shown to be cost-effective over methylphenidate in 2 evaluations associated with the manufacturer or atomoxetine, while MPH-ER was cost-effective over atomoxetine in the evaluation associated with the manufacturer of methylphenidate.

A systematic literature review of economic evaluations of pharmacotherapies for ADHD was conducted in MEDLINE, the National Health Services (NHS) Economic Evaluation database and EMBASE (Wu et al., 2012). For inclusion in this review, studies had to compare two or more ADHD interventions with at least one pharmacotherapy, assess both costs and outcomes, and be conducted between 1990 and 2011 in North America, Europe, Australia or New Zealand. Thirteen papers met the inclusion/exclusion criteria and were included in the review. Identified pharmacotherapies including methylphenidate were found to be cost-effective compared with no treatment, placebo, behavioral therapy or community care among children and adolescents with ADHD. When comparing stimulants with stimulants, there were varied results. A Zupancic et al. study showed that methylphenidate dominated

dexamfetamine (with $Can 7 lower costs, i.e. $US8 in 2010 and a 2-point decrease in CTRS) and pemoline (with $Can29 lower costs, i.e. $US35 in 2010, and a 2.7- point decrease in CTRS) (Miller et al., 1998). Finally, a Marchetti et al. study found that branded methylphenidate had the lowest annual expected cost per patient among all medications considered ($US1487/patient in 2001) and branded SA amphetamine/dexamphetamine salts had the highest expected cost ($US2232/patient in 2001) (Marchetti et al., 2001).

An economic model with Markov processes was developed to estimate the costs and benefits of atomoxetine versus other current ADHD treatment options for the perspective of the United Kingdom (Cottrell et al., 2008). For stimulant-naïve patients, the incremental cost per QALY gained for the atomoxetine algorithm compared with the immediate-release methylphenidate hydrochloride was £ 15,224 (£ 13,241 compared with extended- release methylphenidate).

A systematic review with a total of 65 papers that met inclusion criteria were examined to assess the clinical and cost-effectiveness of oral methylphenidate, dexamfetamine and atomoxetine in children and adolescents diagnosed with ADHD (King et al., 2006). Given the lack of available evidence for statistically significant differences in efficacy between the alternative drugs, the results of the economic model were largely driven by drug cost, in which there are marked differences. The economic evaluation clearly suggests an optimal treatment strategy that is dexamphetamine first-line, followed by IR-MPH for treatment failures followed by atomoxetine for repeat treatment failures. If dexamphetamine is considered not suitable as a first-line therapy, the optimal strategy is IR-MPH first-line, followed by dexamphetamine as second-line and atomoxetine again as third-line.

In a multi-modal treatment study, five hundred seventy-nine children with ADHD were assigned to 14 months of medication management (including methylphenidate), behavioral treatment, both combined or community care (Jensen et al., 2005). In summary, findings suggest that carefully monitored medication treatment, although not quite as effective as combination of medication and behavioral treatment, is likely to be more cost-effective in routine treatments for children with ADHD, particularly those without comorbid disorders.

A literature search was performed using MEDLINE to identify all published articles on the economic implications of ADHD, and in total, 22 relevant items were located including published original studies, economic review articles, conference presentations, and reports available on the internet (Matza et al., 2005). Three published studies utilized decision-analytic modeling techniques to assess the cost-effectiveness of drug therapy, methylphenidate, for ADHD. Overall, results of the three modeling analyses indicated that methylphenidate is a cost-effective treatment option for children with ADHD. The cost per QALY gained ranged from $15,509 to $19,281 when considering short- and medium-term benefits of methylphenidate.

A comprehensive literature review was conducted using HEALTHSTAR and MEDLINE regarding the use of amphetamine/dexamphetamine mixed salts, methylphenidate and dexamphetamine in the treatment of ADHD, as well as relevant ADHD studies on cost-effectiveness and quality of life (Narayan and Hay, 2004). A cost-effectiveness model was constructed from a societal perspective encompassing both direct and indirect cost, and using a cost per quality-adjusted life year outcomes metric. Decision-tree analysis was utilized to construct a 1-year model using probability-weighted utility and cost outcomes for each outcome branch. The results showed that methylphenidate treatment is dominated by amphetamine/dextroamphetamine therapy in the base case, yet when varying response rates, it can be seen that amphetamine/dexamphetamine no longer remains the dominant strategy. It is difficult to generalize about incremental cost effectiveness between stimulant therapies given the essentially equal efficacy and similar-side effect profiles between the agents. Thus, treatment with either amphetamine/dextroamphetamine or methylphenidate is quite cost effective compared with no treatment. Stimulant therapy is estimated to have an incremental cost per quality-adjusted life year ranging from US$14,758 to 73,162/QALY.

A meta-analysis of randomized controlled trials was performed from a health sector perspective in Australia to determine cost-effectiveness of dexamphetamine and methylphenidate interventions to treated childhood ADHD (Donnelly et al., 2004). Effect sizes were translated into utility values and a simulation modelling technique was used to present a 95% uncertainty interval around the incremental cost-effectiveness ratio (ICER) which is calculated in cost per DALY averted. The findings found that methylphenidate and dexamphetamine are cost-effective interventions for childhood ADHD. The ICER For dexamphetamine is A$4100/DALY saved and for methylphenidate is A$15,000/DALY saved. dexamphetamine is more costly than methylphenidate for the government but much less costly for the patient. Therefore, dexamphetamine is more cost-effective than methylphenidate, although if methylphenidate were listed at a lower price as it is in Canada, then it would become more cost-effective.

A comprehensive literature search was undertaken in 1997 to identify randomized controlled or crossover trials that evaluated effects of methylphenidate in children (Gilmore and Milne, 2001). The cost-utility analysis was performed from NHS rather than a societal perspective according to methodology developed by the former South and West Development Evaluation Committee. The number of Quality Adjusted Life Years (QALYs) gained was estimated by using the Index of Health-Related Quality of Life to model treatment effects. Evidence from good and medium quality randomized controlled trials shows benefits of methylphenidate over weeks and months respectively. Evidence beyond 6 months is poorer and it is uncertain whether effects of methylphenidate persist into adolescence and adulthood. Methylphenidate is of reasonable cost-effectiveness when considering short- and medium-term benefits with an estimated cost per QALY of £7,400 to £9,200 at 1997 prices.

According to the review papers identified, the comparative cost-effectiveness literature all but one paper favor methylphenidate or is at least cost-neutral relative to both stimulant and non-stimulant treatments among treatments for ADHD.

12.Summary of the Regulatory Status and Availability of Methylphenidate

Methylphenidate is approved for use in various jurisdictions as follows:

US Food and Drug Administration (FDA)

Methylphenidate Immediate Release

Liquid Preparation

- Methylin Solution

Chewable

- Methylin Chewable

Tablets

- Ritalin
- Focalin

Methylphenidate Intermediate and long acting

Oral

Liquid Preparation

- Quillivant XR liquid)

Disintegrating tablets

- Cotempla-XR-ODT

Chewable

- Quilichew ER

Caplet

- Concerta

Sprinkles

- Metadate CD/ER
- Ritalin LA
- Focalin XR
- Aptensio XR
- Adhansia XR
- Jornay PM

Transdermal Patch

- Daytrana

European Medicines Agency (EMA) (Agency, 2018)

The availability of methylphenidate in European Union countries is given in Appendix B.

United Kingdom Medicines and Healthcare Products Regulatory Agency https://tinyurl.com/owt629g

Methylphenidate hydrochloride – generic immediate release 10mg and several brand name counterparts are licensed in Australia for the treatment of ADHD. These are IR methylphenidate 10mg; Medikinet tablets 5, 10, 20 mgs Ritalin tablets 10mg; Generic methylphenidate 10, 20mgs; Concerta XL 18, 27, 36, 54mgs; Xaggitin XL 18, 27, 36, 54mgs; Matoride XL 18, 27, 36, 54mgs; Delmosart 18, 27, 36, 54mgs; Xenidata XL 18, 27, 36, 54mgs.

Australian Government, Department of Health, Therapeutic Goods Administration (Australian Government Department of Health, 2018)

Methylphenidate hydrochloride – generic immediate release 10mg and several brand name counterparts are licensed in Australia for the treatment of ADHD. These are Ritalin 10mg; Ritalin LA 10, 20, 30, &40 mgs, OROS methylphenidate 18, 27, 36, & 54mgs.

Japanese Pharmaceuticals and Medical Devices Agency (Pharmaceuticals and Medical Devices Agency, 2018)

Methylphenidate hydrochloride, immediate release 10mg and brand name counterparts are licensed in Japan for the treatment of ADHD.

Health Canada (Government of Canada Indigenous Services, 2017)

Methylphenidate hydrochloride, immediate release 5mg, 10mg, 20mg and brand name counterparts are licensed in Canada for the treatment of ADHD.

Chinese National Medical Products Administration http://english.nmpa.gov.cn/

Immediate release methylphenidate (10mg) and OROS methylphenidate (18mg, 36mg) are licensed in China for the treatment of ADHD.

South African Medicines Control Council https://www.sahpra.org.za/

Ritalin 10mg; Methylphenidate Douglas 10mg (generic); Ritalin LA 10mg, 20g, 30mg, 40mg; OROS methylphenidate (branded): 18mg, 27mg, 36mg, 54mg (Lilly); OROS methylphenidate (generic): 18mg, 27mg, 36mg, 54mg (clone - Sanofi); MUPS technology: Contramyl 18mg, 27mg, 36mg, 54mg

Israeli Ministry of Health Pharmacology Department https://www.gov.il/en/service/israeli-drug-inde

Ritalin IR. Ritalin LA (8 hours) and OROS methylphenidate are approved for doses up to 90 mg (no matter which formula) for all prescribers. Specialists can be authorized to prescribe up to 120mg..

Central Drugs Standard Control Organization (CDSCO)—Directorate General of Health Services Ministry of Health & Family Welfare, Government of India

https://cdscoonline.gov.in/CDSCO/Drugs

Methylphenidate hydrochloride Extended release tablet- each extended release contains: methylphenidate HCL USP-18mg, 36 mg, 54 mg

National Administration on of Drugs, Foods, and Medical Devices (ANMAT)-Argentina

http://www.anmat.gov.ar/webanmat/EspecMed/febrero/especmed_monodrogas06.asp

Methylphenidate hydrochloride-20 mg

Ministry of Food and Drug Safety- South Korea

https://synapse.koreamed.org/articles/1111906

Methylphenidate Instant release (Penid, Perospin) 10-60 mg; Extended Release (Metadate CD, Medikinet retard, Bisphentin controlled release) 20- 60 mg; OROS (Concerta OROS) 18-72

Ministry of Health-Singapore https://www.moh.gov.sg/cost-financing/healthcare-schemes-subsidies/drug-subsidies-schemes

Methylphenidate Hydrochloride Extended Release tablet 18 mg, 27mg, 36 mg, 54 mg; Long acting tablet 20 mg; Modified-release capsule (Medikinet) 5 mg, 10 mg, 20 mg, 30 mg, 40 mg; Sustained-release tablet 20 mg; Tablet 10 mg.

National Agency for Food and Drug Administration and Control, Nigeria

https://www.nafdac.gov.ng/wp-content/uploads/Publications/Narcotics/1-NATIONAL-GUIDELINES-ON-ESTIMATION-OF-PSYCHOTROPIC-SUBSTANCES-AND-PRECURSORS.pdf

Methylphenidate tablet 10 mg, 18 mg, 36 mg

The Norwegian Medical Agency

https://legemiddelverket.no/nyheter/tilbakekalling-av-batch-med-methylphenidate-teva-10-mg-kapsler

Methylphenidate tablet 10 mg

Methylphenidate is also available in the following countries under different brand names

Brand Name	Country
Adaphen	South Africa
Addwize	India
Artige	Australia
Attenta	Australia
Cognil	Paraguay
Concentra	Bangladesh
Equasym	Belgium, Switzerland, Spain, Ireland
Inspiral	India
Medikinet	Belgium, Switzerland, Germany, Denmark, Estonia, Great Britain, Ireland, Norway, Poland, Sweden
Methylin	Argentina
Nebapul	Chile
Penid	Republic of Korea
Phenida	Pakistan
Prohiper	Indonesia
Ritaline	Luxembourg
Ritalin	United Arab Emirates, Austria, Australia, Barbados, Burkina Faso, Bahrain, Benin, Switzerland, Cote D'Ivoire, Chile, Colombia, Cyprus, Czech Republic, Germany, Denmark, Ethiopia, Great Britain, Ghana, Gambia, Guinea, Hong Kong, Indonesia, Ireland, Israel, Iraq, Iran, Iceland, Jordan, Japan, Kenya, Kuwait, Lebanon, Sri Lanka, Liberia, Libya, Morocco, Mali, Mauritania, Malt, Mauritius, Malawi, Mexico, Malaysia, Niger, Nigeria, Norway, New Zealand, Oman, Peru, Pakistan, Qatar, Saudi Arabia, Seychelles, Sudan, Sweden, Singapore, Slovenia, Sierra Leone, Senegal, Syria, Tunisia, Taiwan, Tanzania, Uganda, Venezuela, Yemen, Zambia, Zimbabwe
Ritalina	Argentina, Brazil, Paraguay, Uruguay
Ritaline	Belgium, France, Greece
Rubifen	Argentina, Spain, Sri Lanka, Malaysia, New Zealand, Portugal, Singapore, Thailand, Uruguay
Tradea	Costa Rica, Dominican Republic, Guatemala, Honduras, Mexico, Nicaragua, Panama, El Salvador

13.Availability of Pharmacopeial Standards for Methylphenidate

British Pharmacopoeia: Yes, https://www.pharmacopoeia.com

European Pharmacopoeia: Yes, https://www.edqm.eu/en/european-pharmacopoeia-ph-eur-9th-edition

Indian Pharmacopeia: Yes, https://www.indianpharmacopoeia.in

International Pharmacopeia: No, http://apps.who.int/phint/en/p/docf/

United States Pharmacopeia: Yes, http://www.usp.org

Australian Pharmacopeia: Yes, https://www.tga.gov.au/pharmacopoeias

Japanese Pharmacopeia: Yes, https://www.pmda.go.jp/english/index.html

South Africa (observer, European Pharmacopoeia)

China: Yes, see Appendix C

14.References

Adeyemo, B.O., Biederman, J., Zafonte, R., Kagan, E., Spencer, T.J., Uchida, M., Kenworthy, T., Spencer, A.E., Faraone, S.V., 2014. Mild Traumatic Brain Injury and ADHD: A Systematic Review of the Literature and Meta-Analysis. J Atten Disord 18, 576-584.

Agency, T.E.M., 2018. Methylphenidate.

Alliance, C.A.R., 2011. Canadian ADHD Practice Guidelines, 3rd ed., 3rd ed.

American Psychiatric Association, 2013. Diagnostic and statistical manual of mental disorders (5th ed.), 5th ed. American Psychiatric Publishing, Arlington, VA.

Australian ADHD Professionals Association, 2019. The social and economic costs of ADHD in Australia. Deloitte Access Economics.

Australian Government Department of Health, T.G.A.T., 2018. Methylphenidate.

Banaschewski T, B.M., Bea M, Döpfner M, Gelb M, Grosse KP, Hohmann S, Huss M, Millenet M, Philipsen A, Retz W, Rösler M, Skrodzki K, Spitczok von Brisinski I, Stollhoff K, Wilken B, 2018. Leitlinien-Detailansicht ADHS bei Kindern, Jugendlichen und Erwachsenen. AWMD online

Banaschewski, T., Buitelaar, J., Chui, C.S., Coghill, D., Cortese, S., Simonoff, E., Wong, I.C., 2016. Methylphenidate for ADHD in children and adolescents: throwing the baby out with the bathwater. Evid Based Ment Health 19, 97-99.

Beaudry, G., Yu, R., Langstrom, N., Fazel, F.S., 2020. Mental Disorders Among Adolescents in Juvenile Detention and Correctional Facilities: An Updated Systematic Review and Metaregression Analysis. J Am Acad Child Adolesc Psychiatry [Epub ahead or print] S0890-8567(20)30061-7.

Beheshti, A., Chavanon, M.L., Christiansen, H., 2020. Emotion dysregulation in adults with attention deficit hyperactivity disorder: a meta-analysis. BMC Psychiatry 20, 120.

Benedict, F.T., Vivier, P.M., Gjelsvik, A., 2015. Mental health and bullying in the United States among children aged 6 to 17 years. J Interpers Violence 30, 782-795.

Bernardi, S., Faraone, S.V., Cortese, S., Kerridge, B.T., Pallanti, S., Wang, S., Blanco, C., 2012. The lifetime impact of attention deficit hyperactivity disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions (NESARC). Psychol Med 42, 875-887.

Boaden, K., Tomlinson, A., Cortese, S., Cipriani, A., 2020. Antidepressants in Children and Adolescents: Meta-Review of Efficacy, Tolerability and Suicidality in Acute Treatment. Front Psychiatry 11, 717.

Bolea-Alamanac, B., Nutt, D.J., Adamou, M., Asherson, P., Bazire, S., Coghill, D., Heal, D., Muller, U., Nash, J., Santosh, P., Sayal, K., Sonuga-Barke, E., Young, S.J., British Association for, P., 2014. Evidence-based guidelines for the pharmacological management of attention deficit hyperactivity disorder: update on recommendations from the British Association for Psychopharmacology. J Psychopharmacol 28, 179-203.

Breslau, J., Miller, E., Joanie Chung, W.J., Schweitzer, J.B., 2011. Childhood and adolescent onset psychiatric disorders, substance use, and failure to graduate high school on time. J Psychiatr Res 45, 295-301.

Brikell, I., Chen, Q., Kuja-Halkola, R., D'Onofrio, B.M., Wiggs, K.K., Lichtenstein, P., Almqvist, C., Quinn, P.D., Chang, Z., Larsson, H., 2019. Medication treatment for attention-deficit/hyperactivity disorder and the risk of acute seizures in individuals with epilepsy. Epilepsia 60, 284-293.

Carucci, S., Balia, C., Gagliano, A., Lampis, A., Buitelaar, J.K., Danckaerts, M., Dittmann, R.W., Garas, P., Hollis, C., Inglis, S., Konrad, K., Kovshoff, H., Liddle, E.B., McCarthy, S., Nagy, P., Panei, P., Romaniello, R., Usala, T., Wong, I.C.K., Banaschewski, T., Sonuga-Barke, E., Coghill, D., Zuddas, A., 2020. Long term methylphenidate exposure and growth in children and adolescents with ADHD. A systematic review and meta-analysis (Online ahead of print). Neurosci Biobehav Rev S0149-7634(20)30592-3.

Catalá-López, F., Ridao, M., Sanfélix-Gimeno, G., Peiró, S., 2013. Cost-effectiveness of pharmacological treatment of attention deficit hyperactivity disorder in children and adolescents: qualitative synthesis of scientific evidence. Rev Psiquiatr Salud Ment 6, 168-177.

Chang, Z., D'Onofrio, B.M., Quinn, P.D., Lichtenstein, P., Larsson, H., 2016. Medication for Attention-Deficit/Hyperactivity Disorder and Risk for Depression: A Nationwide Longitudinal Cohort Study. Biol Psychiatry 80, 916-922.

Chang, Z., Ghirardi, L., Quinn, P.D., Asherson, P., D'Onofrio, B.M., Larsson, H., 2019. Risks and Benefits of Attention-Deficit/Hyperactivity Disorder Medication on Behavioral and Neuropsychiatric Outcomes: A Qualitative Review of Pharmacoepidemiology Studies Using Linked Prescription Databases. Biol Psychiatry 86, 335-343.

Chang, Z., Lichtenstein, P., D'Onofrio, B.M., Almqvist, C., Kuja-Halkola, R., Sjolander, A., Larsson, H., 2014a. Maternal age at childbirth and risk for ADHD in offspring: a population-based cohort study. Int J Epidemiol 43, 1815-1824.

Chang, Z., Lichtenstein, P., D'Onofrio, B.M., Sjolander, A., Larsson, H., 2014b. Serious transport accidents in adults with attention-deficit/hyperactivity disorder and the effect of medication: a population-based study. JAMA Psychiatry 71, 319-325.

Chang, Z., Lichtenstein, P., Halldner, L., D'Onofrio, B., Serlachius, E., Fazel, S., Langstrom, N., Larsson, H., 2014c. Stimulant ADHD medication and risk for substance abuse. J Child Psychol Psychiatry 55, 878-885.

Chang, Z., Quinn, P.D., Hur, K., Gibbons, R.D., Sjolander, A., Larsson, H., D'Onofrio, B.M., 2017. Association Between Medication Use for Attention-Deficit/Hyperactivity Disorder and Risk of Motor Vehicle Crashes. JAMA Psychiatry 74, 597-603.

Chen, M.H., Hsu, J.W., Huang, K.L., Bai, Y.M., Ko, N.Y., Su, T.P., Li, C.T., Lin, W.C., Tsai, S.J., Pan, T.L., Chang, W.H., Chen, T.J., 2018. Sexually Transmitted Infection Among Adolescents and Young

Adults With Attention-Deficit/Hyperactivity Disorder: A Nationwide Longitudinal Study. J Am Acad Child Adolesc Psychiatry 57, 48-53.

Chen, Q., Sjolander, A., Runeson, B., D'Onofrio, B.M., Lichtenstein, P., Larsson, H., 2014. Drug treatment for attention-deficit/hyperactivity disorder and suicidal behaviour: register based study. BMJ 348, g3769.

Chen, V.C., Chan, H.L., Wu, S.I., Lee, M., Lu, M.L., Liang, H.Y., Dewey, M.E., Stewart, R., Lee, C.T., 2019. Attention-Deficit/Hyperactivity Disorder and Mortality Risk in Taiwan. JAMA Netw Open 2, e198714.

Chen, V.C., Chan, H.L., Wu, S.I., Lu, M.L., Dewey, M.E., Stewart, R., Lee, C.T., 2020a. Methylphenidate and mortality in children with attention-deficit hyperactivity disorder: population-based cohort study. Br J Psychiatry, 1-9.

Chen, V.C., Yang, Y.H., Liao, Y.T., Kuo, T.Y., Liang, H.Y., Huang, K.Y., Huang, Y.C., Lee, Y., McIntyre, R.S., Lin, T.C., 2017. The association between methylphenidate treatment and the risk for fracture among young ADHD patients: A nationwide population-based study in Taiwan. PLoS One 12, e0173762.

Chen, V.C., Yang, Y.H., Yu Kuo, T., Lu, M.L., Tseng, W.T., Hou, T.Y., Yeh, J.Y., Lee, C.T., Chen, Y.L., Lee, M.J., Dewey, M.E., Gossop, M., 2020b. Methylphenidate and the risk of burn injury among children with attention-deficit/hyperactivity disorder. Epidemiol Psychiatr Sci 29, e146.

Chinese Society of Psychiatry, 2001. Chinese Classification and diagnostic criteria of Mental Disorder, 3rd Edition.). Shandong science and technology press, Jinan, China.

Ching, C., Eslick, G.D., Poulton, A.S., 2019. Evaluation of Methylphenidate Safety and Maximum-Dose Titration Rationale in Attention-Deficit/Hyperactivity Disorder: A Meta-analysis. JAMA Pediatr 173, 630-639.

Chou, I.C., Lin, C.C., Sung, F.C., Kao, C.H., 2014. Attention-deficit hyperactivity disorder increases the risk of deliberate self-poisoning: A population-based cohort. Eur Psychiatry 29, 523-527.

Christoffersen, M.N., 2019. Violent crime against children with disabilities: A nationwide prospective birth cohort-study. Child Abuse Negl 98, 104150.

Christoffersen, M.N., 2020. Sexual Crime Against Schoolchildren With Disabilities: A Nationwide Prospective Birth Cohort Study. J Interpers Violence, 886260520934442.

Chudal, R., Joelsson, P., Gyllenberg, D., Lehti, V., Leivonen, S., Hinkka-Yli-Salomaki, S., Gissler, M., Sourander, A., 2015. Parental age and the risk of attention-deficit/hyperactivity disorder: a nationwide, population-based cohort study. J Am Acad Child Adolesc Psychiatry 54, 487-494.e481.

Coghill, D.R., Caballero, B., Sorooshian, S., Civil, R., 2014. A systematic review of the safety of lisdexamfetamine dimesylate. CNS Drugs 28, 497-511.

Cohen, S.C., Mulqueen, J.M., Ferracioli-Oda, E., Stuckelman, Z.D., Coughlin, C.G., Leckman, J.F., Bloch, M.H., 2015. Meta-Analysis: Risk of Tics Associated With Psychostimulant Use in Randomized, Placebo-Controlled Trials. J Am Acad Child Adolesc Psychiatry 54, 728-736.

Correia Filho, A.G., Bodanese, R., Silva, T.L., Alvares, J.P., Aman, M., Rohde, L.A., 2005. Comparison of risperidone and methylphenidate for reducing ADHD symptoms in children and adolescents with moderate mental retardation. J Am Acad Child Adolesc Psychiatry 44, 748-755.

Cortese, S., 2020. Pharmacologic Treatment of Attention Deficit-Hyperactivity Disorder. N Engl J Med 383, 1050-1056.

Cortese, S., Adamo, N., Del Giovane, C., Mohr-Jensen, C., Hayes, A.J., Carucci, S., Atkinson, L.Z., Tessari, L., Banaschewski, T., Coghill, D., Hollis, C., Simonoff, E., Zuddas, A., Barbui, C., Purgato, M., Steinhausen, H.C., Shokraneh, F., Xia, J., Cipriani, A., 2018. Comparative efficacy and tolerability of medications for attention-deficit hyperactivity disorder in children, adolescents, and adults: a systematic review and network meta-analysis. Lancet Psychiatry 5, 727-738.

Cortese, S., Holtmann, M., Banaschewski, T., Buitelaar, J., Coghill, D., Danckaerts, M., Dittmann, R.W., Graham, J., Taylor, E., Sergeant, J., 2013. Practitioner review: current best practice in the management of adverse events during treatment with ADHD medications in children and adolescents. J Child Psychol Psychiatry 54, 227-246.

Cortese, S., Tomlinson, A., Cipriani, A., 2019. Meta-Review: Network Meta-Analyses in Child and Adolescent Psychiatry. J Am Acad Child Adolesc Psychiatry 58, 167-179.

Cottrell, S., Tilden, D., Robinson, P., Bae, J., Arellano, J., Edgell, E., Aristides, M., Boye, K.S., 2008. A modeled economic evaluation comparing atomoxetine with stimulant therapy in the treatment of children with attention-deficit/hyperactivity disorder in the United Kingdom. Value Health 11, 376-388.

Crunelle, C.L., van den Brink, W., Moggi, F., Konstenius, M., Franck, J., Levin, F.R., van de Glind, G., Demetrovics, Z., Coetzee, C., Luderer, M., Schellekens, A., group, I.c., Matthys, F., 2018. International Consensus Statement on Screening, Diagnosis and Treatment of Substance Use Disorder Patients with Comorbid Attention Deficit/Hyperactivity Disorder. Eur Addict Res 24, 43-51.

Curry, A.E., Metzger, K.B., Pfeiffer, M.R., Elliott, M.R., Winston, F.K., Power, T.J., 2017. Motor Vehicle Crash Risk Among Adolescents and Young Adults With Attention-Deficit/Hyperactivity Disorder. JAMA Pediatr 171, 756-763.

Daley, D., Jacobsen, R.H., Lange, A.M., Sorensen, A., Walldorf, J., 2019. The economic burden of adult attention deficit hyperactivity disorder: A sibling comparison cost analysis. Eur Psychiatry 61, 41-48.

Dalsgaard, S., Kvist, A.P., Leckman, J.F., Nielsen, H.S., Simonsen, M., 2014. Cardiovascular safety of stimulants in children with attention-deficit/hyperactivity disorder: a nationwide prospective cohort study. J Child Adolesc Psychopharmacol 24, 302-310.

Dalsgaard, S., Leckman, J.F., Mortensen, P.B., Nielsen, H.S., Simonsen, M., 2015a. Effect of drugs on the risk of injuries in children with attention deficit hyperactivity disorder: a prospective cohort study. Lancet Psychiatry 2, 702-709.

Dalsgaard, S., Ostergaard, S.D., Leckman, J.F., Mortensen, P.B., Pedersen, M.G., 2015b. Mortality in children, adolescents, and adults with attention deficit hyperactivity disorder: a nationwide cohort study. Lancet 385, 2190-2196.

de Graaf, R., Kessler, R.C., Fayyad, J., ten Have, M., Alonso, J., Angermeyer, M., Borges, G., Demyttenaere, K., Gasquet, I., de Girolamo, G., Haro, J.M., Jin, R., Karam, E.G., Ormel, J., Posada-Villa, J., 2008. The prevalence and effects of adult attention-deficit/hyperactivity disorder (ADHD) on the performance of workers: results from the WHO World Mental Health Survey Initiative. Occup Environ Med 65, 835-842.

Dey, M., Paz Castro, R., Haug, S., Schaub, M.P., 2019. Quality of life of parents of mentally-ill children: a systematic review and meta-analysis. Epidemiol Psychiatr Sci 28, 563-577.

Donnelly, M., Haby, M.M., Carter, R., Andrews, G., Vos, T., 2004. Cost-effectiveness of dexamphetamine and methylphenidate for the treatment of childhood attention deficit hyperactivity disorder. Aust N Z J Psychiatry 38, 592-601.

Doshi, J.A., Hodgkins, P., Kahle, J., Sikirica, V., Cangelosi, M.J., Setyawan, J., Erder, M.H., Neumann, P.J., 2012. Economic impact of childhood and adult attention-deficit/hyperactivity disorder in the United States. J Am Acad Child Adolesc Psychiatry 51, 990-1002.e1002.

Du Rietz, E., Jangmo, A., Kuja-Halkola, R., Chang, Z., D'Onofrio, B.M., Ahnemark, E., Werner-Kiechle, T., Larsson, H., 2020. Trajectories of healthcare utilization and costs of psychiatric and somatic multimorbidity in adults with childhood ADHD: a prospective register-based study [Epub ahead of print]. J Child Psychol Psychiatry 61, 959-968.

Faraone, S.V., Asherson, P., Banaschewski, T., Biederman, J., Buitelaar, J.K., Ramos-Quiroga, J.A., Rohde, L.A., Sonuga-Barke, E.J., Tannock, R., Franke, B., 2015. Attention-deficit/hyperactivity disorder. Nat Rev Dis Primers 1, 15020.

Faraone, S.V., Banaschewski, T., Coghill, D., Zheng, Y., Biederman, J., Bellgrove, M.A., Newcorn, J.H., Gignac, M., Saud, N.M.A., Manor, I., Rohde, L.A., Yang, L., Cortese, S., Almagor, D., Stein, M.A., Albatti, T.H., Aljoudi, H.F., Alqahtani, M.M.J., Asherson, P., Atwoli, L., Bölte, S., Buitelaar, J.K., Crunelle, C.L., Daley, D., Dalsgaard, S., Döepfner, M., Espinet, S., Fitzgerald, M., Franke, B., Haavik, J., Hartman, C.A., Hartung, C.M., Hinshaw, S.P., Hoekstra, P.J., Hollis, C., Kollins, S.H., Kooij, J.J.S., Kuntsi, J., Larsson, H., Li, T., Liu, J., Merzon, E., Mattingly, G., Mattos, P., McCarthy, S., Mikami, A.Y., Molina, B.S.G., Nigg, J.T., Purper-Ouakil, D., Omigbodun, O.O., Polanczyk, G.V., Pollak, Y., Poulton, A.S., Rajkumar, R.P., Reding, A., Reif, A., Rubia, K., Rucklidge, J., Romanos, M., Ramos-Quiroga, J.A., Schellekens, A., Scheres, A., Schoeman, R., Schweitzer, J.B., Shah, H., Solanto, M.V., Sonuga-Barke, E., Soutullo, C., Steinhausen, H.-C., Swanson, J.M., Thapar, A., Tripp, G., Glind, G.v.d., Brink, W.v.d., Oord, S.V.d., Venter, A., Vitiello, B., Walitza, S., Wang, Y., 2020 Submitted. The World Federation of ADHD International Consensus Statement: 208 Evidence-based Conclusions about the Disorder. Neurosci Biobehav Rev.

Faraone, S.V., Biederman, J., Mick, E., 2006. The age-dependent decline of attention deficit hyperactivity disorder: a meta-analysis of follow-up studies. Psychol Med 36, 159-165.

Faraone, S.V., Biederman, J., Morley, C.P., Spencer, T.J., 2008. Effect of stimulants on height and weight: a review of the literature. J Am Acad Child Adolesc Psychiatry 47, 994-1009.

Faraone, S.V., Po, M.D., Komolova, M., Cortese, S., 2019. Sleep-Associated Adverse Events During Methylphenidate Treatment of Attention-Deficit/Hyperactivity Disorder: A Meta-Analysis. J Clin Psychiatry 80.

Faraone, S.V., Rostain, A.L., Montano, C.B., Mason, O., Antshel, K.M., Newcorn, J.H., 2020. Systematic Review: Nonmedical Use of Prescription Stimulants: Risk Factors, Outcomes, and Risk Reduction Strategies. J Am Acad Child Adolesc Psychiatry 59, 100-112.

Fayyad, J., Sampson, N.A., Hwang, I., Adamowski, T., Aguilar-Gaxiola, S., Al-Hamzawi, A., Andrade, L.H., Borges, G., de Girolamo, G., Florescu, S., Gureje, O., Haro, J.M., Hu, C., Karam, E.G., Lee, S., Navarro-Mateu, F., O'Neill, S., Pennell, B.E., Piazza, M., Posada-Villa, J., Ten Have, M., Torres, Y., Xavier, M., Zaslavsky, A.M., Kessler, R.C., 2017. The descriptive epidemiology of DSM-IV Adult ADHD in the World Health Organization World Mental Health Surveys. Atten Defic Hyperact Disord 9, 47-65.

Feldman, H.M., Reiff, M.I., 2014. Clinical practice. Attention deficit-hyperactivity disorder in children and adolescents. N Engl J Med 370, 838-846.

Fitzgerald, C., Dalsgaard, S., Nordentoft, M., Erlangsen, A., 2019. Suicidal behaviour among persons with attention-deficit hyperactivity disorder. Br J Psychiatry, 1-6.

Fleming, M., Fitton, C.A., Steiner, M.F.C., McLay, J.S., Clark, D., King, A., Mackay, D.F., Pell, J.P., 2017. Educational and Health Outcomes of Children Treated for Attention-Deficit/Hyperactivity Disorder. JAMA Pediatr 171, e170691.

Fletcher, J.M., 2014. The effects of childhood ADHD on adult labor market outcomes. Health Econ 23, 159-181.

Flisher, A.J., Hawkridge, S., 2013. Attention deficit hyperactivity disorder in children and adolescents. South African Journal of Psychiatry 19, 136-140.

Ghirardi, L., Chen, Q., Chang, Z., Kuja-Halkola, R., Skoglund, C., Quinn, P.D., D'Onofrio, B.M., Larsson, H., 2020. Use of medication for attention-deficit/hyperactivity disorder and risk of unintentional injuries in children and adolescents with co-occurring neurodevelopmental disorders. J Child Psychol Psychiatry 61, 140-147.

Gilmore, A., Milne, R., 2001. Methylphenidate in children with hyperactivity: review and cost-utility analysis. Pharmacoepidemiology and Drug Safety 10, 85-94.

Golubchik, P., Weizman, A., 2018. The effect of methylphenidate treatment on suspiciousness in children with ADHD alone or comorbid with ODD. Int J Psychiatry Clin Pract 22, 109-114.

Government of Canada Indigenous Services, 2017. Central Nervous System Agents

Graham, J., Banaschewski, T., Buitelaar, J., Coghill, D., Danckaerts, M., Dittmann, R.W., Dopfner, M., Hamilton, R., Hollis, C., Holtmann, M., Hulpke-Wette, M., Lecendreux, M., Rosenthal, E., Rothenberger, A., Santosh, P., Sergeant, J., Simonoff, E., Sonuga-Barke, E., Wong, I.C., Zuddas, A., Steinhausen, H.C., Taylor, E., European Guidelines, G., 2011. European guidelines on managing adverse effects of medication for ADHD. Eur Child Adolesc Psychiatry 20, 17-37.

Graham, J., Coghill, D., 2008. Adverse effects of pharmacotherapies for attention-deficit hyperactivity disorder: epidemiology, prevention and management. CNS Drugs 22, 213-237.

Graziano, P.A., Garcia, A., 2016. Attention-deficit hyperactivity disorder and children's emotion dysregulation: A meta-analysis. Clin Psychol Rev 46, 106-123.

Groenman, A.P., Janssen, T.W.P., Oosterlaan, J., 2017. Childhood Psychiatric Disorders as Risk Factor for Subsequent Substance Abuse: A Meta-Analysis. J Am Acad Child Adolesc Psychiatry 56, 556-569.

Gudjonsson, G.H., Sigurdsson, J.F., Sigfusdottir, I.D., Asgeirsdottir, B.B., Gonzalez, R.A., Young, S., 2016. A national epidemiological study investigating risk factors for police interrogation and false confession among juveniles and young persons. Soc Psychiatry Psychiatr Epidemiol 51, 359-367.

Guo, N.W., Lin, C.L., Lin, C.W., Huang, M.T., Chang, W.L., Lu, T.H., Lin, C.J., 2016. Fracture risk and correlating factors of a pediatric population with attention deficit hyperactivity disorder: a nationwide matched study. J Pediatr Orthop B 25, 369-374.

Hennissen, L., Bakker, M.J., Banaschewski, T., Carucci, S., Coghill, D., Danckaerts, M., Dittmann, R.W., Hollis, C., Kovshoff, H., McCarthy, S., Nagy, P., Sonuga-Barke, E., Wong, I.C., Zuddas, A., Rosenthal, E., Buitelaar, J.K., 2017. Cardiovascular Effects of Stimulant and Non-Stimulant Medication for Children and Adolescents with ADHD: A Systematic Review and Meta-Analysis of Trials of Methylphenidate, Amphetamines and Atomoxetine. CNS Drugs 31, 199-215.

Hoekstra, P.J., Buitelaar, J.K., 2016. Is the evidence base of methylphenidate for children and adolescents with attention-deficit/hyperactivity disorder flawed? Eur Child Adolesc Psychiatry 25, 339-340.

Hollis, C., Chen, Q., Chang, Z., Quinn, P.D., Viktorin, A., Lichtenstein, P., D'Onofrio, B., Landén, M., Larsson, H., 2019. Methylphenidate and the risk of psychosis in adolescents and young adults: a population-based cohort study. The Lancet Psychiatry 6, 651-658.

Holmskov, M., Storebo, O.J., Moreira-Maia, C.R., Ramstad, E., Magnusson, F.L., Krogh, H.B., Groth, C., Gillies, D., Zwi, M., Skoog, M., Gluud, C., Simonsen, E., 2017. Gastrointestinal adverse events during methylphenidate treatment of children and adolescents with attention deficit hyperactivity disorder: A systematic review with meta-analysis and Trial Sequential Analysis of randomised clinical trials. PLoS One 12, e0178187.

Hong, M., Park, B., Lee, S.M., Bahn, G.H., Kim, M.J., Park, S., Oh, I.H., Park, H., 2020. Economic Burden and Disability-Adjusted Life Years (DALYs) of Attention Deficit/Hyperactivity Disorder. J Atten Disord 24, 823-829.

Hua, M.H., Huang, K.L., Hsu, J.W., Bai, Y.M., Su, T.P., Tsai, S.J., Li, C.T., Lin, W.C., Chen, T.J., Chen, M.H., 2020. Early Pregnancy Risk Among Adolescents With ADHD: A Nationwide Longitudinal Study. J Atten Disord, 1087054719900232.

Huang, K.L., Wei, H.T., Hsu, J.W., Bai, Y.M., Su, T.P., Li, C.T., Lin, W.C., Tsai, S.J., Chang, W.H., Chen, T.J., Chen, M.H., 2018. Risk of suicide attempts in adolescents and young adults with attention-deficit hyperactivity disorder: a nationwide longitudinal study. Br J Psychiatry 212, 234-238.

Humphreys, K.L., Eng, T., Lee, S.S., 2013. Stimulant Medication and Substance Use Outcomes: A Meta-analysis. JAMA Psychiatry, 1-9.

Huybrechts, K.F., Broms, G., Christensen, L.B., Einarsdottir, K., Engeland, A., Furu, K., Gissler, M., Hernandez-Diaz, S., Karlsson, P., Karlstad, O., Kieler, H., Lahesmaa-Korpinen, A.M., Mogun, H., Norgaard, M., Reutfors, J., Sorensen, H.T., Zoega, H., Bateman, B.T., 2018. Association Between Methylphenidate and Amphetamine Use in Pregnancy and Risk of Congenital Malformations: A Cohort Study From the International Pregnancy Safety Study Consortium. JAMA Psychiatry 75, 167-175.

Jangmo, A., Stalhandske, A., Chang, Z., Chen, Q., Almqvist, C., Feldman, I., Bulik, C.M., Lichtenstein, P., D'Onofrio, B., Kuja-Halkola, R., Larsson, H., 2019. Attention-Deficit/Hyperactivity Disorder, School Performance, and Effect of Medication. J Am Acad Child Adolesc Psychiatry 58, 423-432.

Jennum, P., Hastrup, L.H., Ibsen, R., Kjellberg, J., Simonsen, E., 2020. Welfare consequences for people diagnosed with attention deficit hyperactivity disorder (ADHD): A matched nationwide study in Denmark. Eur Neuropsychopharmacol 37, 29-38.

Jensen, P.S., Garcia, J.A., Glied, S., Crowe, M., Foster, M., Schlander, M., Hinshaw, S., Vitiello, B., Arnold, L.E., Elliott, G., Hechtman, L., Newcorn, J.H., Pelham, W.E., Swanson, J., Wells, K., 2005. Cost-effectiveness of ADHD treatments: findings from the multimodal treatment study of children with ADHD. Am J Psychiatry 162, 1628-1636.

Keilow, M., Holm, A., Fallesen, P., 2018. Medical treatment of Attention Deficit/Hyperactivity Disorder (ADHD) and children's academic performance. PLoS One 13, e0207905.

King, S., Griffin, S., Hodges, Z., Weatherly, H., Asseburg, C., Richardson, G., Golder, S., Taylor, E., Drummond, M., Riemsma, R., 2006. A systematic review and economic model of the effectiveness and cost-effectiveness of methylphenidate, dexamfetamine and atomoxetine for the treatment of attention deficit hyperactivity disorder in children and adolescents. Health Technol Assess 10, 1-162.

Kooij, J.J.S., Bijlenga, D., Salerno, L., Jaeschke, R., Bitter, I., Balazs, J., Thome, J., Dom, G., Kasper, S., Nunes Filipe, C., Stes, S., Mohr, P., Leppamaki, S., Casas, M., Bobes, J., McCarthy, J.M., Richarte, V., Kjems Philipsen, A., Pehlivanidis, A., Niemela, A., Styr, B., Semerci, B., Bolea-Alamanac, B., Edvinsson, D., Baeyens, D., Wynchank, D., Sobanski, E., Philipsen, A., McNicholas, F., Caci, H., Mihailescu, I., Manor, I., Dobrescu, I., Saito, T., Krause, J., Fayyad, J., Ramos-Quiroga, J.A., Foeken, K., Rad, F., Adamou, M., Ohlmeier, M., Fitzgerald, M., Gill, M., Lensing, M., Motavalli Mukaddes, N., Brudkiewicz, P., Gustafsson, P., Tani, P., Oswald, P., Carpentier, P.J., De Rossi, P., Delorme, R., Markovska Simoska, S., Pallanti, S., Young, S., Bejerot, S., Lehtonen, T., Kustow, J., Muller-Sedgwick,

U., Hirvikoski, T., Pironti, V., Ginsberg, Y., Felegyhazy, Z., Garcia-Portilla, M.P., Asherson, P., 2019. Updated European Consensus Statement on diagnosis and treatment of adult ADHD. Eur Psychiatry 56, 14-34.

Koren, G., Barer, Y., Ornoy, A., 2020. Fetal safety of methylphenidate-A scoping review and meta analysis. Reprod Toxicol 93, 230-234.

Korrel, H., Mueller, K.L., Silk, T., Anderson, V., Sciberras, E., 2017. Research Review: Language problems in children with Attention-Deficit Hyperactivity Disorder - a systematic meta-analytic review. J Child Psychol Psychiatry 58, 640-654.

Le, H.H., Hodgkins, P., Postma, M.J., Kahle, J., Sikirica, V., Setyawan, J., Erder, M.H., Doshi, J.A., 2014. Economic impact of childhood/adolescent ADHD in a European setting: the Netherlands as a reference case. Eur Child Adolesc Psychiatry 23, 587-598.

Lee, M.J., Yang, K.C., Shyu, Y.C., Yuan, S.S., Yang, C.J., Lee, S.Y., Lee, T.L., Wang, L.J., 2016a. Attention-deficit hyperactivity disorder, its treatment with medication and the probability of developing a depressive disorder: A nationwide population-based study in Taiwan. J Affect Disord 189, 110-117.

Lee, S.S., Humphreys, K.L., Flory, K., Liu, R., Glass, K., 2011. Prospective association of childhood attention-deficit/hyperactivity disorder (ADHD) and substance use and abuse/dependence: a meta-analytic review. Clin Psychol Rev 31, 328-341.

Lee, Y.C., Yang, H.J., Chen, V.C., Lee, W.T., Teng, M.J., Lin, C.H., Gossop, M., 2016b. Meta-analysis of quality of life in children and adolescents with ADHD: By both parent proxy-report and child self-report using PedsQL. Res Dev Disabil 51-52, 160-172.

Lenzi, F., Cortese, S., Harris, J., Masi, G., 2018. Pharmacotherapy of emotional dysregulation in adults with ADHD: A systematic review and meta-analysis. Neuroscience & Biobehavioral Reviews 84, 359-367.

Leucht, S., Hierl, S., Kissling, W., Dold, M., Davis, J.M., 2012. Putting the efficacy of psychiatric and general medicine medication into perspective: review of meta-analyses. Br J Psychiatry 200, 97-106.

Liang, E.F., Lim, S.Z., Tam, W.W., Ho, C.S., Zhang, M.W., McIntyre, R.S., Ho, R.C., 2018a. The Effect of Methylphenidate and Atomoxetine on Heart Rate and Systolic Blood Pressure in Young People and Adults with Attention-Deficit Hyperactivity Disorder (ADHD): Systematic Review, Meta-Analysis, and Meta-Regression. Int J Environ Res Public Health 15, 1789.

Liang, S.H., Yang, Y.H., Kuo, T.Y., Liao, Y.T., Lin, T.C., Lee, Y., McIntyre, R.S., Kelsen, B.A., Wang, T.N., Chen, V.C., 2018b. Suicide risk reduction in youths with attention-deficit/hyperactivity disorder prescribed methylphenidate: A Taiwan nationwide population-based cohort study. Res Dev Disabil 72, 96-105.

Liao, Y.T., Yang, Y.H., Kuo, T.Y., Liang, H.Y., Huang, K.Y., Wang, T.N., Lee, Y., McIntyre, R.S., Chen, V.C., 2018. Dosage of methylphenidate and traumatic brain injury in ADHD: a population-based study in Taiwan. Eur Child Adolesc Psychiatry 27, 279-288.

Libutzki, B., Ludwig, S., May, M., Jacobsen, R.H., Reif, A., Hartman, C.A., 2019. Direct medical costs of ADHD and its comorbid conditions on basis of a claims data analysis. Eur Psychiatry 58, 38-44.

Lichtenstein, P., Halldner, L., Zetterqvist, J., Sjolander, A., Serlachius, E., Fazel, S., Langstrom, N., Larsson, H., 2012. Medication for attention deficit-hyperactivity disorder and criminality. N Engl J Med 367, 2006-2014.

Liu, H., Feng, W., Zhang, D., 2019. Association of ADHD medications with the risk of cardiovascular diseases: a meta-analysis. Eur Child Adolesc Psychiatry 28, 1283-1293.

Liu, Q., Zhang, H., Fang, Q., Qin, L., 2017. Comparative efficacy and safety of methylphenidate and atomoxetine for attention-deficit hyperactivity disorder in children and adolescents: Meta-analysis based on head-to-head trials. J Clin Exp Neuropsychol 39, 854-865.

Lu, Y., Sjölander, A., Cederlöf, M., et al., 2017. Association between medication use and performance on higher education entrance tests in individuals with attention-deficit/hyperactivity disorder. JAMA Psychiatry 74, 815-822.

Maia, C.R., Stella, S.F., Wagner, F., Pianca, T.G., Krieger, F.V., Cruz, L.N., Polanczyk, G.V., Rohde, L.A., Polanczyk, C.A., 2016. Cost-utility analysis of methylphenidate treatment for children and adolescents with ADHD in Brazil. Braz J Psychiatry 38, 30-38.

Man, K.K., Chan, E.W., Coghill, D., Douglas, I., Ip, P., Leung, L.P., Tsui, M.S., Wong, W.H., Wong, I.C., 2015. Methylphenidate and the risk of trauma. Pediatrics 135, 40-48.

Man, K.K., Coghill, D., Chan, E.W., Lau, W.C., Hollis, C., Liddle, E., Banaschewski, T., McCarthy, S., Neubert, A., Sayal, K., Ip, P., Wong, I.C., 2016. Methylphenidate and the risk of psychotic disorders and hallucinations in children and adolescents in a large health system. Transl Psychiatry 6, e956.

Man, K.K.C., Coghill, D., Chan, E.W., Lau, W.C.Y., Hollis, C., Liddle, E., Banaschewski, T., McCarthy, S., Neubert, A., Sayal, K., Ip, P., Schuemie, M.J., Sturkenboom, M., Sonuga-Barke, E., Buitelaar, J., Carucci, S., Zuddas, A., Kovshoff, H., Garas, P., Nagy, P., Inglis, S.K., Konrad, K., Hage, A., Rosenthal, E., Wong, I.C.K., 2017. Association of Risk of Suicide Attempts With Methylphenidate Treatment. JAMA Psychiatry 74, 1048-1055.

Marchetti, A., Magar, R., Lau, H., Murphy, E.L., Jensen, P.S., Conners, C.K., Findling, R., Wineburg, E., Carotenuto, I., Einarson, T.R., Iskedjian, M., 2001. Pharmacotherapies for attention-deficit/hyperactivity disorder: expected-cost analysis. Clin Ther 23, 1904-1921.

Masi, G., Manfredi, A., Nieri, G., Muratori, P., Pfanner, C., Milone, A., 2017. A Naturalistic Comparison of Methylphenidate and Risperidone Monotherapy in Drug-Naive Youth With Attention-Deficit/Hyperactivity Disorder Comorbid With Oppositional Defiant Disorder and Aggression. J Clin Psychopharmacol 37, 590-594.

Matza, L.S., Paramore, C., Prasad, M., 2005. A review of the economic burden of ADHD. Cost Eff Resour Alloc 3, 5.

McCauley, H.L., Breslau, J.A., Saito, N., Miller, E., 2015. Psychiatric disorders prior to dating initiation and physical dating violence before age 21: findings from the National Comorbidity Survey Replication (NCS-R). Soc Psychiatry Psychiatr Epidemiol 50, 1357-1365.

Miller, A., Lee, S.K., Raina, P., Klassen, A., Zupancic, J., Olsen, L., 1998. A Review of Therapies for Attention-Deficit/Hyperactivity Disorder. Ottawa: Canadian Coordinating Office for Health Technology Assessment (CCOHTA).

Mohr-Jensen, C., Muller Bisgaard, C., Boldsen, S.K., Steinhausen, H.C., 2019. Attention-Deficit/Hyperactivity Disorder in Childhood and Adolescence and the Risk of Crime in Young Adulthood in a Danish Nationwide Study. J Am Acad Child Adolesc Psychiatry 58, 443-452.

Montes, G., Halterman, J.S., 2007. Bullying among children with autism and the influence of comorbidity with ADHD: a population-based study. Ambul Pediatr 7, 253-257.

Narayan, S., Hay, J., 2004. Cost effectiveness of methylphenidate versus AMP/DEX mixed salts for the first-line treatment of ADHD. Expert Rev Pharmacoecon Outcomes Res 4, 625-634.

National Collaborating Centre for Mental Health, 2018. Attention Deficit Hyperactivity Disorder: Diagnosis and Management of ADHD in Children, Young People and Adults. British Psychological Society

National Institute for Health Care and Excellence, 2018. Attention defificit hyperactivity disorder: diagnosis and management, March 14, 2018 ed. National Institute for Health Care and Excellence, United Kingdom.

Nelson, L.D., Guskiewicz, K.M., Marshall, S.W., Hammeke, T., Barr, W., Randolph, C., McCrea, M.A., 2016. Multiple Self-Reported Concussions Are More Prevalent in Athletes With ADHD and Learning Disability. Clin J Sport Med 26, 120-127.

Osland, S.T., Steeves, T.D., Pringsheim, T., 2018. Pharmacological treatment for attention deficit hyperactivity disorder (ADHD) in children with comorbid tic disorders. Cochrane Database Syst Rev 6, Cd007990.

Ostergaard, S.D., Dalsgaard, S., Faraone, S.V., Munk-Olsen, T., Laursen, T.M., 2017. Teenage Parenthood and Birth Rates for Individuals With and Without Attention-Deficit/Hyperactivity Disorder: A Nationwide Cohort Study. J Am Acad Child Adolesc Psychiatry 56, 578-584 e573.

Pearl, P.L., Weiss, R.E., Stein, M.A., 2001. Medical mimics. Medical and neurological conditions simulating ADHD. Ann N Y Acad Sci 931, 97-112.

Pharmaceuticals and Medical Devices Agency, J., 2018. Methylphenidate.

Pliszka, S., 2007. Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. J Am Acad Child Adolesc Psychiatry 46, 894-921.

Pohlabeln, H., Rach, S., De Henauw, S., Eiben, G., Gwozdz, W., Hadjigeorgiou, C., Molnar, D., Moreno, L.A., Russo, P., Veidebaum, T., Pigeot, I., 2017. Further evidence for the role of pregnancy-induced hypertension and other early life influences in the development of ADHD: results from the IDEFICS study. Eur Child Adolesc Psychiatry 26, 957-967.

Polanczyk, G.V., Willcutt, E.G., Salum, G.A., Kieling, C., Rohde, L.A., 2014. ADHD prevalence estimates across three decades: an updated systematic review and meta-regression analysis. Int J Epidemiol 43, 434-442.

Raman, S.R., Man, K.K.C., Bahmanyar, S., Berard, A., Bilder, S., Boukhris, T., Bushnell, G., Crystal, S., Furu, K., KaoYang, Y.H., Karlstad, Ø., Kieler, H., Kubota, K., Lai, E.C., Martikainen, J.E., Maura, G., Moore, N., Montero, D., Nakamura, H., Neumann, A., Pate, V., Pottegård, A., Pratt, N.L., Roughead, E.E., Macias Saint-Gerons, D., Stürmer, T., Su, C.C., Zoega, H., Sturkenbroom, M., Chan, E.W., Coghill, D., Ip, P., Wong, I.C.K., 2018. Trends in attention-deficit hyperactivity disorder medication use: a retrospective observational study using population-based databases. Lancet Psychiatry 5, 824-835.

Rodrigues, R., Lai, M.C., Beswick, A., Gorman, D.A., Anagnostou, E., Szatmari, P., Anderson, K.K., Ameis, S.H., 2020. Practitioner Review: Pharmacological treatment of attention-deficit/hyperactivity disorder symptoms in children and youth with autism spectrum disorder: a systematic review and meta-analysis. J Child Psychol Psychiatry.

Ros, R., Graziano, P.A., 2018. Social Functioning in Children With or At Risk for Attention Deficit/Hyperactivity Disorder: A Meta-Analytic Review. J Clin Child Adolesc Psychol 47, 213-235.

Ruiz-Goikoetxea, M., Cortese, S., Aznarez-Sanado, M., Magallon, S., Alvarez Zallo, N., Luis, E.O., de Castro-Manglano, P., Soutullo, C., Arrondo, G., 2018a. Risk of unintentional injuries in children and adolescents with ADHD and the impact of ADHD medications: A systematic review and meta-analysis. Neurosci Biobehav Rev 84, 63-71.

Ruiz-Goikoetxea, M., Cortese, S., Magallon, S., Aznarez-Sanado, M., Alvarez Zallo, N., Luis, E.O., de Castro-Manglano, P., Soutullo, C., Arrondo, G., 2018b. Risk of poisoning in children and adolescents with ADHD: a systematic review and meta-analysis. Sci Rep 8, 7584.

Schoeman, R., Liebenberg, R., 2017. The South African Society of Psychiatrists/Psychiatry Management Group management guidelines for adult attention-deficit/hyperactivity disorder. The South African journal of psychiatry : SAJP : the journal of the Society of Psychiatrists of South Africa 23, 1060-1060.

Schoenfelder, E.N., Faraone, S.V., Kollins, S.H., 2014. Stimulant treatment of ADHD and cigarette smoking: a meta-analysis. Pediatrics 133, 1070-1080.

Sciberras, E., Streatfeild, J., Ceccato, T., Pezzullo, L., Scott, J.G., Middeldorp, C.M., Hutchins, P., Paterson, R., Bellgrove, M.A., Coghill, D., 2020. Social and Economic Costs of Attention-Deficit/Hyperactivity Disorder Across the Lifespan. J Atten Disord, 1087054720961828.

Seixas, M., Weiss, M., Muller, U., 2012. Systematic review of national and international guidelines on attention-deficit hyperactivity disorder. J Psychopharmacol 26, 753-765.

Septier, M., Stordeur, C., Zhang, J., Delorme, R., Cortese, S., 2019. Association between suicidal spectrum behaviors and Attention-Deficit/Hyperactivity Disorder: A systematic review and meta-analysis. Neurosci Biobehav Rev 103, 109-118.

Sethi, N.J., Nielsen, E.E., Safi, S., Feinberg, J., Gluud, C., Jakobsen, J.C., 2018. Digoxin for atrial fibrillation and atrial flutter: A systematic review with meta-analysis and trial sequential analysis of randomised clinical trials. PLoS One 13, e0193924.

Shin, J.Y., Roughead, E.E., Park, B.J., Pratt, N.L., 2016. Cardiovascular safety of methylphenidate among children and young people with attention-deficit/hyperactivity disorder (ADHD): nationwide self controlled case series study. Bmj 353, i2550.

Shyu, Y.C., Yuan, S.S., Lee, S.Y., Yang, C.J., Yang, K.C., Lee, T.L., Wang, L.J., 2015. Attention-deficit/hyperactivity disorder, methylphenidate use and the risk of developing schizophrenia spectrum disorders: A nationwide population-based study in Taiwan. Schizophr Res 168, 161-167.

Skoglund, C., Kopp Kallner, H., Skalkidou, A., Wikstrom, A.K., Lundin, C., Hesselman, S., Wikman, A., Sundstrom Poromaa, I., 2019. Association of Attention-Deficit/Hyperactivity Disorder With Teenage Birth Among Women and Girls in Sweden. JAMA Netw Open 2, e1912463.

Solmi, M., Fornaro, M., Ostinelli, E.G., Zangani, C., Croatto, G., Monaco, F., Krinitski, D., Fusar-Poli, P., Correll, C.U., 2020. Safety of 80 antidepressants, antipsychotics, anti-attention-deficit/hyperactivity medications and mood stabilizers in children and adolescents with psychiatric disorders: a large scale systematic meta-review of 78 adverse effects. World Psychiatry 19, 214-232.

Stahl, 2018. Methylphenidate Dosing. Cambridge University Press Online.

Stein, M.A., 2008. Medical mimics and differential diagnosis in adult ADHD. CNS Spectr 13, 14-16.

Storebo, O.J., Krogh, H.B., Ramstad, E., Moreira-Maia, C.R., Holmskov, M., Skoog, M., Nilausen, T.D., Magnusson, F.L., Zwi, M., Gillies, D., Rosendal, S., Groth, C., Rasmussen, K.B., Gauci, D., Kirubakaran, R., Forsbol, B., Simonsen, E., Gluud, C., 2015. Methylphenidate for attention-deficit/hyperactivity disorder in children and adolescents: Cochrane systematic review with meta-analyses and trial sequential analyses of randomised clinical trials. Bmj 351, h5203.

Storebø, O.J., Pedersen, N., Ramstad, E., Kielsholm, M.L., Nielsen, S.S., Krogh, H.B., Moreira-Maia, C.R., Magnusson, F.L., Holmskov, M., Gerner, T., Skoog, M., Rosendal, S., Groth, C., Gillies, D., Buch Rasmussen, K., Gauci, D., Zwi, M., Kirubakaran, R., Hakonsen, S.J., Aagaard, L., Simonsen, E., Gluud, C., 2018. Methylphenidate for attention deficit hyperactivity disorder (ADHD) in children and adolescents - assessment of adverse events in non-randomised studies. Cochrane Database Syst Rev 5, Cd012069.

Storebø, O.J., Ramstad, E., Krogh, H.B., Nilausen, T.D., Skoog, M., Holmskov, M., Rosendal, S., Groth, C., Magnusson, F.L., Moreira-Maia, C.R., Gillies, D., Buch Rasmussen, K., Gauci, D., Zwi, M.,

Kirubakaran, R., Forsbøl, B., Simonsen, E., Gluud, C., 2015. Methylphenidate for children and adolescents with attention deficit hyperactivity disorder (ADHD). Cochrane Database Syst Rev, Cd009885.

Strine, T.W., Lesesne, C.A., Okoro, C.A., McGuire, L.C., Chapman, D.P., Balluz, L.S., Mokdad, A.H., 2006. Emotional and behavioral difficulties and impairments in everyday functioning among children with a history of attention-deficit/hyperactivity disorder. Prev Chronic Dis 3, A52.

Stuckelman, Z.D., Mulqueen, J.M., Ferracioli-Oda, E., Cohen, S.C., Coughlin, C.G., Leckman, J.F., Bloch, M.H., 2017. Risk of Irritability With Psychostimulant Treatment in Children With ADHD: A Meta-Analysis. J Clin Psychiatry 78, e648-e655.

Sturman, N., Deckx, L., van Driel, M.L., 2017. Methylphenidate for children and adolescents with autism spectrum disorder. Cochrane Database Syst Rev 11, Cd011144.

Sun, C.K., Tseng, P.T., Wu, C.K., Li, D.J., Chen, T.Y., Stubbs, B., Carvalho, A.F., Chen, Y.W., Lin, P.Y., Cheng, Y.S., Wu, M.K., 2019a. Therapeutic effects of methylphenidate for attention-deficit/hyperactivity disorder in children with borderline intellectual functioning or intellectual disability: A systematic review and meta-analysis. Sci Rep 9, 15908.

Sun, S., Kuja-Halkola, R., Faraone, S.V., D'Onofrio, B.M., Dalsgaard, S., Chang, Z., Larsson, H., 2019b. Association of Psychiatric Comorbidity With the Risk of Premature Death Among Children and Adults With Attention-Deficit/Hyperactivity Disorder. JAMA Psychiatry 76, 1141-1149.

Sundquist, J., Ohlsson, H., Sundquist, K., Kendler, K.S., 2015. Attention-deficit/hyperactivity disorder and risk for drug use disorder: a population-based follow-up and co-relative study. Psychol Med 45, 977-983.

Swensen, A.R., Birnbaum, H.G., Secnik, K., Marynchenko, M., Greenberg, P., Claxton, A., 2003. Attention-deficit/hyperactivity disorder: increased costs for patients and their families. J Am Acad Child Adolesc Psychiatry 42, 1415-1423.

Taylor, E., Dopfner, M., Sergeant, J., Asherson, P., Banaschewski, T., Buitelaar, J., Coghill, D., Danckaerts, M., Rothenberger, A., Sonuga-Barke, E., Steinhausen, H.C., Zuddas, A., 2004. European clinical guidelines for hyperkinetic disorder-first upgrade. Eur Child Adolesc Psychiatry 13, i7-i30.

Torres-Acosta, N., O'Keefe, J.H., O'Keefe, C.L., Lavie, C.J., 2020. Cardiovascular Effects of ADHD Therapies: JACC Review Topic of the Week. J Am Coll Cardiol 76, 858-866.

Tsujii, N., Okada, T., Usami, M., Kuwabara, H., Fujita, J., Negoro, H., Kawamura, M., Iida, J., Saito, T., 2020. Effect of Continuing and Discontinuing Medications on Quality of Life After Symptomatic Remission in Attention-Deficit/Hyperactivity Disorder: A Systematic Review and Meta-Analysis. J Clin Psychiatry 81, 19r13015.

Tzeng, N.S., Chung, C.H., Lin, F.H., Yeh, C.B., Huang, S.Y., Lu, R.B., Chang, H.A., Kao, Y.C., Yeh, H.W., Chiang, W.S., Chou, Y.C., Tsao, C.H., Wu, Y.F., Chien, W.C., 2019. Risk of Dementia in Adults With ADHD: A Nationwide, Population-Based Cohort Study in Taiwan. J Atten Disord 23, 995-1006.

UpToDate, 2018. Methylphenidate

www-uptodate-com.eresources.mssm.edu.

Vaa, T., 2014. ADHD and relative risk of accidents in road traffic: a meta-analysis. Accid Anal Prev 62, 415-425.

Wang, L.J., Shyu, Y.C., Yuan, S.S., Yang, C.J., Yang, K.C., Lee, T.L., Lee, S.Y., 2016. Attention-deficit hyperactivity disorder, its pharmacotherapy, and the risk of developing bipolar disorder: A nationwide population-based study in Taiwan. J Psychiatr Res 72, 6-14.

Wiggs, K.K., Chang, Z., Quinn, P.D., Hur, K., Gibbons, R., Dunn, D., Brikell, I., Larsson, H., D'Onofrio, B.M., 2018. Attention-deficit/hyperactivity disorder medication and seizures. Neurology 90, e1104-e1110.

Wolraich, M., Brown, L., Brown, R.T., DuPaul, G., Earls, M., Feldman, H.M., Ganiats, T.G., Kaplanek, B., Meyer, B., Perrin, J., Pierce, K., Reiff, M., Stein, M.T., Visser, S., 2011. ADHD: clinical practice guideline for the diagnosis, evaluation, and treatment of attention-deficit/hyperactivity disorder in children and adolescents. Pediatrics 128, 1007-1022.

World Health Organization, 2018a. International statistical classification of diseases and related health problems (11th Revision).

World Health Organization, 2018b. mhGAP Intervention Guide for mental, neurological and substance use disorders in non-specialized health settings [Internet], pp. cited Dec 5, 2018.

Wu, E.Q., Hodgkins, P., Ben-Hamadi, R., Setyawan, J., Xie, J., Sikirica, V., Du, E.X., Yan, S.Y., Erder, M.H., 2012. Cost effectiveness of pharmacotherapies for attention-deficit hyperactivity disorder: a systematic literature review. CNS Drugs 26, 581-600.

Yeh, J.Y., Hou, T.Y., Tseng, W.T., Chen, V.C., Yang, Y.H., Kuo, T.Y., Weng, J.C., Lee, C.T., Chen, Y.L., Lee, M.J., 2020. Association Between Attention Deficit Hyperactivity Disorder and Risk of Burn Injury: A Propensity-Matched Cohort Study. Neuropsychiatr Dis Treat 16, 1249-1255.

Yi, Z., Jing, L., 2015. Prevention and treatment guidelines for attention deficit hyperactivity disorder (the 2nd edition). Peking University Medical Press, Beijing.

Young, S., Moss, D., Sedgwick, O., Fridman, M., Hodgkins, P., 2015. A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations. Psychol Med 45, 247-258.

Zheng, Y., Liu, H., 2015. Chinese Guidelines for prevention and treatment of ADHD. China Medical Electronic Audio and Video Publishing House.

APPENDICES

Appendix A: Letters of Support

Appendix B: Methylphenidate Formulations Approved in European Union Countries

Appendix C: Chinese Pharmacopeia

Appendix A: Letters of Support

Professor Stephen Faraone
President World Federation of ADHD Upstate Medical University
505 Irving Avenue Syracuse
New York

November 13, 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD include children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have a significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for Spanish patients. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopment disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Josefina Rodriguez Sastre

President ARPANIH

ARPANIH
Asociación Riojana de Padres de Niños Hiperactivos
Avda. de La Rioja, 12, 2º, 26001 Logroño (La Rioja) Spain
www.arpanih.org
608 692 614 - arpanih@arpanih.or

Professor Stephen Faraone
President World Federation of ADHD Upstate Medical University
505 Irving Avenue Syracuse
New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives. Yours sincerely

ASOCIACION SOCIAL DE TDAH Y RETRASO MADURATIVO DE MARBELLA-SAN PEDRO
ADAHIMAR
C.I.F.G-93286334

Fdo.: Vanesa Maeso Pizarro
Presidenta de ADAHIMAR

ADAHIMAR - Asociación de Ayuda al TDAH (Trastorno por Déficit de Atención / Hiperactividad)
C/ Fernando VII, Nº 44, Blq 5, 1º A. 29601. Marbella. (Málaga, España) Tlf. : +34 653590729
adahimar_tdah@yahoo.es https://es-la.facebook.com/adahimar.sanpedro adahimar.es

238, "Ta' Ganni", Triq il-Htajriet,

Mosta, MST 3067, Malta, Europe.

Mob: 77297800

Email : adhdmalta@gmail.com

www.adhdmalta.org.mt

www.facebook.com/ADHDMalta

11th November 2020

Dear Prof. Faraone,

On behalf of ADHD MALTA, I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in MALTA. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Yours Sincerely,

Carola Stivala
Honorary Secretary
ADHD Malta (VO 41)

ASOCIACIÓN DE PERSONAS CON DEFICIT DE ATENCION E HIPERACTIVIDAD DE BIZKAIA
Parque JM Txabarri Zuazo s/n Centro Gobelaurre 48930 Getxo (Bizkaia)
Tfno. 944 315 783 gtahida@gmail.com www.ahida.es

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

13 November 2020

Dear Prof. Faraone:

On behalf of patients in Europe who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder in all Bizkaia

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients European wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Dr. Itziar Orive

President AHIDA-Bizkaia

Inscrita en el Registro de Asociaciones, con Núm. AS/B/07970/1999- CIF G 95041521

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

40924913R MIRIAM GALINDO (R: G43891019)

Miriam Galindo Gómez

President AHIDA-TTE

possibilities

www.possibilitiesclinic.com
info@possibilitiesclinic.com
Toll Free:1•833•482•5558
Fax :1•833•482•8999

Dear Prof. Faraone:

I would like to express my strong support for the inclusion of methylphenidate on the World Health Organization's List of Essential Medicines for Children. ADHD causes significant morbidity for children and adolescents across the world. Methylphenidate is an extremely effective and first line treatment for ADHD, and is recognized as such by Canadian national guidelines, physician and healthcare organizations, the federal government and all provincial governments. If methylphenidate is not included on the List of Essential Medicine, this could affect decisions made by insurance companies and governmental agencies. It's essential for child mental health and quality of life that methylphenidate be included on the List of Essential Medicines ; otherwise this will reduce access and cause significant health issues to the children and families affected by this disorder. I thank you for you consideration of this important matter.

Doron Almagor MD FRCPC
Child and Adolescent Psychiatrist
Director, Possibilities Clinic

ADDISS
25 years of ADHD Advocacy

Professor Stephen Faraone
President World Federation of ADHD
Upstate Medical University
505 Irving Avenue
Syracuse
New York

8 November 2020

Dear Prof. Faraone:

On behalf of parents and children in the UK who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder in the United Kingdom as recommended in the NICE Guidelines (National Institute of Health and Clinical Excellence). This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatise a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Yours sincerely

Mrs Andrea Bilbow OBE
Founder and CEO of ADDISS
Vice President of ADHD Europe
ADDISS
10th Floor, Hyde House
The Hyde, Colindale
London NW9 6LH

ADDISS
ADHD INFORMATION SERVICES
Registered Charity No: 1070827

020 8952 2800
info@addiss.co.uk
addiss.co.uk

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

María Parra Calderón

President ADAHIGI

34100761-H.

ASOCIACION DE DÉFICIT DE ATENCIÓN CON HIPERACTIVIDAD, ADAHIGI
Número de registro AS/G/09854/2002
www.adahigi.org adahigi@adahigi.org Teléfono 943 459 594

ATIMANA-DAH
ASOCIACIÓN TDAH

ASOCIACIÓN TINERFEÑA DE MADRES Y PADRES DE NIÑOS Y ADOLESCENTES CON DÉFICIT DE ATENCIÓN E HIPERACTIVIDAD

Professor Stephen Faraone
President World Federation of ADHD Upstate Medical University
505 Irving Avenue Syracuse
New York

13th November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Marina Pérez Acosta
President ATIMANA-DAH

ATIMANA-DAH
Avda. La Libertad, Ed. Araucaria 15
Local E 4 – Los Majuelos
Tfno. 922 645 715
E-mail: secretariaatimana@gmail.com

LA LAGUNA

وزارة الصحة
Ministry of Health

مدينة الملك سعود الطبية
KING SAUD MEDICAL CITY

October 18th 2020

Support Letter

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in Kingdome of Saudi Arabia (KSA). Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Ayman Shawqi Alhazmi, MD

Developmental & behavioral Pediatric consultant
HOD developmental pediatrics, King Saud Medical City.
MOH, Riyadh
KSA

Email: admin@aadpa.com.au
ABN: 85 616 076 049

www.aadpa.com.au

Professor Steven V. Faraone
President
World Federation of ADHD

2 October 2020

Dear Professor Faraone,

I write to provide my strong support for your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder (ADHD) in Australia. ADHD affects around 800,000 people in Australia and is associated with a huge economic and social cost. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Yours sincerely,

Professor Mark A. Bellgrove, President

The Australian ADHD Professionals Association (AADPA)

www.aadpa.com.au

TDAH Bahía de Cádiz

Asociación TDAH Bahía de Cádiz

639 066 625

asociaciontdahbahiadecadiz@gmail.com

@asociaciónTDAHCadiz

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

12 November 2020

505 Irving Avenue Syracuse . New York

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

TDAH Bahía de Cádiz

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely,

Vanesa Clavaín

Presidenta Asociación Bahía de Cádiz

Núm. Registro Asociaciones de Andalucía: 12953 . CIF: G72328560

CHADD

October 2, 2020

Stephen V. Faraone, Ph.D.
Distinguished Professor and Vice Chair for Research
Department of Psychiatry, SUNY Upstate Medical University

Dear Dr. Faraone,

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. CHADD – the U.S. national organization that supports children and adults with ADHD, their parents, educators and professionals, supports evidence-based science and information regarding ADHD. Results from numerous studies, and direct reports from parents and adults, show that methylphenidate is a first line treatment for attention deficit hyperactivity disorder in the United States. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. It is CHADD's position that all individuals with diagnosed ADHD should have access to the full range of safe and effective prescription medications indicated to treat ADHD. In light of the rampant misconceptions about ADHD treatment, the stigma surrounding the disorder, and other external pressures, individuals with ADHD often face significant barriers to accessing prescribed medications. This important medication will improve the quality of life of many children and those that care for them. We respectfully urge the World Health Organization to include methylphenidate on the List of Essential Medicines for Children.

Very truly yours,

Robert Cattoi
Chief Executive Officer
CHADD – Children and Adults with ADHD

Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD)
4221 Forbes Blvd., Suite 270 Lanham, MD 20706; www.chadd.org

DGKJP - Deutsche Gesellschaft für Kinder- und Jugendpsychiatrie, Psychosomatik und Psychotherapie e.V.
Geschäftsstelle • Reinhardtstraße 27 B • 10117 Berlin

Stephen V. Faraone, PhD
President, World Federation of ADHD
Board Member, American Professional Society of ADHD and Related Disorders
Distinguished Professor of Psychiatry, SUNY Upstate Medical University, Syracuse NY, USA
sfaraone@childpsychresearch.org

October 30, 2020

Letter of Support

Dear Prof. Faraone,

I am writing to support your point to include methylphenidate on the World Health Organization's List of Essential Medicines for Children. ADHD is one of the most frequent psychiatric disorders in childhood and adolescence. There is strong evidence for the effectiveness of methylphenidate in the treatment of ADHD. Both the German National Guideline for Diagnostics and Treatment of ADHD (AWMF S3-Leitlinie ADHS bei Kindern, Jugendlichen und Erwachsenen, Registernummer 028-045, *https://www.awmf.org/leitlinien/detail/ll/028-045.html)* and other guidelines (like NICE) recommend MPH as a safe treatment option within child and adolescent psychiatry. There are numerous studies about effects and safety, and there is sound evidence about positive effects to prevent severe negative consequences of ADHD on our patients' later lives (e.g. school performance). In Germany MPH is licensed for the treatment of ADHD. Furthermore, it is an economic choice.
Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers, as it might impact decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents who care for them.

Kind regards

Prof. Michael Kölch
President DGKJP

Prof. Dr. med. Dominique Eich-Höchli
FMH Psychiatrie und Psychotherapie
Turnerstrasse 26
8006 Zürich

Fon 0041-43 243 35 35

Zürich, October 30th, 2020

Dear Prof. Faraone

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.
Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in **Switzerland**.
Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Dominique Eich-Höchli, MD, Prof.
Co-President of the Swiss Society for ADHD

Prof. Dr. med. Dominique Eich
FMH Psychiatrie & Psychotherapie
Turnerstrasse 26
CH-8006 Zürich
W 133501

Schweizerische Fachgesellschaft ADHS
Société suisse pour le TDAH
Società svizzera per l'ADHD
Swiss Society for ADHD

ECNP neuroscience applied

For the science and treatment of disorders of the brain

Cagliari, Madrid, October 27th, 2020

Prof. Stephen V. Faraone, PhD
President, World Federation of ADHD
Distinguished Professor of Psychiatry, SUNY
Upstate Medical University, Syracuse NY, USA

Dear Prof. Faraone,

I am writing to strongly support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.

Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in Italy, Spain and the other 10 countries represented at the European Network of Child Adolescent Neuropsychopharmacology (at the European College of Neuropsychopharmacology-ECNP).

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of, prescribers, the compliance of parents and young children and impacts decisions made by the insurance programs that pay for medications.

Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children and adolescents with ADHD and the parents that care for them.

Kind regards

Alessandro Zuddas, MD
Chair of ECNP Network of Child Adolescent Neuropsychopharmacology
Professor of Child Neuropsychiatry
Dept. Biomedical Sciences, Sect. Neuroscience & Clinical Pharmacology
University of Cagliari, Cagliari, Italy

Carmen Moreno, MD, PhD
Co-Chair of ECNP Network of Child Adolescent Neuropsychopharmacology
Child and Adolescent Psychiatry Department
Institute of Psychiatry and Mental Health
Hospital General Universitario Gregorio Marañón, Madrid, Spain

SECRETARIAT
ECNP OFFICE
T: +31 88 75 69 555
F. +31 88 75 59 900
E. secretariat@ecnp.eu

POSTAL ADDRESS
PO BOX 85410
3508 AK Utrecht
The Netherlands
www.ecnp.eu

VISITING ADDRESS
Bolognalaan 28
3584CJ Utrecht
The Netherlands

ESCAP
European Society for Child and Adolescent Psychiatry

Athens, 12/11/2020

Dear Prof. Faraone,

On behalf of the European Society for Child and Adolescent Psychiatry (ESCAP), I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.

Methylphenidate is a first-choice pharmacological treatment for children suffering with ADHD. The safety and efficacy of methylphenidate has been strongly demonstrated based on extended research and clinical evidences. Like in other disorders e.g. hypertension or diabetes everyone should have access to a medication that has shown effectiveness and is recommended in all international and European guidelines. Including methylphenidate on the List of Essential Medicines will improve access to this effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Wishing that your application will be successful.

Kind regards,

Dimitris Anagnostopoulos

Dimitris C. Anagnostopoulos MD, PhD
Professor of Child and Adolescent Psychiatry,
National & Kapodistrian University of Athens
President, European Society for Child and Adolescent Psychiatry
danagnost@med.uoa.gr, danagnostopoulos@escap.eu
Mobile: 00306973303375, FT, WhatsApp, Viber

ESCAP

National and Kapodistrian UNIVERSITY OF ATHENS

Federación Asociaciones TDAH
CASTILLA Y LEÓN

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Castilla y León who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Mª Cristina E. Peña Ruiz,

President FACYL-TDAH

FEDERACIÓN DE ASOCIACIONES DE CASTILLA Y LEÓN DE TDAH (FACYL- TDAH)
facyl.comunicacion@gmail.com (Información central FACYL-TDAH) Teléfono 646 25 43 33

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Firmado por 34100719E MAITE URKIZU (R: G30787261) el día 12/11/2020 con un certificado emitido por AC Representación

Maite Urkizu Moriuevo

President FEAADAH

Fegadah
Federación Galega de Asociacións de Déficit de Atención e Hiperactividade

www.fegadah.org
info@fegadah.org

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Montserrat Álvarez Rodríguez

President FEGADAH

FEDERACIÓN GALEGA DE ASOCIACIÓNS DE DÉFICIT DE ATENCIÓN E HIPERACTIVIDADE
ANIHDA (Vigo) - ANIHDACORUÑA (A Coruña) - ADAHPO (Pontevedra-Vilagarcía de Arousa - Ourense) - ACNH (Santiago) - BULEBULE (Lugo)R. / Rosalía de Castro, 36, Baixo. 36001 (Pontevedra) -Telfs.: 655146134

CIF: G94128469. Email: presidencia@fegadah.org

Fegadah

Panda SA
The Paediatric Neurology and Development Association of Southern Africa

5th October 2020

Dear Prof. Faraone

Re: Inclusion of methylphenidate on WHO List of Essential Medicines for Children

I am writing to you on behalf of PANDA SA (Paediatric Neurology and Development Association of Southern Africa) as we strongly believe that methylphenidate needs to included on the World Health Organization's List of Essential Medicines for Children.

Therefore, I would like to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in South Africa both in the public and private sectors. In the public sector there is no access to other treatments for ADHD.

We feel that excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and their caregivers.

Kind regards

Prof Gail Scher
Paediatric Neurologist
Chairperson PANDA SA (Paediatric Neurology and Development Association of Southern Africa)

Department of Paediatrics and Child Health, University of the Witwatersrand
P O Box 1804
Houghton
Johannesburg
South Africa
2041

CADDRA
CANADIAN ADHD RESOURCE ALLIANCE

October 1, 2020

To: Stephen V. Faraone, PhD
President, World Federation of ADHD
Board Member, American Professional Society of ADHD and Related Disorders
Distinguished Professor of Psychiatry, SUNY Upstate Medical University, Syracuse NY, USA

RE: WHO List of Essential Medicines for Children

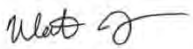
Dear Prof. Faraone,

I am writing to support your application for including methylphenidate on the World Health Organization's (WHO) List of Essential Medicines for Children.

The Canadian ADHD Practice Guidelines, 4.1 Edition (2020) includes methylphenidate as a first line treatment for attention deficit hyperactivity disorder in Canada. The decision of the WHO to exclude methylphenidate from its List of Essential Medicines is contrary to Canadian expert clinical consensus. Moreover, it undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications.

Medications are part of an integrated and multimodal treatment plan for ADHD. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment. Research has shown that early treatment of ADHD is a strong preventive measure in the field of mental health. Furthermore, it will improve the quality of life of many children with ADHD and the parents that care for them.

Yours faithfully,



Martin Gignac MD FRCPC
Chair, CADDRA Board of Directors
CADDRA – Canadian ADHD Resource Alliance
Associate Professor, McGill University, Montreal, Qc, Canada

366 Adelaide St. E, Suite 221, Toronto, ON M5A 3X9 ~ P: 416-637-8583 ~ www.caddra.ca

CADDAC
CENTRE FOR ADHD AWARENESS, CANADA

Dear Prof. Faraone:

I am writing on behalf of the Centre for ADHD Awareness Canada (CADDAC), a national charity dedicated to improving the lives of families and individuals with ADHD, to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. While we consider Methylphenidate a second line treatment for attention deficit hyperactivity disorder in Canada, due to its briefer duration of action, we do consider it to be an essential medication for the treatment of ADHD world-wide. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by governments and insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this treatment which, in turn, will improve the quality of life of many children with ADHD and their families.

Heidi Bernhardt
Founder and President
Centre for ADHD Awareness Canada
366 Adelaide St E, Suite 221 Toronto,
ON Canada M5A 3X9

ABDA
ASSOCIAÇÃO BRASILEIRA DO DÉFICIT DE ATENÇÃO

Dear Professor Faraone,

My name is Iane Kestelman; I am the president of the Brazilian Association for Attention Deficit Disorder (ABDA) - the only and largest Non-Profit Organization, an entity representing the rights of people with ADHD in Brazil.

The reason for this email is to affirm my support for the World Health Organization in order to recognize the list of essential medications for the treatment of children with ADHD and the use of methylphenidate

In my country the most used medication for the treatment of children with ADHD is methylphenidate, due to its low cost and also because the Brazilian Health Agency (ANVISA) only makes medications based on methylphenidate and Lisdexamfetamine available for ADHD.

The exclusion of Ritalin from the list of essential medications is certain to have a negative impact on an absurd number of people and will cause problems of a social nature by interrupting important health policies that are carried out with children with ADHD in Brazil.

On behalf of the association, I reaffirm the need for methylphenidate in order to improve the quality, treatment and social inclusion of all children with ADHD in my country and, on behalf of them, I request the inclusion of the medication mentioned in the list.

Yours sincerely,

Iane Kestelman

ABDA
ASSOCIAÇÃO BRASILEIRA DO DÉFICIT DE ATENÇÃO

Iane Kestelman
Presidente
Fone: 55(21) 3217.75
www.tdah.org.br

CLALIT over 100 years The Best for Your Family

Geha Mental Health Center

החברה הישראלית להפרעת קשב
The Israeli Society for ADHD

10-14-20

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.
Methylphenidate is the sole first line treatment for Attention Deficit Hyperactivity Disorder (ADHD) in Israel.
Its exclusion from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications.
Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Professor Iris Manor
Senior Child and Adolescent psychiatrist
Director of the ADHD clinic, Geha MHC, Petah-Tikva, Israel
Associate professor, Sackler school of medicine, Tel Aviv University, Israel
Chair of the Israeli Society of ADHD

1 Helsinky St. Petach-Tikva 49100, P.O.B. 102 • Tel: 972-3-9258258 • Fax: 972-3-9241041 • www.geha.co.il

Fundación Cultural Federico Hoth A.C.

Proyectodah®

October 15, 2020

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.

Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in México, were there is more than a two million and a half of children with these disorder.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the programs that pay for medications.

Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

The negative impacts on children who do not receive Methylphenidate substantially affect them, their families and society in general, for which we strongly support their inclusion.

Dr. Juan Carlos Pérez Castro Vázquez

Director General

Torresco No. 6, Col. Santa Catarina, Deleg. Coyoacán,
C.P. 04010, México, D.F.
Tels: (55) 5658 7122 (55) 5339 5065 (55) 5339 5936
RFC: FCF000926EEA
www.cerebrofeliz.org

FCAFA-TDAH
Federació Catalana d'Associacions de Familiars i Afectats per TDAH
C/.Convent, 36 08202 Sabadell

Dear Professor Faraone:

The Catalan Federation of Associations of Relatives and People Affected by ADHD (FCAFA-TDAH) supports your request to include methylphenidate in the list of essential medicines for children of the World Health Organization. In Spain, and in Catalonia specifically, methylphenidate is a first-line treatment for attention deficit hyperactivity disorder prescribed by practically the majority of mental health professionals, and is trusted by thousands of families for treatment of this disorder for its innumerable advantages. Excluding methylphenidate from the list of essential medicines would cause thousands of children in Spain to abandon treatment by affecting this decision to the public health system and a very important economic decline in Spanish families. The inclusion of methylphenidate on the essential drug list will improve access to this highly effective treatment and, in turn, improve the quality of life for many children with ADHD and the parents who care for them.

Greetings,

Juan Pérez Caro
President of the Catalan
Federation of Relatives and
People Affected by ADHD
(FCAFA-TDAH).

FCAFA-TDAH
Inscrita en el registre d'associacions de la Generalitat de Catalunya amb el número 573
C/.Convent 36, 08202 Sabadell
info@federaciocatalanatdah.org

PsyQ
Specialist bij
psychische problemen

PsyQ
KvK 27321697
www.psyq.nl

PsyQ is onderdeel
van Parnassia Groep

Onderwerp

The Hague, 9 oktober 2020

Dear Prof. Faraone,

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.

Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in the Netherlands. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Prof. Dr. J.J.S. Kooij, psychiatrist

Amsterdam University Medical Center/VUmc, Amsterdam, the Netherlands
& PsyQ, psychomedical Programs, the Hague, the Netherlands

Fundación Cultural Federico Hoth A.C.

Proyectodah®

October 15, 2020

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.

Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in México.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the programs that pay for medications.

Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Mtra. María Elena Frade Rubio

President and Founder

Torresco No. 6, Col. Santa Catarina, Deleg. Coyoacán,
C.P. 04010, México, D.F.
Tels: (55) 5658 7122 (55) 5339 5065 (55) 5339 5936
RFC: FCF000926EEA
www.cerebrofeliz.org

Encuentro TDAH

LIGA LATINOAMERICANA
LILAPETDAH 2022
Santo Domingo , Republica Dominicana

Subject: Written Support from LILAPETDAH

Dear Prof. Faraone,

On behalf of all countries of Latin America that form part of the Latin American League for the study and research of ADHD, we join to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first-line treatment for attention deficit hyperactivity disorder in Latin America. Maintaining methylphenidate included on the List of Essential Medicines will improve the quality of life of many children living with ADHD and the parents that care for them.

Zuleika Morillo de Nieto, MD
President of the Latinamerican Federation and Association of Child & Adolescent Psychiatrists and related professions, FLAPIA.
President of the Latinamerican League for the study of ADHD, Lilapetdah.
Chief Manager of the Mental Health Department Robert Reid Hospital, Santo Dgo.
Coordinator of the Child & Adolescent Residency program in Robert Reid Hospital.
Child & Adolescent Psychiatrist professor of the Pediatric and general Psychiatry Residency programs.
Professor in the Psychology school of the Catholic University of Santo Domingo and the Iberoamericano University of Santo Domingo.
Chair of Iaedp. International Chapter .Association of Eating Disorders Professionals
Clinic Director of medical service CPE/Renovatus, special program for eating disorders, Santo Domingo.

TDA-H PALENCIA
Asociación TDA- H PALENCIA
Entidad sin ánimo de lucro, G-34243832
Es miembro de: feaadah Federación Asociaciones TDAH Castilla y León

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Firmado por 12730853P JOSE ANTONIO HOYOS (R: G34243832) el día 12/11/2020 con un certificado emitido por AC Representación

José Antonio Hoyos Álvarez
President TDA-H PALENCIA

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University 12 November 2020

505 Irving Avenue Syracuse

New York

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

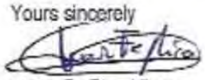
Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely



Maria Fe Rico Nieto

President of TDAH AXARQUIA Association

Member of FEAADAH, FAHYDA AND ADHD EUROPE

ASOCIACION TDAH AXARQUIA, G93045607, VÉLEZ-MÁLAGA
INSCRITA EN EL REGISTRO DE ASOCIACIONES DE ANDALUCIA, UNIDAD REGISTRAL DE MALAGA, Nº 8811 DE LA SECCION 1ª. TLF. 650358939 tdahaxarquia@gmail.com

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in NAME OF COUNTRY. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Yi Zheng, MD. President,
Chinese Society of Child and Adolescent Psychiatry;
Asian Federation of ADHD;

Add: Beijing Anding Hospital,Capital Medical University
Beijing, 100088 P.R. China
E-mail: yizheng@ccmu.edu.cn

APSARD

The American Professional Society of ADHD and Related Disorders

October 2, 2020

Dear Dr. Faraone,

As President of the American Professional Society of ADHD and Related Disorders (APSARD), I am writing regarding your application to include methylphenidate on the list of Essential Medicines for Children by the World Health Organization (WHO). I, and my organization, strongly support the addition of methylphenidate, which is an important first line treatment for attention-deficit/hyperactivity disorder in the United States of America and also world-wide. Excluding methylphenidate from the list is not a fair representation of the importance of this medication in treating children and adolescents. Moreover, excluding it from the list could weaken confidence in this intervention for prescribers and insurance companies. It is important to emphasize that methylphenidate has a very large effect for youth with ADHD – one of the largest in psychiatry and, in fact, all of medicine. It has a major impact on the quality of life for children with ADHD and their parents. The importance of this information cannot be over-stated; ADHD is a highly prevalent and impairing disorder in children, and methylphenidate is a highly effective treatment for this condition. Including methylphenidate on the World Health Organization's List of Essential Medicines for Children will recognize the importance of this medication in the treatment of millions of children world-wide. This is a vitally important issue, and I hope the WHO will give it serious consideration.

Sincerely,

Jeffrey H. Newcorn, MD

President, American Professional Society of ADHD and Related disorders (APSARD)

STICHTING Eunethydis Foundation

Prof. Dr. Dr. T. Banaschewski
Chairman

Central Institute of Mental Health
Postbox: 12 21 20
D-68072 Mannheim
Tobias.Banaschewski@zi-mannheim.de
T: +49 / (0)621 / 1703 – 4502
F: +49 / (0)621 / 1703 – 4505

Prof. Dr. J.K. Buitelaar
Secretary and Treasurer
Stiching Eunethydis Foundation
Paijensweg 6
NL-6523 MC Nijmegen
Jan.Buitelaar@radboudumc.nl

To whom it may concern

Mannheim, 10/27/2020

Subject: Support application for including methylphenidate

Dear Prof. Faraone,

we are writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in Europe. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications.

Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Yours sincerely,

Professor Tobias Banaschewski
Chairman of the Eunethydis Network

Prof. Dr. J.K. Buitelaar
Secretary and Treasurer

Tobias Banaschewski, MD, PhD,
Professor of Child and Adolescent Psychiatry

Chairman of the Eunethydis Network

Bankaccount 56 34 46 013
ABNAMRO Bloemendaal
BIC ABNANL2A
IBAN NL70ABNA0563446013

KvK 34166582 Amsterdam

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

10 November 2020

Dear Prof. Faraone:

On behalf of patients in Europe who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder in all European countries.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients European wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

Dr. Myriam Bea

President ADHD Europe

ADHD Europe aisbl, Rue Washington straat 40/5, Brussels, Belgium, 1050
Registered International Non-Profit Organization in Belgium: 0810.982.059
www.adhdeurope.eu

Cosigned by National organisations

K. Kilbride

Ken Kilbride, CEO, ADHD Ireland

Elín H. Hinriksdóttir

Elín Hoe Hinriksdóttir M.Ed.

Chair, ADHD association Iceland.

Board member of The Icelandic Disability Alliance

Christine Javis

ADHD Solutions CIC

Director/CEO ADHD Solutions CIC

Dr. Dominique Bertholdt

Treffpunkt ADHS.Asbl

Luxemburg

Patrizia Starcomi

National President

Associazione Italiana Famiglie ADHD Organizzazione di Volontariato

Maura Cavera

National Vice President

Associazione Italiana Famiglie ADHD Organizzazione di Volontariato

B Sinton

Beverley Sinton
President of ADHD, ASC & LD Belgium
European Brain Ambassador

Hartmut Gartzke
Vorsitzender
ADHS Deutschland e. V.

- foreningen

Trish Nymark Vice President
Danish ADHD Organization

Christine GETIN
Présidente
HyperSupers - TDAH France

A.N.S.H.D.A.
Asociación de Afectados
TDAH – Madrid
desde 1999

ASOCIACIÓN DE AFECTADOS POR TDAH DE MADRID.
C/ Molina de Segura, 33 28030 Madrid
91 3560207 657371999 - 691530347
info@anshda.org www.anshda.org

Pasaje de Valdilecha, 5-7, Esquina C/ Molina de Segura, 33 28030 Madrid Tfno. 91 356 02 07 Fax 91 361 04 33 Móviles 691530347 - 637571999 www.anshda.org e-mail: info@anshda.org
Inscrita con el número 19.337, en el registro de Asociaciones de la Comunidad de Madrid e inscrita en la Consejería de Sanidad de la Comunidad de Madrid con Nº Registro de Centro Sanitario CS13326.

12 November 2020.

Professor Stephen Faraone
President World Federation of ADHD Upstate Medical University
505 Irving Avenue Syracuse
New York

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely.
Teresa Moras Cítores
President ANSHDA.

Federación Andaluza de Asociaciones de Ayuda al TDAH
T 693 728 555
fahyda.org@gmail.com
http://fahyda.blogspot.com/

Professor Stephen Faraone

President World Federation of ADHD Upstate Medical University

505 Irving Avenue Syracuse

New York

12 November 2020

Dear Prof. Faraone:

On behalf of patients in Spain who receive treatment for ADHD I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines. Methylphenidate is a first line treatment for Attention Deficit Hyperactivity Disorder.

Patients with ADHD includes children and adolescents as well as adults. Attention deficit hyperactivity disorder is a developmental disorder with an age onset prior to 12 years. Children with ADHD have significantly lower ability to focus and sustain attention and score higher on impulsivity and hyperactivity.

Untreated ADHD is not a benign condition and pharmacological interventions such as methylphenidate have wide ranging beneficial effects for patients Spanish wide. For most patients, the impairing symptoms of ADHD persist into adulthood. Because ADHD is a common neurodevelopmental disorder in childhood affecting 5% of children and 2.8% of adults worldwide, limiting access to methylphenidate will have profound repercussions. It also does not consider the many mental and somatic health risks associated with failure to treat ADHD such as accidents, injuries, suicide, and premature death, which have been documented by large population studies or meta-analyses.

This medication has been a lifeline for so many thousands of children allowing them to access their education and very importantly to enjoy a positive family life. It has given them the opportunity to complete their education and move on into further education, university, and employment. All these experiences are crucial to a productive and secure future.

Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by prescribers. Ultimately it is the patient who then suffers.

Including methylphenidate on the List of Essential Medicines will go a long way to destigmatize a very real treatable condition and it will improve access to this very effective treatment which, in turn, will improve the quality of life of many people with ADHD and their relatives.

Yours sincerely

FAHYDA
NIF G-91720219
Federación Andaluza de Asociaciones de Ayuda
al Trastorno Hipercinético y Deficit de Atención
Telf. 693 728 555

Juan Ángel Quirós Cantos

President FAHYDA

Federación Andaluza de Asociaciones de Ayuda al TDAH
T 693 728 555
fahyda.org@gmail.com
http://fahyda.blogspot.com/

From: "宮島祐." <miyajima-t@tokyo-kasei.ac.jp>
Sent: Wednesday, November 18, 2020 7:38 AM
To: Steve Faraone <sfaraone@childpsychresearch.org>
Subject: Re: WHO application

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in Japan.
Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Tasuku Miyajima, M.D. Ph.D
Professor & Chairman
Department of Education for Childcare, Tokyo Kasei University
Miyajima-t@tokyo-kasei.ac.jp
2-15-1 Inariyama, Sayama, Saitama, 350-1398, Japan
TEL: +81-(0)4-2952-1621, FAX: +81-(0)4-2955-6944
President of Japanese Society of ADHD

IMPULS& WOORTBLIND

11-11-2020

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder in the Netherlands. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and impacts decisions made by the insurance programs that pay for medications. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Rob Rodrigues Pereira, pediatrician

Chairman Impuls en Woortblind

Organisation for individuals with AD(H)D and dyslexia/dyscalculia

Postbus 1058, 3860 BB Nijkerk, the Netherlands

Ref No.....
In replying the above
Number and date of this
letter should be quoted

MINISTRY OF HEALTH
RICHMOND HILL INSTITUTIONS
C/O MT. GAY HOSPITAL
MT. GAY, ST. GEORGE'S
GRENADA W.I.

October 23, 2020

The Secretary of the 22nd Expert Committee on the Selection and Use of Essential Medicines
Medicine Access and Rational Use (MAR)
Department of Essential Medicines and Health Products (EMP)
World Health Organization
20 Avenue Appia
CH-1211 Geneva 27
Switzerland

Dear Secretariat,

I am writing to on behalf of the Mt. Gay Mental Hospital in support of the application being made by Dr. Craig Katz and his colleagues at Mount Sinai School of Medicine to have Methylphenidate added to the List of Essential Medications. We have collaborated with them for over 3 years on meeting mental health needs in our own country and see their decision to make this application on behalf of people around the world as showing great initiative and wisdom. We have much experience with Methylphenidate.

We believe that at least one central nervous system stimulant should be considered an essential part of any formulary, and our experience definitely supports that it should be Methylphenidate. I would like to make a special appeal that it be included in its immediate-release formulations.

Respectfully,

.....

Dr. Evlyn Spencer **MD**
House Officer
Mt. Gay Psychiatric Hospital

Tel: 1 (473) 440 – 3154/3272 **Fax: 1 (473) 435 – 4160** mtgayhsp@health.gov.gd

Ref No.....
In replying the above
Number and date of this
letter should be quoted

MINISTRY OF HEALTH
RICHMOND HILL INSTITUTIONS
C/O MT. GAY HOSPITAL
MT. GAY, ST. GEORGE'S
GRENADA W.I.

October 23, 2020

The Secretary of the 22nd Expert Committee on the Selection and Use of Essential Medicines
Medicine Access and Rational Use (MAR)
Department of Essential Medicines and Health Products (EMP)
World Health Organization
20 Avenue Appia
CH-1211 Geneva 27
Switzerland

Dear Secretariat,

I am writing to on behalf of the Mt. Gay Mental Hospital in support of the application being made by Dr. Craig Katz and his colleagues at Mount Sinai School of Medicine to have Methylphenidate added to the List of Essential Medications. We have collaborated with them for over 3 years on meeting mental health needs in our own country and see their decision to make this application on behalf of people around the world as showing great initiative and wisdom. We have much experience with Methylphenidate.

We believe that at least one central nervous system stimulant should be considered an essential part of any formulary, and our experience definitely supports that it should be Methylphenidate. I would like to make a special appeal that it be included in its immediate-release formulations.

Respectfully,

.....

Dr. Arelys Francia Vasconcelos
Consultant Psychiatrist
Mt. Gay Psychiatric Hospital
Tel: 1 (473) 440 – 3154/3272 Fax: 1 (473) 435 – 4160 mtgayhsp@health.gov.gd

Ref No.....
In replying the above
Number and date of this
letter should be quoted

MINISTRY OF HEALTH
RICHMOND HILL INSTITUTIONS
C/O MT. GAY HOSPITAL
MT. GAY, ST. GEORGE'S
GRENADA W.I.

October 23, 2020

The Secretary of the 22nd Expert Committee on the Selection and Use of Essential Medicines
Medicine Access and Rational Use (MAR)
Department of Essential Medicines and Health Products (EMP)
World Health Organization
20 Avenue Appia
CH-1211 Geneva 27
Switzerland

Dear Secretariat,

I am writing to on behalf of the Mt. Gay Mental Hospital in support of the application being made by Dr. Craig Katz and his colleagues at Mount Sinai School of Medicine to have Methylphenidate added to the List of Essential Medications. We have collaborated with them for over 3 years on meeting mental health needs in our own country and see their decision to make this application on behalf of people around the world as showing great initiative and wisdom. We have much experience with Methylphenidate.

We believe that at least one central nervous system stimulant should be considered an essential part of any formulary, and our experience definitely supports that it should be Methylphenidate. I would like to make a special appeal that it be included in its immediate-release formulations.

Respectfully,

Dr. Doris Keens Douglas **MD, MPH**
Senior Registrar
Mt. Gay Psychiatric Hospital

Tel: 1 (473) 440 – 3154/3272 Fax: 1 (473) 435 – 4160 mtgayhsp@health.gov.gd

GMERS MEDICAL COLLEGE & HOSPITAL
Department of Psychiatry, Room No: 204,
2nd Floor, Hospital Building, GOTRI, Vadodara - 390021

29 October 2020

The Secretary of the 22nd Expert Committee on the Selection and Use of Essential Medicines
Medicine Access and Rational Use (MAR)
Department of Essentail Medicines and Halth Products (EMI)
World Health Organization
20 Avenue Appia
CH-1211 Geneva 27
Switzerland

Dear Secretariat

I am writing to you on behalf of the GMERS Medical College and Hospital, Gotri, Vadodara, India, in support of the application being made by Dr. Craig Katz and his colleagues at the Mount Sinai School of Medicine to have Methylphenidate added to the List of Essential Medications. We have collaborated with them for over a decade on meeting mental health needs in our own country and see their decision to make this application on behalf of people around the world as showing great initiative and wisdom. We have much experience with Mehylphenidate.

We believe that at least one central nervous system stimulant should be considered and essential part of any formulary, and our experience definitely supports that it should be methylphenidate. I would like to make a special appeal that it be included in its immediate-release formulations.

Respectfully,

Dr. Sandip H. Shah
MD (Psychiatry)
Professor and Head
Department of Psychiatry
GMERS Medical College
Gotri, Vadodara.

Dr Sandip H Shah MD
Professor and Head of Deparment of Psychiatry
GEMRS Medical College and Hospital, Gotri, Vadodara, INDIA.
Email – hod.psy.gotri@gmail.com.

MINISTRY OF HEALTH

Third Floor, East Block Building
Belmopan, Belize, Central America.

Phone: 501-822-2325/2363 Fax: 501-822-2942/2055
seniorsecretary@health.gov.bz

October 5, 2020

The Secretary of the 22rd Expert Committee on the
Selection and Use of Essential Medicines
Medicine Access and Rational Use (MAR)
Department of Essential Medicines and Health Products (EMP)
World Health Organization
20 Avenue Appia
CH-LZII Geneva2T
Switzerland

Dear Secretariat,

I am writing to you on behalf of the Ministry of Health, Belize in support of the application being made by Dr. Craig Katz and his colleagues at the Mount Sinai School of Medicine to have Methylphenidate added to the List of Essential Medications. We have collaborated with them for over 10 years on meeting mental health needs in our own country and see their decision to make this application on behalf of people around the world as showing great initiative and wisdom. We have much experience with Methylphenidate.

We believe that at least one central nervous system stimulant should be considered an essential part of any formulary, and our experience definitely supports that it should be Methylphenidate. I would like to make a special appeal that it be included in its immediate-release formulations.

Respectfully,

Iveth Quintanilla, RN, PNP, MHA
Head, Mental Health Unit
Belize Ministry of Health
Belize, Central America

HIPERAKTIVNI SANJARI

BUĐENJE – Udruga za razumijevanje ADHD-a
www.budenje.hr, 098/9978-915, e-mail: budenje@gmail.com
Žiro račun Zagrebačka banka: HR4923600001102716634
MB: 1867385; OIB: 01048724725; Kačićeva 4, 10 000 Zagreb

13th November 2020

Dear Prof. Faraone,

On behalf of „Buđenje“ - non profit ADHD organisation from Croatia, I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children.

Yours Sincerely,

Marko Ferek
President

Servei de Psiquiatria
Hospital Universitari Vall d'Hebron
Pg. Vall d'Hebron 119-129 | 08035 Barcelona
T. 93 489 42 94
jaramos@vhebron.net

Dear Prof. Faraone:

I am writing to support your application for including methylphenidate on the World Health Organization's List of Essential Medicines for Children. Methylphenidate is a first line treatment for attention deficit hyperactivity disorder (ADHD) in Spain, where around of 80% of the children under medical treatment for ADHD are taking methylphenidate. Excluding methylphenidate from the List of Essential Medicines undermines the confidence of prescribers and the families. Also, this decision impact negatively on the appropriate treatment of children with ADHD. Including methylphenidate on the List of Essential Medicines will improve access to this very effective treatment which, in turn, will improve the quality of life of many children with ADHD and the parents that care for them.

Sincerely,

Prof. Josep Antoni Ramos Quiroga, MD,PhD
Head of Psychiatry Department
Hospital Universitari Vall d'Hebron
Universitat Autònoma de Barcelona

Chair of the Section Neurodevelopmental Disorders Across Lifespan.
European Psychiatric Association

Pg. Vall d'Hebron, 119-129
08035 Barcelona
Spain

Barcelona, October 14th of 2020

Appendix B: Methylphenidate Formulations Approved in European Union Countries

ANNEX I

LIST OF THE NAMES, PHARMACEUTICAL FORMS, STRENGTHS OF THE MEDICINAL PRODUCTS, ROUTE OF ADMINISTRATION, MARKETING AUTHORISATION HOLDERS IN THE MEMBER STATES (EU/EEA)

Marketing Authorisations for medicinal products containing METHYLPHENIDATE

Member State (EU/EEA)	Marketing Authorisation Holder	Invented Name	Strength	Pharmaceutical form	Route of administration
AT - Austria	Janssen-Cilag Pharma GmbH Pfarrgasse 75 A-1232 Wien	Concerta 18 mg Retardtabletten	18 mg	Prolonged-release tablet	oral use
AT - Austria	Janssen-Cilag Pharma GmbH Pfarrgasse 75 A-1232 Wien	Concerta 36 mg Retardtabletten	36 mg	Prolonged-release tablet	oral use
AT - Austria	Janssen-Cilag Pharma GmbH Pfarrgasse 75 A-1232 Wien	Concerta 54 mg Retardtabletten	54 mg	Prolonged-release tablet	oral use
AT - Austria	Janssen-Cilag Pharma GmbH Pfarrgasse 75 A-1232 Wien	Concerta 27 mg Retardtabletten	27 mg	Prolonged-release tablet	oral use
AT - Austria	UCB Pharma GmbH Jaquingasse 16-18/3 A-1030 Wien	Equasym retard 10 mg - Hartkapseln mit veränderter Wirkstofffreisetzung	10 mg	Modified-release capsule, hard	oral use
AT - Austria	UCB Pharma GmbH Jaquingasse 16-18/3 A-1030 Wien	Equasym retard 20 mg - Hartkapseln mit veränderter Wirkstofffreisetzung	20 mg	Modified-release capsule, hard	oral use
AT - Austria	UCB Pharma GmbH Jaquingasse 16-18/3 A-1030 Wien	Equasym retard 30 mg - Hartkapseln mit veränderter Wirkstofffreisetzung	30 mg	Modified-release capsule, hard	oral use
AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 10 mg - retardierte Hartkapseln	10 mg	Prolonged-release capsule, hard	oral use
AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 20 mg - retardierte Hartkapseln	20 mg	Prolonged-release capsule, hard	oral use
AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 30 mg - retardierte Hartkapseln	30 mg	Prolonged-release capsule, hard	oral use

AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 40 mg - retardierte Hartkapseln	40 mg	Prolonged-release capsule, hard	oral use
AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 5 mg - Tabletten	5 mg	tablet	oral use
AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 10 mg - Tabletten	10 mg	tablet	oral use
AT - Austria	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 DE-58638 Iserlohn	Medikinet 20 mg - Tabletten	20 mg	tablet	oral use
AT - Austria	Novartis Pharma GmbH Brunner Straße 59 A-1235 Wien	Ritalin LA 20 mg - Kapseln	20 mg	Modified-release capsule, hard	oral use
AT - Austria	Novartis Pharma GmbH Brunner Straße 59 A-1235 Wien	Ritalin LA 30 mg - Kapseln	30 mg	Modified-release capsule, hard	oral use
AT - Austria	Novartis Pharma GmbH Brunner Straße 59 A-1235 Wien	Ritalin LA 40 mg - Kapseln	40 mg	Modified-release capsule, hard	oral use
AT - Austria	Novartis Pharma GmbH Brunner Straße 59 A-1235 Wien	Ritalin 10 mg - Tabletten	10 mg	tablet	oral use
AT - Austria	Laboratorios Rubio SA C/Industria 29, Poligon Industrial Compte de Sert ES-08755 Castellbisbal (Barcelona)	RUBIFEN 5 mg -Tabletten	5 mg	tablet	oral use
AT - Austria	Laboratorios Rubio SA C/Industria 29, Poligon Industrial Compte de Sert ES-08755 Castellbisbal (Barcelona)	RUBIFEN 10 mg -Tabletten	10 mg	tablet	oral use
AT - Austria	Laboratorios Rubio SA C/Industria 29, Poligon Industrial Compte de Sert ES-08755 Castellbisbal (Barcelona)	RUBIFEN 20 mg -Tabletten	20 mg	tablet	oral use
BE - Belgium	JANSSEN CILAG N.V. Roderveldlaan, 1 B-2600 BERCHEM	CONCERTA 18 MG	18 mg	Prolonged-release tablet	oral use

BE - Belgium	JANSSEN CILAG N.V. Roderveldlaan, 1 B-2600 BERCHEM	CONCERTA 36 MG	36 mg	Prolonged-release tablet	oral use
BE - Belgium	JANSSEN CILAG N.V. Roderveldlaan, 1 B-2600 BERCHEM	CONCERTA 54 MG	54 mg	Prolonged-release tablet	oral use
BE - Belgium	JANSSEN CILAG N.V. Roderveldlaan, 1 B-2600 BERCHEM	CONCERTA 27 MG	27 mg	Prolonged-release tablet	oral use
BE - Belgium	NOVARTIS PHARMA N.V. Medialaan, 40 1800 VILVOORDE	RILATINE	10 mg	tablet	oral use
BE - Belgium	NOVARTIS PHARMA N.V. Medialaan, 40 1800 VILVOORDE	RILATINE MODIFIED RELEASE 20 MG	20 mg	Modified-release capsule, hard	oral use
BE - Belgium	NOVARTIS PHARMA N.V. Medialaan, 40 1800 VILVOORDE	RILATINE MODIFIED RELEASE 30 MG	30 mg	Modified-release capsule, hard	oral use
BE - Belgium	NOVARTIS PHARMA N.V. Medialaan, 40 1800 VILVOORDE	RILATINE MODIFIED RELEASE 40 MG	40 mg	Modified-release capsule, hard	oral use
BG - Bulgaria	Johnson & Johnson D.O.O. Smartinska 53, 1000 Ljubljana, Slovenia	Concerta	36 mg	prolonged release tablet	Oral use
BG - Bulgaria	Johnson & Johnson D.O.O. Smartinska 53, 1000 Ljubljana, Slovenia	Concerta	18 mg	prolonged release tablet	Oral use
BG - Bulgaria	Johnson & Johnson D.O.O. Smartinska 53, 1000 Ljubljana, Slovenia	Concerta	54 mg	prolonged release tablet	Oral use

CY - Cyprus	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta	18 mg	prolonged-release tablet	oral use
CY - Cyprus	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta	36 mg	prolonged-release tablet	oral use
CY - Cyprus	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta	54 mg	prolonged-release tablet	oral use
CS - Czech Republic	Novartis s.r.o. Nagano III. U Nákladového nádraží 10 130 00 Praha 3, Czech Republic	RITALIN	10 mg	tablet	oral use
CS – Czech Republic	Janssen-Cilag s.r.o., Karla Engliše 3201/6, 150 00 Praha 5 – Smíchov, Czech Republic	CONCERTA 18 mg	18 mg	prolonged release tablet	oral use
CS – Czech Republic	Janssen-Cilag s.r.o., Karla Engliše 3201/6, 150 00 Praha 5 – Smíchov, Czech Republic	CONCERTA 36 mg	36 mg	prolonged release tablet	oral use
CS – Czech Republic	Janssen-Cilag s.r.o., Karla Engliše 3201/6, 150 00 Praha 5 – Smíchov, Czech Republic	CONCERTA 54 mg	54 mg	prolonged release tablet	oral use
DK - Denmark	Janssen-Cilag A/S Hammerbakken 19 DK-3460 Birkerød Denmark	CONCERTA	18 mg	Prolonged-release tablets	Oral use
DK-Denmark	Janssen-Cilag A/S Hammerbakken 19 DK-3460 Birkerød Denmark	CONCERTA	36 mg	Prolonged-release tablets	Oral use

DK - Denmark	Janssen-Cilag A/S Hammerbakken 19 DK-3460 Birkerød Denmark	CONCERTA	54 mg	Prolonged-release tablets	Oral use
DK - Denmark	UCB Nordic A/S Arne Jacobsen Allé 15, DK-2300 Kobenhavn S Denmark	Equasym	5 mg	Tablets	Oral
DK - Denmark	UCB Nordic A/S Arne Jacobsens Allé 15 DK-2300 Kobenhavn S Denmark	Equasym	10 mg	Tablets	Oral
DK - Denmark	UCB Nordic A/S Arne Jacobsens Allé 15 DK-2300 Kobenhavn S Denmark	Equasym	20 mg	Tablets	Oral
DK - Denmark	UCB Nordic A/S Arne Jacobsen Allé 15, DK-2300 Kobenhavn S Denmark	Equasym Depot	10, 20, 30 mg	Modified–release capsules, hard	Oral
DA	Medice Arzneimittle Kuhloweg 37-39 Iserlohn Germany	Medikinet	5, 10, 20 mg	Tablets	Oral
DA	Medice Arzneimittle Kuhloweg 37-39 Iserlohn Germany	Medikinet CR	10, 20, 30, 40 mg	Hard capsules, modified release	Oral
DA	Sandoz A/S C.F. Tietgens Boulevard 40 5220 Odense SØ Denmark	Motiron	5, 10, 20 mg	Tablets	Oral

DA	Novartis Healthcare Lyngbyvej 172 2100 København Ø Denmark	Ritalin	10 mg	Tablets	Oral
DA	Novartis Healthcare Lyngbyvej 172 2100 København Ø Denmark	Ritalin Uno	20, 30, 40 mg	Hard capsules, modifed release	oral
ES - Spain	Laboratorios RUBIO, SA Industria 29- Polígono industrial Comte de Sert Castellbisbal 08755	RUBIFEN 10 mg comprimidos	10 mg	tablets	oral use
ES - Spain	Laboratorios RUBIO, SA Industria 29- Polígono industrial Comte de Sert Castellbisbal 08755	RUBIFEN 20 mg comprimidos	20 mg	tablets	oral use
ES - Spain	Laboratorios RUBIO, SA Industria 29- Polígono industrial Comte de Sert Castellbisbal 08755	RUBIFEN 5 mg comprimidos	5 mg	tablets	oral use
ES - Spain	JANSSEN CILAG, SA Paseo de las doce estrellas, 5-7 Madrid 28042	CONCERTA 27 mg comprimidos de liberación prolongada	27 mg	prolonged-release tablet	oral use
ES - Spain	JANSSEN CILAG, SA Paseo de las doce estrellas, 5-7 Madrid 28042	CONCERTA 36 mg comprimidos de liberación prolongada	36 mg	prolonged-release tablet	oral use
ES - Spain	JANSSEN CILAG, SA Paseo de las doce estrellas, 5-7 Madrid 28042	CONCERTA 54 mg comprimidos de liberación prolongada	54 mg	prolonged-release tablet	oral use
ES - Spain	JANSEN CILANG, SA Paseo de las doce estrellas, 5-7 Madrid 28042	CONCERTA 18 mg comprimidos de liberación prolongada	18 mg	prolonged-release tablet	oral use
ES - Spain	Laboratorios RUBIO, SA Industria 29- Polígono industrial Comte de Sert Castellbisbal 08755	OMOZIN 5 mg comprimidos	5 mg	tablets	oral use

ES - Spain	Laboratorios RUBIO, SA Industria 29- Polígono industrial Comte de Sert Castellbisbal 08755	OMOZIN 10 mg comprimidos	10 mg	tablets	oral use
ES - Spain	Laboratorios RUBIO, SA Industria 29- Polígono industrial Comte de Sert Castellbisbal 08755	OMOZIN 20 mg comprimidos	20 mg	tablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 5 mg comprimidos	5mg	Tablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 10 mg comprimidos	10 mg	Tablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 20 mg comprimidos	20 mg	Tablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 10 mg cápsulas de liberación prolongada	10 mg	prolonged release Tablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 20 mg cápsulas liberación prlongada	20 mg	prolonged release Tablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 30 mg cápsulas liberación prolongada	30 mg	Prolonged releaseTablets	oral use
ES - Spain	Medice Arznemitel Putter GMBH Kuhloweg, 37 D 58638 Iselohon	MEDIKINET 40 mg cápsulas liberación prolongada	40 mg	Prolonged releaseTablets	oral use
ET – Estonia	Johnson & Johnson UAB, Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	18 mg	prolonged release tablet	oral use
ET – Estonia	Johnson & Johnson UAB, Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	36 mg	prolonged release tablet	oral use

8

ET – Estonia	Johnson & Johnson UAB, Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	54 mg	prolonged release tablet	oral use
FI - Finland	Janssen-Cilag Oy Metsänneidonkuja 8 02130 Espoo FINLAND	Concerta	18 mg	prolonged-release tablet	oral
FI - Finland	Janssen-Cilag Oy Metsänneidonkuja 8 02130 Espoo FINLAND	Concerta	27 mg	prolonged-release tablet	oral
FI - Finland	Janssen-Cilag Oy Metsänneidonkuja 8 02130 Espoo FINLAND	Concerta	36 mg	prolonged-release tablet	oral
FI - Finland	Janssen-Cilag Oy Metsänneidonkuja 8 02130 Espoo FINLAND	Concerta	54 mg	prolonged-release tablet	oral
FI - Finland	UCB Pharma Oy Finland Malminkaari 5 00700 Helsinki FINLAND	Equasym Retard	10 mg	Modified-release capsule, hard	oral
FI - Finland	UCB Pharma Oy Finland Malminkaari 5 00700 Helsinki FINLAND	Equasym Retard	20 mg	Modified-release capsule, hard	oral
FI - Finland	UCB Pharma Oy Finland Malminkaari 5 00700 Helsinki FINLAND	Equasym Retard	30 mg	Modified-release capsule, hard	oral
FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet	5 mg	tablet	oral
FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet	10 mg	tablet	oral
FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet	20 mg	tablet	oral
FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet CR	10 mg	prolonged-release capsule, hard	oral
FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet CR	20 mg	prolonged-release capsule, hard	oral

FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet CR	30 mg	prolonged-release capsule, hard	oral
FI - Finland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 ISERLOHN GERMANY	Medikinet CR	40 mg	prolonged-release capsule, hard	oral
FR - France	JANSSEN CILAG S.A. 1 rue Camille Desmoulins TSA 91003 92787 Issy-les-Moulineaux Cedex 9 France	CONCERTA LP	18mg	prolonged-release tablet	oral
FR - France	JANSSEN CILAG S.A. 1 rue Camille Desmoulins TSA 91003 92787 Issy-les-Moulineaux Cedex 9 France	CONCERTA LP	27mg	prolonged-release tablet	oral
FR - France	JANSSEN CILAG S.A. 1 rue Camille Desmoulins TSA 91003 92787 Issy-les-Moulineaux Cedex 9 France	CONCERTA LP	36mg	prolonged-release tablet	oral
FR - France	JANSSEN CILAG S.A. 1 rue Camille Desmoulins TSA 91003 92787 Issy-les-Moulineaux Cedex 9 France	CONCERTA LP	54mg	prolonged-release tablet	oral

FR - France	Laboratorios RUBIO SA c/ Industria 29, Pol.Ind.Comte de Sert 08755 Castellbisbal Barcelona SPAIN	METHYLPHENIDATE RUBIO	10mg	tablet	oral
FR - France	Laboratorios RUBIO SA c/ Industria 29, Pol.Ind.Comte de Sert 08755 Castellbisbal Barcelona SPAIN	METHYLPHENIDATE RUBIO	20mg	tablet	oral
FR - France	Laboratorios RUBIO SA c/ Industria 29, Pol.Ind.Comte de Sert 08755 Castellbisbal Barcelona SPAIN	METHYLPHENIDATE RUBIO	5mg	tablet	oral
FR - France	UCB PHARMA S.A. 21 rue de Neuilly BP 314 92003 Nanterre France	QUASYM L.P. 10MG, GELULE A LIBERATION MODIFIEE	10mg	Modified release capsule, hard	oral
FR - France	UCB PHARMA S.A. 21 rue de Neuilly BP 314 92003 Nanterre France	QUASYM L.P. 20MG, GELULE A LIBERATION MODIFIEE	20mg	Modified release capsule, hard	oral
FR - France	UCB PHARMA S.A. 21 rue de Neuilly BP 314 92003 Nanterre France	QUASYM L.P. 30MG, GELULE A LIBERATION MODIFIEE	30mg	Modified release capsule, hard	oral

FR - France	NOVARTIS PHARMA SAS 2-4 rue Lionel Terray 92500 Rueil-Malmaison France	RITALINE	10mg	tablet	oral
FR - France	NOVARTIS PHARMA SAS 2-4 rue Lionel Terray 92500 Rueil-Malmaison France	RITALINE L.P.	20mg	modified release capsule	oral
FR - France	NOVARTIS PHARMA SAS 2-4 rue Lionel Terray 92500 Rueil-Malmaison France	RITALINE L.P.	30mg	modified release capsule	oral
FR - France	NOVARTIS PHARMA SAS 2-4 rue Lionel Terray 92500 Rueil-Malmaison France	RITALINE L.P.	40mg	modified release capsule	oral
HU - Hungary	JANSSEN-CILAG Kft. 2045 Törökbálint, Tó Park	CONCERTA 18 mg	18mg	retard tabletta	oral
HU - Hungary	JANSSEN-CILAG Kft. 2045 Törökbálint, Tó Park	CONCERTA 36 mg	36mg	retard tabletta	oral
HU - Hungary	JANSSEN-CILAG Kft. 2045 Törökbálint, Tó Park	CONCERTA 54 mg	54mg	retard tabletta	oral
HU - Hungary	Novartis Hungária Kft.Pharma 1114 Budapest Bartók Béla út 43-47	RITALIN	10mg	tablet	oral
HU - Hungary	Novartis Hungária Kft.Pharma 1114 Budapest Bartók Béla út 43-47	RITALIN	20mg	prolonged release capsules	oral
HU - Hungary	Novartis Hungária Kft.Pharma 1114 Budapest Bartók Béla út 43-47	RITALIN	30mg	prolonged release capsules	oral

HU - Hungary	Novartis Hungária Kft.Pharma 1114 Budapest Bartók Béla út 43-47	RITALIN	40mg	prolonged release capsules	oral
IE - Ireland	Novartis Pharmaceuticals UK Ltd, Frimley Business Park, Frimley, Camberley GU16 7SR, UK	Ritalin	10mg	Tablet	Oral
IE - Ireland	Novartis Pharmaceuticals UK Ltd, Frimley Business Park, Frimley, Camberley GU16 7SR, UK	Ritalin LA	20mg, 30mg, 40mg	Capsules modified release	Oral
IE - Ireland	Janssen-Cilag Ltd, Saunderton, High Wycombe HP14 4HJ, Buckinghamshire, England.	Concerta XL	18mg, 27mg 36mg, 54mg	Prolonged release tablet	Oral
IE - Ireland	Ratiopharm GmbH, Graf-Arco-Strasse 3, D-	Equasym	5mg, 10mg, 20mg	Tablets	Oral
IE - Ireland	Ratiopharm GmbH, Graf-Arco-Strasse 3, D-	Equasym XL	10mg, 20mg, 30mg	Capsules modified release	Oral
IE – Ireland	UCB (Pharma) Ireland Ltd Magna Drive, Magna Business Park Citywest Road – Dublin 24 Ireland	Equasym 5 mg tablets	5mg	Tabletss	Oral
IE – Ireland	UCB (Pharma) Ireland Ltd Magna Drive, Magna Business Park Citywest Road – Dublin 24 Ireland	Equasym 10 mg tablets	10mg	Tablets	Oral
IE - Ireland	UCB (Pharma) Ireland Ltd Magna Drive, Magna Business Park Citywest Road – Dublin 24 Ireland	Equasym 20 mg tablets	30mg	Tablets	Oral

IE - Ireland	UCB (Pharma) Ireland Ltd Magna Drive, Magna Business Park Citywest Road – Dublin 24 Ireland	Equasym XL 10mg Modified-release capsules, hard	10 mg	Modified-release capsules, hard	Oral
IE - Ireland	UCB (Pharma) Ireland Ltd Magna Drive, Magna Business Park Citywest Road – Dublin 24 Ireland	Equasym XL 20mg Modified-release capsules, hard	20 mg	Modified-release capsules, hard	Oral
IE - Ireland	UCB (Pharma) Ireland Ltd Magna Drive, Magna Business Park Citywest Road – Dublin 24 Ireland	Equasym XL 30mg Modified-release capsules, hard	30 mg	Modified-release capsules, hard	Oral
LV – Latvia	UAB Johnson & Johnson, Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	18 mg	prolonged release tablet	oral use
LV – Latvia	UAB Johnson & Johnson, Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	36 mg	prolonged release tablet	oral use
LV – Latvia	UAB Johnson & Johnson, Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	54 mg	prolonged release tablet	oral use
LV - Latvia	Novartis Finland Oy, Metsanneidonkuja 10, , FI-02130 Espoo, Finland,	Ritalin 10 mg	10mg	tablets	oral
LT – Lithuania	UAB „Johnson & Johnson", Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	18 mg	prolonged release tablet	oral use
LT – Lithuania	UAB „Johnson & Johnson", Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	36 mg	prolonged release tablet	oral use
LT – Lithuania	UAB „Johnson & Johnson", Geležinio Vilko g. 18A, LT-08104 Vilnius, Lithuania.	CONCERTA	54 mg	prolonged release tablet	oral use

IT- Italy	Janssen- Cilag SpA Via M. Buonarroti 23 20093 Cologno Monzese (MI) - ITALY	CONCERTA	18 mg 36 mg 54 mg	Prolonged release tablet	oral
PT - Portugal	Janssen-Cilag Farmacêutica, Lda. - Estrada Consiglieri Pedroso, 69 A - Queluz de Baixo - 2734-503 Barcarena	Concerta	18 mg	Prolonged-release tablet	Oral use
PT - Portugal	Janssen-Cilag Farmacêutica, Lda. - Estrada Consiglieri Pedroso, 69 A - Queluz de Baixo - 2734-503 Barcarena	Concerta	27 mg	Prolonged-release tablet	Oral use
PT - Portugal	Janssen-Cilag Farmacêutica, Lda. - Estrada Consiglieri Pedroso, 69 A - Queluz de Baixo - 2734-503 Barcarena	Concerta	36 mg	Prolonged-release tablet	Oral use
PT - Portugal	Janssen-Cilag Farmacêutica, Lda. - Estrada Consiglieri Pedroso, 69 A - Queluz de Baixo - 2734-503 Barcarena	Concerta	54 mg	Prolonged-release tablet	Oral use
PT - Portugal	Novartis Farma - Produtos Farmacêuticos, S.A. - Rua do Centro Empresarial - Edificio 8 - Quinta da Beloura - 2710-444 Sintra	Ritalina LA	20 mg	Modifyed-release capsule, hard	Oral use
PT - Portugal	Novartis Farma - Produtos Farmacêuticos, S.A. - Rua do Centro Empresarial - Edificio 8 - Quinta da Beloura - 2710-444 Sintra	Ritalina LA	30 mg	Modifyed-release capsule, hard	Oral use
PT - Portugal	Novartis Farma - Produtos Farmacêuticos, S.A. - Rua do Centro Empresarial - Edificio 8 - Quinta da Beloura - 2710-444 Sintra	Ritalina LA	40 mg	Modifyed-release capsule, hard	Oral use
PT - Portugal	Laboratorios Rubió, S.A. - Calle Industria, 29 - Polígono Industrial	Rubifen	5 mg	Tablet	Oral use

	Comte de Sert - E-08755 Castellbisbal - Barcelona - Spain				
PT - Portugal	Laboratorios Rubió, S.A. - Calle Industria, 29 - Polígono Industrial Comte de Sert - E-08755 Castellbisbal - Barcelona - Spain	Rubifen	10 mg	Tablet	Oral use
PT - Portugal	Laboratorios Rubió, S.A. - Calle Industria, 29 - Polígono Industrial Comte de Sert - E-08755 Castellbisbal - Barcelona - Spain	Rubifen	20 mg	Tablet	Oral use
RO Romania	Janssen-Pharmaceutica N.V. Turnhoutseweg 30 2340 Beerse Belgium	Concerta XL 18 mg	18 mg	Prolonge release film-coated tablets	
RO Romania	Janssen-Pharmaceutica N.V. Turnhoutseweg 30 2340 Beerse Belgium	Concerta XL 36 mg	36 mg	Prolonge release film-coated tablets	
RO Romania	Janssen-Pharmaceutica N.V. Turnhoutseweg 30 2340 Beerse Belgium	Concerta XL 54 mg	54 mg	Prolonged release film-coated tablets	oral
SE – Sweden	Janssen-Cilag AB Box 7073 SE-192 07 Sollentuna Sweden	Concerta	18, 27 36, 54 mg	prolonged-release tablet	oral
SE – Sweden	UCB Nordic A/S Arne Jacobsens Allé 15 DK-2300 Kobenhavn S Denmark	Equasym Depot	10, 20, 30 mg	Modified-release capsules, hard	Oral
SE – Sweden	Novartis Sverige AB Box 1150 SE-183 11 Täby Sweden	Ritalin	10, 20, 30, 40 mg	10 mg – tablet 20, 30, 40 mg – modified-release capsule, hard	oral

SE – Sweden	UCB Nordic A/S Arne Jacobsens Allé 15 DK-2300 Kobenhavn S Denmark	Equasym	5, 10, 20 mg	tablet	oral
SE – Sweden	Medice Arzneimittel Pütter & Co. KG Kuhloweg 37-39 DE-58638 Iserlohn Germany	Medikinet	5, 10, 20, 30, 40 mg	5, 10, 20 mg – tablet 10, 20, 30, 40 – prolonged-release capsule, hard	oral
UK – United Kingdom	UCB PHARMA LIMITED, 208 BATH ROAD, SLOUGH, BERKSHIRE SL1 3WE UNITED KINGDOM	EQUASYM 10 MG TABLETS	10MG	TABLET	ORAL USE
UK – United Kingdom	UCB PHARMA LIMITED, 208 BATH ROAD, SLOUGH, BERKSHIRE SL1 3WE UNITED KINGDOM	EQUASYM 5 MG TABLETS	5MG	TABLET	ORAL USE
UK – United Kingdom	UCB PHARMA LIMITED, 208 BATH ROAD, SLOUGH, BERKSHIRE SL1 3WE UNITED KINGDOM	EQUASYM 20 MG TABLETS	20MG	TABLET	ORAL USE
UK – United Kingdom	UCB PHARMA LIMITED, 208 BATH ROAD, SLOUGH, BERKSHIRE SL1 3WE UNITED KINGDOM	EQUASYM XL 10 MG CAPSULES	10MG	MODIFIED-RELEASE CAPSULE, HARD	ORAL USE
UK – United Kingdom	UCB PHARMA LIMITED, 208 BATH ROAD, SLOUGH, BERKSHIRE SL1 3WE UNITED KINGDOM	EQUASYM XL 20 MG CAPSULES	20MG	MODIFIED-RELEASE CAPSULE, HARD	ORAL USE
UK – United Kingdom	UCB PHARMA LIMITED, 208 BATH ROAD, SLOUGH, BERKSHIRE SL1 3WE UNITED KINGDOM	EQUASYM XL 30 MG CAPSULES	30MG	MODIFIED-RELEASE CAPSULE, HARD	ORAL USE
UK – United Kingdom	NOVARTIS PHARMACEUTICALS UK LIMITED, FRIMLEY BUSINESS PARK, FRIMLEY, CAMBERLEY, SURREY GU16 7SR, UNITED KINGDOM	RITALIN	10MG	TABLET	ORAL USE

UK – United Kingdom	JANSSEN-CILAG LIMITED, SAUNDERTON, HIGH WYCOMBE, BUCKINGHAMSHIRE, HP14 4HJ, UNITED KINGDOM	CONCERTA® XL	18MG	PROLONGED-RELEASE TABLET	ORAL USE
UK – United Kingdom	JANSSEN-CILAG LIMITED, SAUNDERTON, HIGH WYCOMBE, BUCKINGHAMSHIRE, HP14 4HJ, UNITED KINGDOM	CONCERTA® XL	36MG	PROLONGED-RELEASE TABLET	ORAL USE
UK – United Kingdom	JANSSEN-CILAG LIMITED, SAUNDERTON, HIGH WYCOMBE, BUCKINGHAMSHIRE, HP14 4HJ, UNITED KINGDOM	CONCERTA® XL	54MG	PROLONGED-RELEASE TABLET	ORAL USE
UK – United Kingdom	JANSSEN-CILAG LIMITED, SAUNDERTON, HIGH WYCOMBE, BUCKINGHAMSHIRE, HP14 4HJ, UNITED KINGDOM	CONCERTA® XL	27MG	PROLONGED-RELEASE TABLET	ORAL USE
UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET	5MG	TABLET	ORAL USE
UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET	10MG	TABLET	ORAL USE
UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET	20MG	TABLET	ORAL USE
UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET XL	10MG	PROLONGED-RELEASE CAPSULE, HARD	ORAL USE
UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET XL	20MG	PROLONGED-RELEASE CAPSULE, HARD	ORAL USE

UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET XL	30MG	PROLONGED-RELEASE CAPSULE, HARD	ORAL USE
UK – United Kingdom	MEDICE ARZNEIMITTEL PUTTER GMBH & CO KG; KUHLOWEG 37; ISERLOHN 58638; GERMANY	MEDIKINET XL	40MG	PROLONGED-RELEASE CAPSULE, HARD	ORAL USE
UK – United Kingdom	ALFRED E TIEFENBACHER GMBH & CO; VAN-DER-SMISSEN-STRASSE 1; HAMBURG D-22767; GERMANY	ELMIFITEN	10MG	TABLET	ORAL USE
UK – United Kingdom	ALFRED E TIEFENBACHER GMBH & CO; VAN-DER-SMISSEN-STRASSE 1; HAMBURG D-22767; GERMANY	TIFINIDAT	10MG	TABLET	ORAL USE
UK – United Kingdom	LABORATORIOS RUBIÓ S A, C/INDUSTRIAL 29, POLIGONO INDUSTRIAL, COMTE DE SERT, CASTELLBISBAL, BARCELONA E-08755, SPAIN	TRANQUILYN	5MG	TABLET	ORAL USE
UK – United Kingdom	LABORATORIOS RUBIÓ S A, C/INDUSTRIAL 29, POLIGONO INDUSTRIAL, COMTE DE SERT, CASTELLBISBAL, BARCELONA E-08755, SPAIN	TRANQUILYN	10MG	TABLET	ORAL USE
UK – United Kingdom	LABORATORIOS RUBIÓ S A, C/INDUSTRIAL 29, POLIGONO INDUSTRIAL, COMTE DE SERT, CASTELLBISBAL, BARCELONA E-08755, SPAIN	TRANQUILYN	20MG	TABLET	ORAL USE
IS Iceland	UCB Nordic A/S c/o Vistor hf. Hörgatúni 2, 212 Garðabær, Iceland	Equasym Depot	30 mg	Modified-release capsule, hard	Oral
IS Iceland	UCB Nordic A/S c/o Vistor hf., Hörgatúni 2, 212 Garðabær, Iceland	Equasym Depot	20 mg	Modified-release capsule, hard	Oral

IS Iceland	UCB Nordic A/S, c/o Vistor hf., Hörgatúni 2, 212 Garðabær, Iceland	Equasym Depot	10 mg	Modified-release capsule, hard	Oral
IS	Janssen-Cilag AB c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland.	Concerta	54 mg	Prolonged release tablet	Oral
IS	Janssen-Cilag AB c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland.	Concerta	27 mg	Prolonged release tablet	Oral
IS	Janssen-Cilag AB c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland.	Concerta	36 mg	Prolonged release tablet	Oral
IS	Janssen-Cilag AB c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland.	Concerta	18 mg	Prolonged release tablet	Oral
IS Iceland	UCB Nordic A/S, c/o Vistor hf., Hörgatúni 2, 212 Garðabær, Iceland	Equasym	20 mg	Tablet	Oral
IS Iceland	UCB Nordic A/S, c/o Vistor hf., Hörgatúni 2, 212 Garðabær, Iceland	Equasym	10 mg	Tablet	Oral
IS Iceland	UCB Nordic A/S, c/o Vistor hf., Hörgatúni 2, 212 Garðabær, Iceland	Equasym	5 mg	Tablet	Oral
IS	Novartis Healthcare A/S, c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland	Ritalin	10 mg	Tablet	Oral
IS	Novartis Healthcare A/S, c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland	Ritalin Uno	40 mg	Modified-release capsule, hard	Oral
IS	Novartis Healthcare A/S, c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland	Ritalin Uno	20 mg	Modified-release capsule, hard	Oral
IS	Novartis Healthcare A/S, c/o Vistor hf., Hörgatún 2, 212 Garðabær, Iceland	Ritalin Uno	30 mg	Modified-release capsule, hard	Oral
DE – Germany	Novartis Pharma GmbH D-90327 Nuernberg	Ritalin	10. mg	Tablet	Oral
DE - Germany	Novartis Pharma GmbH D-90327 Nuernberg	MPH Novartis 20 mg Hartkapseln mit veränderter Wirkstofffreisetzung	20. mg	Modified-release capsule, hard	Oral
DE - Germany	Novartis Pharma GmbH D-90327 Nuernberg	MPH Novartis 30 mg Hartkapseln mit veränderter Wirkstofffreisetzung	30. mg	Modified-release capsule, hard	Oral
DE - Germany	Novartis Pharma GmbH D-90327 Nuernberg	MPH Novartis 40 mg Hartkapseln mit veränderter Wirkstofffreisetzung	40. mg	Modified-release capsule, hard	Oral

DE - Germany	Novartis Pharma GmbH D-90327 Nuernberg	Ritalin LA 20 mg Hartkapseln mit veränderter Wirkstofffreisetzung	20. mg	Modified-release capsule, hard	Oral
DE - Germany	Novartis Pharma GmbH D-90327 Nuernberg	Ritalin LA 30 mg Hartkapseln mit veränderter Wirkstofffreisetzung	30. mg	Modified-release capsule, hard	Oral
DE - Germany	Novartis Pharma GmbH D-90327 Nuernberg	Ritalin LA 40 mg Hartkapseln mit veränderter Wirkstofffreisetzung	40. mg	Modified-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet 10mg	11.56 mg	Tablet	Oral
DE - Germany	UCB GmbH Alfred-Nobel-Str. 10 D-40789 Monheim Germany	Equasym 5 mg Tabletten	5. mg	Tablet	Oral
DE - Germany	UCB GmbH Alfred-Nobel-Str. 10 D-40789 Monheim Germany	Equasym 10 mg Tabletten	10. mg	Tablet	Oral
DE - Germany	UCB GmbH Alfred-Nobel-Str. 10 D-40789 Monheim Germany	Equasym 20 mg Tabletten	20. mg	Tablet	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid 10mg	11.56 mg	Tablet	Oral
DE - Germany	Alfred E.Tiefenbacher GmbH & Co.KG Van-der-Smissen-Str. 1 D-22767 Hamburg	Methylphenidat TB	11.56 mg	Tablet	Oral
DE - Germany	HEXAL AG Postfach 1263 D-83602 Holzkirchen	Methylphenidat HEXAL 10mg Tabletten	10 mg	Tablet	Oral

DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet 5 mg	5. mg	Tablet	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet 20 mg	20. mg	Tablet	Oral
DE - Germany	Janssen-Cilag GmbH 41457 Neuss or Janssen Cilag GmbH Raiffeisenstr.8 41470 Neuss, Germany	CONCERTA 18 mg Retardtabletten	18. mg	Prolonged-release tablet	Oral
DE - Germany	Janssen-Cilag GmbH 41457 Neuss or Janssen Cilag GmbH Raiffeisenstr.8 41470 Neuss, Germany	CONCERTA 27 mg Retardtabletten	27. mg	Prolonged-release tablet	Oral
DE - Germany	Janssen-Cilag GmbH 41457 Neuss or Janssen Cilag GmbH Raiffeisenstr.8 41470 Neuss, Germany	CONCERTA 36 mg Retardtabletten	36. mg	Prolonged-release tablet	Oral
DE - Germany	Janssen-Cilag GmbH 41457 Neuss or Janssen Cilag GmbH Raiffeisenstr.8 41470 Neuss, Germany	CONCERTA 54 mg Retardtabletten	54. mg	Prolonged-release tablet	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet retard 10 mg	10. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet retard 20 mg	20. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet retard 5 mg	5. mg	Prolonged-release capsule, hard	Oral

DE - Germany	TAD Pharma GmbH Postfach 720 D-27457 Cuxhaven	METHYLPHENI TAD 5 mg Tabletten	5. mg	Tablet	Oral
DE - Germany	TAD Pharma GmbH Postfach 720 D-27457 Cuxhaven	METHYLPHENI TAD 10 mg Tabletten	10. mg	Tablet	Oral
DE - Germany	TAD Pharma GmbH Postfach 720 D-27457 Cuxhaven	METHYLPHENI TAD 20 mg Tabletten	20. mg	Tablet	Oral
DE - Germany	ratiopharm GmbH D-89070 Ulm	Methylphenidat-ratiopharm 10 mg Tabletten	10. mg	Tablet	Oral
DE - Germany	Alfred E.Tiefenbacher GmbH & Co.KG Van-der-Smissen-Str. 1 D-22767 Hamburg	Elmiften 10 mg Tabletten	10. mg	Tablet	Oral
DE - Germany	1 A Pharma GmbH Keltenring 1 + 3 D-82041 Oberhaching	Methylphenidat - 1 A Pharma 10 mg Tabletten	10. mg	Tablet	Oral
DE - Germany	Alfred E.Tiefenbacher GmbH & Co.KG Van-der-Smissen-Str. 1 D-22767 Hamburg	Tifinidat 10 mg Tabletten	10. mg	Tablet	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet retard 30 mg	30. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikinet retard 40 mg	40. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid 5 mg	5. mg	Tablet	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid 20 mg	20. mg	Tablet	Oral

DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid retard 10 mg	10. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid retard 20 mg	20. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid retard 5 mg	5. mg	Prolonged-release capsule, hard	Oral
DE - Germany	UCB GmbH Alfred-Nobel-Str. 10 D-40789 Monheim Germany	Equasym retard 10 mg Hartkapseln mit veränderter Wirkstofffreisetzung	10 mg	Modified-release capsule, hard	Oral
DE - Germany	UCB GmbH Alfred-Nobel-Str. 10 D-40789 Monheim Germany	Equasym retard 20 mg Hartkapseln mit veränderter Wirkstofffreisetzung	20. mg	Modified-release capsule, hard	Oral
DE - Germany	UCB GmbH Alfred-Nobel-Str. 10 D-40789 Monheim Germany	Equasym retard 30 mg Hartkapseln mit veränderter Wirkstofffreisetzung	30 mg	Modified-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid retard 30 mg	30. mg	Prolonged-release capsule, hard	Oral
DE - Germany	Medice Postfach 2063 D-58634 Iserlohn	Medikid retard 40 mg	40. mg	Prolonged-release capsule, hard	Oral
EL - Greece	JANSSEN-CILAG PHARMACEUTICAL S.A.C.I EIRINIS AVENUE 56, PEFKI, 15121 Tel: +30-210-6140061 Fax: +30-210-6140072	CONCERTA®	18 MG 36 MG 54 MG	PROLONGED RELEASE TABLETS	ORAL

EL - Greece	LABORATORIOS RUBIO S.A. C/Industria 29 Pol. Compte de Sert 08755-Castellbisbal (Barcelona) SPAIN Tel:+34-93-772 25 09 Fax: +34-93-772 25 01	METHYLPHENIDATE/RUBIO	5 MG/TAB 10 MG/TAB 20 MG/TAB	TABLETS	ORAL
EL - Greece	UCB A.E. VOULIAGMENIS AVENUE 580, ARGYROUPOLIS 16452	EQUASYM XR	10, 20, 30 mg	Modified-release capsules, hard	ORAL
IT	NOVARTIS FARMA S.P.A. Largo Umberto Boccioni 1 21040 VARESE	RITALIN	10 mg	Tablet 30	Oral
IT	NOVARTIS FARMA S.P.A. Largo Umberto Boccioni 1 21040 VARESE	RITALIN	20 mg	Tablet prolongued release 30	Oral
IT	NOVARTIS FARMA S.P.A. Largo Umberto Boccioni 1 21040 VARESE	RITALIN	20 mg	Tablet prolongued release 100	Oral
MT - Malta	Novartis Pharmaceuticals UK Ltd, Frimley Business Park, Frimley Camberley, Surrey GU16 7SR United Kingdom	Ritalin	10mg	tablet	oral
MT - Malta	UCB Pharma Limited, 208, Bath Road, Slough, Berkshire SL1 3WE United Kingdom	Equasym XL	10 mg	Modified release capsule, hard.	oral
MT - Malta	UCB Pharma Limited, 208, Bath Road, Slough, Berkshire SL1 3WE United Kingdom	Equasym XL	20 mg	Modified release capsule, hard.	oral
MT - Malta	UCB Pharma Limited, 208, Bath Road, Slough, Berkshire SL1 3WE United Kingdom	Equasym XL	30 mg	Modified release capsule, hard.	Oral

MT - Malta	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta®	18 mg	prolonged-release tablet	oral use
MT - Malta	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta®	36 mg	prolonged-release tablet	oral use
MT - Malta	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta®	54 mg	prolonged-release tablet	oral use
NL - Netherlands	Novartis Pharma B.V.; Raapopseweg 1; 6824 DP ARNHEM/NL	Ritalin	10 mg	tablets	oral
NL - Netherlands	Ratiopharm Nederland BV; Ronde Tocht 11;1507 CC ZAANDAM/NL	Methylfenidaat HCl ratiopharm 10 mg	10 mg	tablets	oral
NL - Netherlands	U.C.B. Pharma B.V.; Lage Mosten 33 ; 4822 NK BREDA/NL	Equasym 5 mg Tabletten	5 mg	tablets	oral
NL - Netherlands	U.C.B. Pharma B.V.; Lage Mosten 33 ; 4822 NK BREDA/NL	Equasym 10 mg tabletten	10 mg	tablets	oral
NL - Netherlands	U.C.B. Pharma B.V.; Lage Mosten 33 ; 4822 NK BREDA/NL	Equasym XL 10 mg Capsule	10 mg	modified release capsules	oral
NL - Netherlands	U.C.B. Pharma B.V.; Lage Mosten 33 ; 4822 NK BREDA/NL	Equasym XL 20 mg Capsule	20 mg	modified release capsules	oral
NL - Netherlands	U.C.B. Pharma B.V.; Lage Mosten 33 ; 4822 NK BREDA/NL	Equasym XL 30 mg Capsule	30 mg	modified release capsules	oral
NL - Netherlands	Alfred Tiefenbacher (GmbH & Co. KG); Van-der-Smisse- Strasse 1; 22767 HAMBURG/ Germany	Methylfenidaat HCl AET 10 mg	10 mg	tablets	oral
NL - Netherlands	Pharmachemie B.V.; Swensweg 5; 2003 RN HAARLEM/NL	Methylfenidaat HCl 10 mg PCH	10 mg	tablets	oral
NL - Netherlands	Hexal B.V.; Pastoorslaan 28; 2182 BX HILLEGOM/NL	Methylfenidaat HCl 10 mg tabletten	10 mg	tablets	oral

NL - Netherlands	Alfred Tiefenbacher (GmbH & Co. KG); Van-der-Smisse- Strasse 1; 22767 HAMBURG/ Germany	Tifinidat	10 mg	tablets	oral
NL - Netherlands	Janssen-Cilag B.V.; Dr. Paul Janssenweg 150 ; 5026 RH TILBURG/NL	Concerta 18 mg	18 mg	prolonged release tablets	oral
NL - Netherlands	Janssen-Cilag B.V.; Dr. Paul Janssenweg 150 ; 5026 RH TILBURG/NL	Concerta 27 mg	27 mg	prolonged release tablets	oral
NL - Netherlands	Janssen-Cilag B.V.; Dr. Paul Janssenweg 150 ; 5026 RH TILBURG/NL	Concerta 36 mg	36 mg	prolonged release tablets	oral
NL - Netherlands	Janssen-Cilag B.V.; Dr. Paul Janssenweg 150 ; 5026 RH TILBURG/NL	Concerta 54 mg	54 mg	prolonged release tablets	oral
NL - Netherlands	Laboratorios Rubio, S.A.; C\Industria, no. 29 Pol. Ind. Comte de Sert; 08755 CASTELLBISBAL, BARCELONA/ SPAIN	Methylfenidaat HCl 5 mg	5 mg	tablets	oral
NL - Netherlands	Laboratorios Rubio, S.A.; C\Industria, no. 29 Pol. Ind. Comte de Sert; 08755 CASTELLBISBAL, BARCELONA/ SPAIN	Methylfenidaat HCl 10 mg	10 mg	tablets	oral
NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet 5 mg	5 mg	tablets	oral
NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet 10 mg	10 mg	tablets	oral
NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet 20 mg	20 mg	tablets	oral

NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet CR 10 mg	10 mg	modified release capsules	oral
NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet CR 20 mg	20 mg	modified release capsules	oral
NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet CR 30 mg	30 mg	modified release capsules	oral
NL - Netherlands	Medice Arzneimittel Pütter GmbH; Kuhloweg 37; 58638 ISERLOHN/Germany	Medikinet CR 40 mg	40 mg	modified release capsules	oral
NO Norway	Janssen-Cilag AS Hoffsveien 1D 0275 Oslo, Norway	Concerta	18mg 36 mg 54 mg	prolonged-release tablet	oral
NO Norway	UCB Nordic A/S Arne Jacobsens Allé 15 2300 Köbenhavn S Denmark	Equasym tabletter 5 mg	5 mg	tablet	oral
NO Norway	UCB Nordic A/S Arne Jacobsens Allé 15 2300 Köbenhavn S Denmark	Equasym tabletter 10 mg	10 mg	tablet	oral
NO - Norway	UCB Nordic A/S Arne Jacobsens Allé 15 2300 Köbenhavn S Denmark	Equasym tabletter 20 mg	20 mg	tablet	oral
NO	UCB Nordic A/S Arne Jacobsens Allé 15 2300 Köbenhavn S Denmark	Equasym Depot	10 mg 20 mg 30 mg	modified-release capsule, hard	oral

NO	Novartis Norge AS Brynsalleèn 4 0667 Oslo, Norway	Ritalin	10 mg 20 mg 30 mg 40 mg	(10 mg - tablet) (20 mg, 30 mg, 40 mg - modified-release capsule, hard)	oral
NO	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 58638 Iserlohn Nordrhein-Westfalen, Germany	Medikinet	10 mg 20 mg 30 mg 40 mg	prolonged-release tablet	oral
NO	Medice Arzneimittel Pütter GmbH & Co KG Kuhloweg 37 58638 Iserlohn Nordrhein-Westfalen, Germany	Medikinet	5 mg 10 mg 20 mg	tablet	oral
PL - Poland	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta®	18 mg	prolonged-release tablet	oral use
PL - Poland	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta®	36 mg	prolonged-release tablet	oral use
PL - Poland	Janssen-Cilag International N.V. Turnhoutseweg 30 B-2340 Beerse Belgium	Concerta®	54 mg	prolonged-release tablet	oral use
PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet 5 mg	5 mg	tablet	oral use

PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet 10 mg	10 mg	tablet	oral use
PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet 20 mg	20 mg	tablet	oral use
PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet CR 10 mg	10 mg	prolonged-release capsule	oral use
PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet CR 20 mg	20 mg	prolonged-release capsule	oral use
PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet CR 30 mg	30 mg	prolonged-release capsule	oral use
PL - Poland	Medice Arzneimittel Pütter GmbH & Co. KG Kuhloweg 37 58638 Iserlohn Germany	Medikinet CR 40 mg	40 mg	prolonged-release capsule	oral use

LU	Novartis Pharma Roonstrasse 25 90429 Nürnberg Germany	Ritalin	10 mg	Tablets	Oral
LU Luxembourg	Janssen Cilag N.V./S.A Roderveldlaan 1, B- 2600 Berchem	Concerta	18 mg	Prolonged release tablets	Oral use
LU Luxembourg	Janssen Cilag N.V./S.A Roderveldlaan 1, B- 2600 Berchem	Concerta	27 mg	Prolonged release tablets	Oral use
LU Luxembourg	Janssen Cilag N.V./S.A Roderveldlaan 1, B- 2600 Berchem	Concerta	36 mg	Prolonged release tablets	Oral use
LU Luxembourg	Janssen Cilag N.V./S.A Roderveldlaan 1, B- 2600 Berchem	Concerta	54 mg	Prolonged release tablets	Oral use
LU	Medice Arzneimittel Pütter GmbH & Co Kuhloweg 37 58638 Iserlohn Germany	Medikinet	5 mg	tablets	oral
LU	Medice Arzneimittel Pütter GmbH & Co	Medikinet	10 mg	tablets	oral
LU	Medice Arzneimittel Pütter GmbH & Co	Medikinet	20 mg	Tablets	oral
LU	Medice Arzneimittel Pütter GmbH & Co	Medikinet retard	10 mg	Capsules	Oral
LU	Medice Arzneimittel Pütter GmbH & Co	Medikinet retard	20 mg	Capsules	Oral

LU	Medice Arzneimittel Pütter GmbH & Co	Medikinet retard	30 mg	Capsules	Oral
LU	Medice Arzneimittel Pütter GmbH & Co	Medikinet retard	40 MG	Capsules	Oral
SI	Johnson & Johnson d.o.o. Smartinska 53, 1000 Ljubljana, Slovenia	Concerta 18 mg tablete s podaljšanim sproščanjem	18 mg	Prolonged release tablets	Oral use
SI	Johnson & Johnson d.o.o. Smartinska 53, 1000 Ljubljana, Slovenia	Concerta 36 mg tablete s podaljšanim sproščanjem	36 mg	Prolonged release tablets	Oral use
SI	Johnson & Johnson d.o.o. Smartinska 53, 1000 Ljubljana, Slovenia	Concerta 54 mg tablete s podaljšanim sproščanjem	54 mg	Prolonged release tablets	Oral use
SK – Slovakia	Johnson & Johnson, s. r. o. Plynárenská 7/B 824 78 Bratislava Slovak republic	Concerta 18 mg tablety s predĺženým uvoľňovaním	18 mg	Prolonged-release tablet	oral use
SK – Slovakia	Johnson & Johnson, s. r. o. Plynárenská 7/B 824 78 Bratislava Slovak republic	Concerta 36 mg tablety s predĺženým uvoľňovaním	36 mg	Prolonged-release tablet	oral use
SK – Slovakia	Johnson & Johnson, s. r. o. Plynárenská 7/B 824 78 Bratislava Slovak republic	Concerta 54 mg tablety s predĺženým uvoľňovaním	54 mg	Prolonged-release tablet	oral use

Appendix C: Chinese Pharmacopeia

附件 2

2020 年版《中国药典》目录

二部目录

52 丁酸氢化可的松乳膏
53 七氟烷
54 吸入用七氟烷
55 三唑仑
56 三唑仑片
57 三硅酸镁
58 三磷酸腺苷二钠
59 干燥硫酸钙
60 大豆油（供注射用）
61 口服补液盐散（Ⅰ）
62 口服补液盐散（Ⅱ）
63 口服补液盐散（Ⅲ）
64 山梨醇
65 山梨醇注射液
66 门冬氨酸
67 门冬氨酸鸟氨酸
68 注射用门冬氨酸鸟氨酸
69 门冬酰胺
70 门冬酰胺片
71 门冬酰胺酶（埃希）
72 注射用门冬酰胺酶（埃希）
73 门冬酰胺酶（欧文）
74 注射用门冬酰胺酶（欧文）
75 己烯雌酚
76 己烯雌酚片
77 己烯雌酚注射液
78 己酮可可碱
79 己酮可可碱肠溶片
80 己酮可可碱注射液
81 己酮可可碱葡萄糖注射液
82 己酮可可碱氯化钠注射液
83 己酮可可碱缓释片
84 己酸羟孕酮
85 己酸羟孕酮注射液
86 马来酸曲美布汀
87 马来酸曲美布汀片
88 马来酸曲美布汀胶囊
89 马来酸伊索拉定
90 马来酸伊索拉定片
91 马来酸麦角新碱
92 马来酸麦角新碱注射液
93 马来酸依那普利
94 马来酸依那普利片
95 马来酸依那普利胶囊
96 马来酸咪达唑仑片
97 马来酸氟伏沙明
98 马来酸氟伏沙明片
99 马来酸氯苯那敏
100 马来酸氯苯那敏片
101 马来酸氯苯那敏注射液
102 马来酸氯苯那敏滴丸
103 马来酸噻吗洛尔
104 马来酸噻吗洛尔片
105 马来酸噻吗洛尔滴眼液
106 扎来普隆
107 扎来普隆片
108 扎来普隆胶囊
109 木糖醇
110 木糖醇颗粒
111 五肽胃泌素
112 五肽胃泌素注射液
113 五氟利多
114 五氟利多片
115 厄贝沙坦
116 厄贝沙坦片
117 厄贝沙坦分散片
118 厄贝沙坦胶囊
119 比沙可啶
120 比沙可啶肠溶片
121 比沙可啶栓

122 贝诺酯
123 贝诺酯片
124 贝敏伪麻片
125 牛磺酸
126 牛磺酸片
127 牛磺酸胶囊
128 牛磺酸散
129 牛磺酸颗粒
130 牛磺酸滴眼液
131 壬苯醇醚
132 壬苯醇醚阴道片
133 壬苯醇醚栓
134 壬苯醇醚膜
135 升华硫
136 硫软膏
137 乌司他丁
138 乌司他丁溶液
139 注射用乌司他丁
140 乌拉地尔
141 乌拉地尔注射液
142 乌苯美司
143 乌苯美司片
144 乌苯美司胶囊
145 乌洛托品
146 六甲蜜胺
147 六甲蜜胺片
148 六甲蜜胺胶囊
149 巴柳氮钠
150 巴氯芬
151 巴氯芬片
152 双水杨酯
153 双水杨酯片
154 双环醇
155 双环醇片
156 双氢青蒿素
157 双氢青蒿素片
158 双氢青蒿素哌喹片
159 双唑泰栓
160 双羟萘酸噻嘧啶
161 双羟萘酸噻嘧啶片
162 双羟萘酸噻嘧啶颗粒
163 双氯芬酸钠
164 双氯芬酸钠肠溶片
165 双氯芬酸钠肠溶胶囊
166 双氯芬酸钠栓
167 双氯芬酸钠搽剂
168 双氯芬酸钠滴眼液
169 双氯芬酸钾
170 双氯芬酸钾片
171 双氯芬酸钾胶囊
172 双氯非那胺
173 双氯非那胺片
174 双嘧达莫
175 双嘧达莫片
176 双嘧达莫注射液
177 双嘧达莫缓释胶囊
178 水合氯醛
179 水杨酸
180 水杨酸软膏
181 水杨酸二乙胺
182 水杨酸二乙胺乳膏
183 水杨酸镁
184 水杨酸镁片
185 水杨酸镁胶囊
186 去乙酰毛花苷
187 去乙酰毛花苷注射液
188 去氢胆酸
189 去氢胆酸片
190 去氧氟尿苷
191 去氧氟尿苷片

192 去氧氟尿苷分散片
193 去氧氟尿苷胶囊
194 去羟肌苷
195 去羟肌苷肠溶胶囊
196 去羟肌苷咀嚼片
197 甘油
198 甘油栓
199 甘油果糖氯化钠注射液
200 甘油磷酸钠
201 甘油磷酸钠注射液
202 甘氨双唑钠
203 注射用甘氨双唑钠
204 甘氨酰谷氨酰胺
205 甘氨酸
206 甘氨酸冲洗液
207 甘露醇
208 甘露醇注射液
209 艾司唑仑
210 艾司唑仑片
211 艾司唑仑注射液
212 艾司奥美拉唑钠
213 注射用艾司奥美拉唑钠
214 艾司奥美拉唑镁肠溶片
215 本芴醇
216 可待因桔梗片
217 丙戊酸钠
218 丙戊酸钠片
219 丙戊酸钠缓释片（Ⅰ）
220 注射用丙戊酸钠
221 丙戊酸镁
222 丙戊酸镁片
223 丙谷胺
224 丙谷胺片
225 丙谷胺胶囊
226 丙泊酚
227 丙泊酚乳状注射液
228 丙氨酰谷氨酰胺
229 丙氨酰谷氨酰胺注射液
230 注射用丙氨酰谷氨酰胺
231 丙氨酸
232 丙硫异烟胺
233 丙硫异烟胺肠溶片
234 丙硫氧嘧啶
235 丙硫氧嘧啶片
236 丙硫氧嘧啶肠溶片
237 丙酸交沙霉素
238 丙酸交沙霉素颗粒
239 丙酸倍氯米松
240 丙酸倍氯米松吸入气雾剂
241 丙酸倍氯米松吸入粉雾剂
242 丙酸倍氯米松乳膏
243 丙酸氟替卡松
244 丙酸氯倍他索
245 丙酸氯倍他索乳膏
246 丙酸睾酮
247 丙酸睾酮注射液
248 丙磺舒
249 丙磺舒片
250 左卡尼汀
251 左甲状腺素钠
252 左甲状腺素钠片
253 左炔诺孕酮
254 左炔诺孕酮片
255 左炔诺孕酮炔雌醇（三相）片
256 左炔诺孕酮炔雌醚片
257 左氧氟沙星
258 左氧氟沙星片
259 左氧氟沙星滴眼液
260 左旋多巴
261 左旋多巴片

262 左旋多巴胶囊
263 左羟丙哌嗪
264 左羟丙哌嗪片
265 左羟丙哌嗪胶囊
266 左奥硝唑
267 左奥硝唑氯化钠注射液
268 石杉碱甲
269 石杉碱甲片
270 石杉碱甲注射液
271 石杉碱甲胶囊
272 右布洛芬
273 右布洛芬胶囊
274 右佐匹克隆
275 右佐匹克隆
276 右酮洛芬氨丁三醇
277 右酮洛芬氨丁三醇胶囊
278 右旋糖酐 20
279 右旋糖酐 20 葡萄糖注射液
280 右旋糖酐 20 氯化钠注射液
281 右旋糖酐 40
282 右旋糖酐 40 葡萄糖注射液
283 右旋糖酐 40 氯化钠注射液
284 右旋糖酐 70
285 右旋糖酐 70 葡萄糖注射液
286 右旋糖酐 70 氯化钠注射液
287 右旋糖酐铁
288 右旋糖酐铁片
289 右旋糖酐铁注射液
290 布美他尼
291 布美他尼片
292 布美他尼注射液
293 布洛伪麻片
294 布洛伪麻胶囊
295 布洛芬
296 布洛芬口服溶液
297 布洛芬片
298 布洛芬胶囊
299 布洛芬混悬滴剂
300 布洛芬缓释胶囊
301 布洛芬糖浆
302 戊四硝酯粉
303 戊四硝酯片
304 戊酸雌二醇
305 戊酸雌二醇注射液
306 扑米酮
307 扑米酮片
308 卡马西平
309 卡马西平片
310 卡马西平胶囊
311 卡比马唑
312 卡比马唑片
313 卡比多巴
314 卡比多巴片
315 卡巴胆碱
316 卡巴胆碱注射液
317 卡托普利
318 卡托普利片
319 卡前列甲酯
320 卡前列甲酯栓
321 卡莫司汀
322 卡莫司汀注射液
323 卡莫氟
324 卡莫氟片
325 卡铂
326 卡铂注射液
327 卡培他滨
328 卡培他滨片
329 卡维地洛
330 卡维地洛片
331 卡维地洛胶囊

332 叶酸
333 叶酸片
334 甲地高辛
335 甲地高辛片
336 甲芬那酸
337 甲芬那酸片
338 甲芬那酸胶囊
339 甲状腺粉
340 甲状腺片
341 甲苯咪唑
342 甲苯咪唑片
343 甲苯磺丁脲
344 甲苯磺丁脲片
345 甲砜霉素
346 甲砜霉素肠溶片
347 甲砜霉素胶囊
348 甲钴胺
349 甲钴胺片
350 甲钴胺注射液
351 甲钴胺胶囊
352 甲氧苄啶
353 甲氧苄啶片
354 甲氧苄啶注射液
355 甲氧氯普胺
356 甲氧氯普胺片
357 盐酸甲氧氯普胺注射液
358 甲氨蝶呤
359 甲氨蝶呤片
360 注射用甲氨蝶呤
361 甲基多巴
362 甲基多巴片
363 甲酚
364 甲酚皂溶液
365 甲硝唑
366 甲硝唑片
367 甲硝唑阴道泡腾片
368 甲硝唑注射液
369 甲硝唑栓
370 甲硝唑胶囊
371 甲硝唑葡萄糖注射液
372 甲硝唑氯化钠注射液
373 甲硝唑凝胶
374 甲硫氨酸
375 甲硫氨酸片
376 甲硫酸新斯的明
377 甲硫酸新斯的明注射液
378 甲紫
379 甲紫溶液
380 甲巯咪唑
381 甲巯咪唑片
382 甲巯咪唑肠溶片
383 甲睾酮
384 甲睾酮片
385 甲醛溶液
386 甲磺酸多沙唑嗪
387 甲磺酸多沙唑嗪片
388 甲磺酸多沙唑嗪胶囊
389 甲磺酸加贝酯
390 注射用甲磺酸加贝酯
391 甲磺酸培氟沙星
392 甲磺酸培氟沙星片
393 甲磺酸培氟沙星注射液
394 甲磺酸培氟沙星胶囊
395 甲磺酸酚妥拉明
396 甲磺酸酚妥拉明片
397 甲磺酸酚妥拉明注射液
398 甲磺酸酚妥拉明胶囊
399 注射用甲磺酸酚妥拉明
400 甲磺酸瑞波西汀
401 甲磺酸瑞波西汀片

402 甲磺酸瑞波西汀胶囊
403 生长抑素
404 注射用生长抑素
405 白消安
406 白消安片
407 他扎罗汀
408 他扎罗汀凝胶
409 他唑巴坦
410 兰索拉唑
411 兰索拉唑肠溶片
412 兰索拉唑肠溶胶囊
413 注射用兰索拉唑
414 头孢丙烯
415 头孢丙烯干混悬剂
416 头孢丙烯片
417 头孢丙烯胶囊
418 头孢丙烯颗粒
419 头孢他啶
420 注射用头孢他啶
421 头孢尼西钠
422 注射用头孢尼西钠
423 头孢地尼
424 头孢地尼胶囊
425 头孢地嗪钠
426 注射用头孢地嗪钠
427 头孢西丁钠
428 注射用头孢西丁钠
429 头孢曲松钠
430 注射用头孢曲松钠
431 头孢米诺钠
432 注射用头孢米诺钠
433 头孢克肟
434 头孢克肟片
435 头孢克肟胶囊
436 头孢克肟颗粒
437 头孢克洛
438 头孢克洛干混悬剂
439 头孢克洛片
440 头孢克洛胶囊
441 头孢克洛颗粒
442 头孢呋辛钠
443 注射用头孢呋辛钠
444 头孢呋辛酯
445 头孢呋辛酯片
446 头孢呋辛酯胶囊
447 头孢孟多酯钠
448 注射用头孢孟多酯钠
449 头孢拉定
450 头孢拉定干混悬剂
451 头孢拉定片
452 头孢拉定胶囊
453 头孢拉定颗粒
454 注射用头孢拉定
455 头孢泊肟酯
456 头孢泊肟酯干混悬剂
457 头孢泊肟酯片
458 头孢泊肟酯胶囊
459 头孢哌酮
460 头孢哌酮钠
461 注射用头孢哌酮钠
462 头孢美唑钠
463 注射用头孢美唑钠
464 头孢唑肟钠
465 注射用头孢唑肟钠
466 头孢唑林钠
467 注射用头孢唑林钠
468 头孢氨苄
469 头孢氨苄干混悬剂
470 头孢氨苄片
471 头孢氨苄胶囊

472 头孢氨苄颗粒
473 头孢羟氨苄
474 头孢羟氨苄片
475 头孢羟氨苄胶囊
476 头孢羟氨苄颗粒
477 头孢替唑钠
478 注射用头孢替唑钠
479 头孢硫脒
480 注射用头孢硫脒
481 头孢噻吩钠
482 注射用头孢噻吩钠
483 头孢噻肟钠
484 注射用头孢噻肟钠
485 司可巴比妥钠
486 司可巴比妥钠胶囊
487 司他夫定
488 司他夫定胶囊
489 司坦唑醇
490 司坦唑醇片
491 司帕沙星
492 司帕沙星片
493 司帕沙星胶囊
494 司莫司汀
495 司莫司汀胶囊
496 尼可刹米
497 尼可刹米注射液
498 尼尔雌醇
499 尼尔雌醇片
500 尼美舒利
501 尼美舒利片
502 尼莫地平
503 尼莫地平片
504 尼莫地平分散片
505 尼莫地平软胶囊
506 尼莫地平注射液
507 尼莫地平胶囊
508 尼索地平
509 尼索地平片
510 尼索地平胶囊
511 尼群地平
512 尼群地平片
513 尼群地平软胶囊
514 加巴喷丁
515 加巴喷丁片
516 加巴喷丁胶囊
517 对乙酰氨基酚
518 对乙酰氨基酚片
519 对乙酰氨基酚咀嚼片
520 对乙酰氨基酚泡腾片
521 对乙酰氨基酚注射液
522 对乙酰氨基酚栓
523 对乙酰氨基酚胶囊
524 对乙酰氨基酚颗粒
525 对乙酰氨基酚滴剂
526 对乙酰氨基酚凝胶
527 对氨基水杨酸钠
528 对氨基水杨酸钠肠溶片
529 注射用对氨基水杨酸钠
530 矛头腹蛇血凝酶
531 注射用矛头腹蛇血凝酶
532 丝氨酸
533 丝裂霉素
534 注射用丝裂霉素
535 吉他霉素
536 吉他霉素片
537 吉非罗齐
538 吉非罗齐胶囊
539 地西泮
540 地西泮片
541 地西泮注射液

542 地红霉素
543 地红霉素肠溶片
544 地红霉素肠溶胶囊
545 地高辛
546 地高辛口服溶液
547 地高辛片
548 地高辛注射液
549 地奥司明
550 地奥司明片
551 地蒽酚
552 地蒽酚软膏
553 地塞米松
554 地塞米松片
555 地塞米松磷酸钠
556 地塞米松磷酸钠注射液
557 地塞米松磷酸钠滴眼液
558 亚叶酸钙
559 亚叶酸钙片
560 亚叶酸钙注射液
561 亚叶酸钙胶囊
562 亚甲蓝
563 亚甲蓝注射液
564 亚硝酸钠
565 亚硫酸氢钠甲萘醌
566 亚硫酸氢钠甲萘醌注射液
567 西尼地平
568 西尼地平片
569 西尼地平胶囊
570 西地碘含片
571 西吡氯铵
572 西吡氯铵含漱液
573 西咪替丁
574 西咪替丁片
575 西咪替丁注射液
576 西咪替丁胶囊
577 西咪替丁氯化钠注射液
578 西洛他唑
579 西洛他唑片
580 西洛他唑胶囊
581 灰黄霉素
582 灰黄霉素片
583 达那唑
584 达那唑胶囊
585 托西酸舒他西林
586 托西酸舒他西林片
587 托西酸舒他西林胶囊
588 托西酸舒他西林颗粒
589 托吡卡胺
590 托吡卡胺滴眼液
591 托拉塞米
592 托拉塞米片
593 托拉塞米胶囊
594 注射用托拉塞米
595 过氧苯甲酰
596 过氧苯甲酰乳膏
597 过氧苯甲酰凝胶
598 曲尼司特
599 曲尼司特片
600 曲尼司特胶囊
601 曲安西龙
602 曲安西龙片
603 曲安奈德
604 曲安奈德注射液
605 曲安奈德益康唑乳膏
606 曲克芦丁
607 曲克芦丁片
608 吗替麦考酚酯
609 吗替麦考酚酯片
610 吗替麦考酚酯分散片
611 吗替麦考酚酯胶囊

612 吗氯贝胺
613 吗氯贝胺片
614 吗氯贝胺胶囊
615 乳贝葡胺注射液
616 乳喷酸葡胺注射液
617 伏立康唑
618 伏立康唑片
619 伏立康唑胶囊
620 伏格列波糖
621 伏格列波糖片
622 伏格列波糖胶囊
623 华法林钠
624 华法林钠片
625 伊曲康唑
626 伊曲康唑胶囊
627 肌苷
628 肌苷口服溶液
629 肌苷片
630 肌苷注射液
631 肌苷胶囊
632 肌苷葡萄糖注射液
633 肌苷氯化钠注射液
634 注射用肌苷
635 多索茶碱
636 多索茶碱片
637 多索茶碱注射液
638 多索茶碱胶囊
639 多烯酸乙酯
640 多烯酸乙酯软胶囊
641 多潘立酮
642 多潘立酮片
643 色甘酸钠
644 色甘酸钠滴眼液
645 色氨酸
646 冰醋酸
647 齐多夫定
648 齐多夫定片
649 齐多夫定注射液
650 齐多夫定胶囊
651 齐多拉米双夫定片
652 交沙霉素
653 交沙霉素片
654 米力农
655 米力农注射液
656 米非司酮
657 米非司酮片
658 米诺地尔
659 米诺地尔片
660 米氮平
661 米氮平片
662 安钠咖注射液
663 那可丁
664 那可丁片
665 那他霉素
666 那他霉素滴眼液
667 那格列奈
668 那格列奈片
669 那格列奈胶囊
670 异戊巴比妥
671 异戊巴比妥片
672 异戊巴比妥钠
673 注射用异戊巴比妥钠
674 异卡波肼
675 异卡波肼片
676 异环磷酰胺
677 注射用异环磷酰胺
678 异氟烷
679 异亮氨酸
680 异烟肼
681 异烟肼片

682 注射用异烟肼
683 异烟腙
684 异烟腙片
685 异维 A 酸
686 异维 A 酸软胶囊
687 异维 A 酸凝胶
688 异福片
689 异福胶囊
690 异福酰胺片
691 异福酰胺胶囊
692 红霉素
693 红霉素肠溶片
694 红霉素肠溶胶囊
695 红霉素软膏
696 红霉素眼膏
697 麦白霉素
698 麦白霉素片
699 麦白霉素胶囊
700 坎地沙坦酯
701 坎地沙坦酯片
702 芬布芬
703 芬布芬片
704 芬布芬胶囊
705 苄达赖氨酸
706 苄达赖氨酸滴眼液
707 苄星青霉素
708 注射用苄星青霉素
709 苄氟噻嗪
710 苄氟噻嗪片
711 克拉维酸钾
712 阿莫西林克拉维酸钾干混悬剂
713 阿莫西林克拉维酸钾片
714 阿莫西林克拉维酸钾分散片
715 阿莫西林克拉维酸钾颗粒
716 注射用阿莫西林钠克拉维酸钾
717 克拉霉素
718 克拉霉素片
719 克拉霉素胶囊
720 克拉霉素颗粒
721 克林霉素磷酸酯
722 克林霉素磷酸酯外用溶液
723 克林霉素磷酸酯注射液
724 克林霉素磷酸酯栓
725 克罗米通
726 克罗米通乳膏
727 克霉唑
728 克霉唑口腔药膜
729 克霉唑阴道片
730 克霉唑阴道膨胀栓
731 克霉唑乳膏
732 克霉唑药膜
733 克霉唑栓
734 克霉唑喷雾剂
735 克霉唑溶液
736 克霉唑倍他米松乳膏
737 苏氨酸
738 劳拉西泮
739 劳拉西泮片
740 杆菌肽
741 杆菌肽软膏
742 杆菌肽眼膏
743 更昔洛韦
744 更昔洛韦胶囊
745 更昔洛韦氯化钠注射液
746 注射用更昔洛韦
747 两性霉素 B
748 注射用两性霉素 B
749 抑肽酶
750 注射用抑肽酶
751 来曲唑

752 来曲唑片
753 来氟米特
754 来氟米特片
755 呋喃妥因
756 呋喃妥因肠溶片
757 呋喃唑酮
758 呋喃唑酮片
759 呋塞米
760 呋塞米片
761 呋塞米注射液
762 吡拉西坦
763 吡拉西坦口服溶液
764 吡拉西坦片
765 吡拉西坦注射液
766 吡拉西坦胶囊
767 吡拉西坦氯化钠注射液
768 注射用吡拉西坦
769 吡罗昔康
770 吡罗昔康片
771 吡罗昔康肠溶片
772 吡罗昔康软膏
773 吡罗昔康注射液
774 吡罗昔康胶囊
775 吡罗昔康凝胶
776 吡哌酸
777 吡哌酸片
778 吡哌酸胶囊
779 吡喹酮
780 吡喹酮片
781 吡嗪酰胺
782 吡嗪酰胺片
783 吡嗪酰胺胶囊
784 吲达帕胺
785 吲达帕胺片
786 吲达帕胺胶囊
787 吲哚美辛
788 吲哚美辛片
789 吲哚美辛肠溶片
790 吲哚美辛乳膏
791 吲哚美辛贴片
792 吲哚美辛栓
793 吲哚美辛胶囊
794 吲哚美辛搽剂
795 吲哚美辛缓释片
796 吲哚美辛缓释胶囊
797 吲哚洛尔
798 吲哚菁绿
799 注射用吲哚菁绿
800 别嘌醇
801 别嘌醇片
802 利巴韦林
803 利巴韦林口服溶液
804 利巴韦林片
805 利巴韦林分散片
806 利巴韦林含片
807 利巴韦林注射液
808 利巴韦林胶囊
809 利巴韦林颗粒
810 利巴韦林滴眼液
811 利巴韦林滴鼻液
812 利巴韦林葡萄糖注射液
813 利巴韦林氯化钠注射液
814 注射用利巴韦林
815 利血平
816 利血平片
817 利血平注射液
818 利培酮
819 利培酮口服溶液
820 利培酮口崩片
821 利培酮片

822 利培酮胶囊
823 利鲁唑
824 利鲁唑片
825 利福平
826 利福平片
827 利福平胶囊
828 注射用利福平
829 利福昔明
830 利福昔明干混悬剂
831 利福昔明片
832 利福昔明胶囊
833 佐匹克隆
834 佐匹克隆片
835 佐匹克隆胶囊
836 佐米曲普坦
837 佐米曲普坦片
838 佐米曲普坦分散片
839 谷丙甘氨酸胶囊
840 谷氨酰胺
841 谷氨酰胺胶囊
842 谷氨酰胺颗粒
843 谷氨酸
844 谷氨酸片
845 谷氨酸钠
846 谷氨酸钠注射液
847 谷氨酸钾注射液
848 谷胱甘肽片
849 妥布霉素
850 妥布霉素滴眼液
851 妥布霉素地塞米松滴眼液
852 妥布霉素地塞米松眼膏
853 硫酸妥布霉素注射液
854 肝素钙
855 肝素钙注射液
856 肝素钠
857 肝素钠乳膏
858 肝素钠注射液
859 辛伐他汀
860 辛伐他汀片
861 辛伐他汀胶囊
862 间苯二酚
863 沙丁胺醇
864 沙丁胺醇吸入气雾剂
865 沙利度胺
866 沙利度胺片
867 泛昔洛韦
868 泛昔洛韦片
869 泛昔洛韦胶囊
870 泛酸钙
871 泛酸钙片
872 泛影酸
873 泛影葡胺注射液
874 泛影酸钠注射液
875 尿促性素
876 注射用尿促性素
877 尿素
878 尿素软膏
879 尿素乳膏
880 尿激酶
881 注射用尿激酶
882 阿片
883 阿片粉
884 阿片片
885 阿片酊
886 阿桔片
887 阿仑膦酸钠
888 阿仑膦酸钠片
889 阿仑膦酸钠肠溶片
890 阿卡波糖
891 阿卡波糖片

892 阿卡波糖胶囊
893 阿立哌唑
894 阿立哌唑口崩片
895 阿立哌唑片
896 阿立哌唑胶囊
897 阿司匹林
898 阿司匹林片
899 阿司匹林肠溶片
900 阿司匹林肠溶胶囊
901 阿司匹林泡腾片
902 阿司匹林栓
903 阿托伐他汀钙
904 阿米卡星
905 阿利沙坦酯
906 阿利沙坦酯片
907 阿昔洛韦
908 阿昔洛韦片
909 阿昔洛韦咀嚼片
910 阿昔洛韦乳膏
911 阿昔洛韦胶囊
912 阿昔洛韦葡萄糖注射液
913 阿昔洛韦滴眼液
914 阿昔洛韦颗粒
915 注射用阿昔洛韦
916 阿昔莫司
917 阿昔莫司胶囊
918 阿那曲唑
919 阿那曲唑片
920 阿苯达唑
921 阿苯达唑片
922 阿苯达唑胶囊
923 阿苯达唑颗粒
924 阿奇霉素
925 阿奇霉素干混悬剂
926 阿奇霉素片
927 阿奇霉素胶囊
928 阿奇霉素颗粒
929 注射用阿奇霉素
930 阿法骨化醇
931 阿法骨化醇片
932 阿法骨化醇软胶囊
933 阿洛西林钠
934 注射用阿洛西林钠
935 阿莫西林
936 阿莫西林干混悬剂
937 阿莫西林片
938 阿莫西林胶囊
939 阿莫西林颗粒
940 阿莫西林钠
941 注射用阿莫西林钠
942 阿维A
943 阿维A胶囊
944 阿替洛尔
945 阿替洛尔片
946 阿普唑仑
947 阿普唑仑片
948 阿德福韦酯
949 阿德福韦酯片
950 阿德福韦酯胶囊
951 阿魏酸哌嗪
952 阿魏酸哌嗪片
953 阿魏酸钠
954 阿魏酸钠片
955 注射用阿魏酸钠
956 纯化水
957 环丙沙星
958 乳酸环丙沙星注射液
959 环吡酮胺
960 环吡酮胺乳膏
961 环孢素

962 环孢素口服溶液
963 环扁桃酯
964 环扁桃酯胶囊
965 环磷酰胺
966 环磷酰胺片
967 注射用环磷酰胺
968 环磷腺苷
969 注射用环磷腺苷
970 青蒿素
971 青蒿素哌喹片
972 青蒿琥酯
973 青蒿琥酯片
974 注射用青蒿琥酯
975 青霉素 V 钾
976 青霉素 V 钾片
977 青霉素 V 钾胶囊
978 青霉素钠
979 注射用青霉素钠
980 青霉素钾
981 注射用青霉素钾
982 青霉胺
983 青霉胺片
984 苯丁酸氮芥
985 苯丁酸氮芥纸型片
986 苯扎贝特
987 苯扎贝特片
988 苯扎贝特胶囊
989 苯扎氯铵
990 苯扎氯铵溶液
991 苯扎溴铵
992 苯扎溴铵溶液
993 苯巴比妥
994 苯巴比妥片
995 苯巴比妥钠
996 注射用苯巴比妥钠
997 苯丙氨酸
998 苯丙酸诺龙
999 苯丙酸诺龙注射液
1000 苯丙醇
1001 苯丙醇软胶囊
1002 苯甲酸
1003 苯甲酸利扎曲普坦
1004 苯甲酸雌二醇
1005 苯甲酸雌二醇注射液
1006 苯甲醇
1007 苯佐卡因
1008 苯妥英钠
1009 苯妥英钠片
1010 注射用苯妥英钠
1011 苯唑西林钠
1012 苯唑西林钠片
1013 苯唑西林钠胶囊
1014 注射用苯唑西林钠
1015 苯酚
1016 苯溴马隆
1017 苯溴马隆片
1018 苯溴马隆胶囊
1019 苯磺顺阿曲库铵
1020 注射用苯磺顺阿曲库铵
1021 苯磺酸左氨氯地平
1022 苯磺酸左氨氯地平片
1023 苯磺酸氨氯地平
1024 苯磺酸氨氯地平片
1025 苯磺酸氨氯地平胶囊
1026 苯噻啶
1027 苯噻啶片
1028 林旦
1029 林旦乳膏
1030 拉西地平
1031 拉西地平片

1032 拉米夫定
1033 拉米夫定片
1034 拉氧头孢钠
1035 注射用拉氧头孢钠
1036 奈韦拉平
1037 奈韦拉平片
1038 奋乃静
1039 奋乃静片
1040 奋乃静注射液
1041 软皂
1042 非那雄胺
1043 非那雄胺片
1044 非那雄胺胶囊
1045 非洛地平
1046 非洛地平片
1047 非诺贝特
1048 非诺贝特片
1049 非诺贝特胶囊
1050 非诺洛芬钙
1051 非诺洛芬钙片
1052 帕司烟肼
1053 帕米膦酸二钠
1054 帕米膦酸二钠注射液
1055 肾上腺素
1056 盐酸肾上腺素注射液
1057 果糖
1058 明胶
1059 吸收性明胶海绵
1060 咖啡因
1061 罗红霉素
1062 罗红霉素干混悬剂
1063 罗红霉素片
1064 罗红霉素胶囊
1065 罗红霉素颗粒
1066 罗库溴铵
1067 罗库溴铵注射液
1068 罗通定
1069 罗通定片
1070 硫酸罗通定注射液
1071 垂体后叶粉
1072 垂体后叶注射液
1073 依巴斯汀
1074 依巴斯汀片
1075 依他尼酸
1076 依他尼酸片
1077 依他尼酸钠
1078 注射用依他尼酸钠
1079 依地酸钙钠
1080 依地酸钙钠注射液
1081 依托红霉素
1082 依托红霉素片
1083 依托红霉素胶囊
1084 依托红霉素颗粒
1085 依托泊苷
1086 依托泊苷软胶囊
1087 依托泊苷注射液
1088 依托咪酯
1089 依托咪酯注射液
1090 依托度酸
1091 依托度酸片
1092 依西美坦
1093 依西美坦片
1094 依西美坦胶囊
1095 依达拉奉
1096 依达拉奉注射液
1097 依诺沙星
1098 依诺沙星片
1099 依诺沙星乳膏
1100 依诺沙星胶囊
1101 依诺沙星滴眼液

1102 依替膦酸二钠
1103 依替膦酸二钠片
1104 依普黄酮
1105 依普黄酮片
1106 乳果糖浓溶液
1107 乳果糖口服溶液
1108 乳酶生
1109 乳酶生片
1110 乳酸
1111 乳酸依沙吖啶
1112 乳酸依沙吖啶注射液
1113 乳酸依沙吖啶溶液
1114 乳酸钙
1115 乳酸钙片
1116 乳酸钠溶液
1117 乳酸钠注射液
1118 乳酸钠林格注射液
1119 乳糖酸红霉素
1120 注射用乳糖酸红霉素
1121 鱼石脂
1122 鱼石脂软膏
1123 鱼肝油酸钠注射液
1124 放线菌素 D
1125 注射用放线菌素 D
1126 炔孕酮
1127 炔孕酮片
1128 炔诺孕酮
1129 炔诺孕酮炔雌醚片
1130 炔诺酮
1131 炔诺酮片
1132 炔诺酮滴丸
1133 炔雌醇
1134 炔雌醇片
1135 炔雌醚
1136 单硝酸异山梨酯
1137 单硝酸异山梨酯片
1138 单硝酸异山梨酯注射液
1139 单硝酸异山梨酯胶囊
1140 单硝酸异山梨酯缓释片
1141 单硝酸异山梨酯葡萄糖注射液
1142 单硝酸异山梨酯氯化钠注射液
1143 法罗培南钠
1144 法莫替丁
1145 法莫替丁片
1146 法莫替丁注射液
1147 法莫替丁胶囊
1148 法莫替丁颗粒
1149 注射用法莫替丁
1150 注射用水
1151 灭菌注射用水
1152 注射用维库溴铵
1153 注射用硫喷妥钠
1154 泮托拉唑钠
1155 泮托拉唑钠肠溶胶囊
1156 注射用泮托拉唑钠
1157 泼尼松
1158 泼尼松龙
1159 泼尼松龙片
1160 组氨酸
1161 细胞色素 C 溶液
1162 细胞色素 C 注射液
1163 注射用细胞色素 C
1164 玻璃酸酶
1165 注射用玻璃酸酶
1166 草乌甲素
1167 草乌甲素口服溶液
1168 草乌甲素片
1169 草酸艾司西酞普兰
1170 草酸艾司西酞普兰片
1171 茴拉西坦

1172 茴拉西坦胶囊
1173 苯海明
1174 苯海明片
1175 碱
1176 碱缓释片
1177 碱缓释胶囊
1178 荧光素钠
1179 荧光素钠注射液
1180 药用炭
1181 药用炭片
1182 药用炭胶囊
1183 枸橼酸乙胺嗪
1184 枸橼酸乙胺嗪片
1185 枸橼酸他莫昔芬
1186 枸橼酸他莫昔芬片
1187 枸橼酸托瑞米芬
1188 枸橼酸托瑞米芬片
1189 枸橼酸芬太尼
1190 枸橼酸芬太尼注射液
1191 枸橼酸坦度螺酮
1192 枸橼酸坦度螺酮胶囊
1193 枸橼酸哌嗪
1194 枸橼酸哌嗪片
1195 枸橼酸哌嗪糖浆
1196 枸橼酸钠
1197 抗凝血用枸橼酸钠溶液
1198 输血用枸橼酸钠注射液
1199 枸橼酸钙
1200 枸橼酸钙片
1201 枸橼酸钾
1202 枸橼酸钾颗粒
1203 枸橼酸铋钾
1204 枸橼酸铋钾片
1205 枸橼酸铋钾胶囊
1206 枸橼酸铋钾颗粒
1207 枸橼酸铋雷尼替丁
1208 枸橼酸铋雷尼替丁片
1209 枸橼酸铋雷尼替丁胶囊
1210 枸橼酸喷托维林
1211 枸橼酸喷托维林片
1212 枸橼酸喷托维林滴丸
1213 枸橼酸锌
1214 枸橼酸锌片
1215 枸橼酸氯米芬
1216 枸橼酸氯米芬片
1217 枸橼酸氯米芬胶囊
1218 枸橼酸舒芬太尼
1219 枸橼酸舒芬太尼注射液
1220 柳氮磺吡啶
1221 柳氮磺吡啶肠溶片
1222 柳氮磺吡啶栓
1223 胃蛋白酶
1224 胃蛋白酶片
1225 胃蛋白酶颗粒
1226 含糖胃蛋白酶
1227 哌库溴铵
1228 注射用哌库溴铵
1229 哌拉西林
1230 哌拉西林钠
1231 注射用哌拉西林钠
1232 注射用哌拉西林钠他唑巴坦钠
1233 哈西奈德
1234 哈西奈德软膏
1235 哈西奈德乳膏
1236 哈西奈德涂膜
1237 哈西奈德溶液
1238 咪达唑仑
1239 咪达唑仑注射液
1240 咪康唑氯倍他索乳膏
1241 氟马西尼

1242 氟马西尼注射液
1243 氟比洛芬
1244 氟他胺
1245 氟他胺片
1246 氟尿苷
1247 氟尿嘧啶
1248 氟尿嘧啶乳膏
1249 氟尿嘧啶注射液
1250 氟罗沙星
1251 氟罗沙星片
1252 氟罗沙星胶囊
1253 氟哌利多
1254 氟哌利多注射液
1255 氟哌啶醇
1256 氟哌啶醇片
1257 氟哌啶醇注射液
1258 氟胞嘧啶
1259 氟胞嘧啶片
1260 氟胞嘧啶注射液
1261 氟康唑
1262 氟康唑片
1263 氟康唑注射液
1264 氟康唑胶囊
1265 氟康唑氯化钠注射液
1266 氟烷
1267 氟氯西林钠
1268 氟氯西林钠胶囊
1269 注射用氟氯西林钠
1270 氢化可的松
1271 氢化可的松片
1272 氢化可的松乳膏
1273 氢化可的松注射液
1274 氢化可的松琥珀酸钠
1275 注射用氢化可的松琥珀酸钠
1276 氢氧化铝
1277 氢氧化铝片
1278 氢氧化铝凝胶
1279 氢氯噻嗪
1280 氢氯噻嗪片
1281 氢溴酸山莨菪碱
1282 氢溴酸山莨菪碱片
1283 氢溴酸山莨菪碱注射液
1284 氢溴酸右美沙芬
1285 氢溴酸右美沙芬口服溶液
1286 氢溴酸右美沙芬片
1287 氢溴酸右美沙芬胶囊
1288 氢溴酸右美沙芬缓释片
1289 氢溴酸右美沙芬颗粒
1290 注射用氢溴酸右美沙芬
1291 氢溴酸东莨菪碱
1292 氢溴酸东莨菪碱片
1293 氢溴酸东莨菪碱注射液
1294 氢溴酸加兰他敏
1295 氢溴酸加兰他敏片
1296 氢溴酸加兰他敏注射液
1297 氢溴酸西酞普兰
1298 氢溴酸西酞普兰片
1299 氢溴酸后马托品
1300 氢溴酸烯丙吗啡
1301 氢溴酸烯丙吗啡注射液
1302 秋水仙碱
1303 秋水仙碱片
1304 重质碳酸镁
1305 重酒石酸去甲肾上腺素
1306 重酒石酸去甲肾上腺素注射液
1307 重酒石酸间羟胺
1308 重酒石酸间羟胺注射液
1309 复方十一烯酸锌软膏
1310 复方己酸羟孕酮注射液
1311 复方门冬维甘滴眼液

1312 复方甘草口服溶液
1313 复方甘草片
1314 复方左炔诺孕酮片
1315 复方左炔诺孕酮滴丸
1316 复方卡比多巴片
1317 复方卡托普利片
1318 复方甲苯咪唑片
1319 复方地芬诺酯片
1320 复方克霉唑乳膏
1321 复方呋塞米片
1322 复方利血平片
1323 复方利血平氨苯蝶啶片
1324 复方泛影葡胺注射液
1325 复方乳酸钠葡萄糖注射液
1326 复方炔诺孕酮片
1327 复方炔诺孕酮滴丸
1328 复方炔诺酮片
1329 复方炔诺酮膜
1330 复方庚酸炔诺酮注射液
1331 复方氢氧化铝片
1332 复方盐酸阿米洛利片
1333 复方莪术油栓
1334 复方氨基酸（15）双肽（2）注
1335 复方氨基酸注射液（18AA）
1336 复方氨基酸注射液（18AA-Ⅰ）
1337 复方氨基酸注射液（18AA-Ⅱ）
1338 复方氨基酸注射液（18AA-Ⅲ）
1339 复方氨基酸注射液（18AA-Ⅳ）
1340 复方铝酸铋片
1341 复方铝酸铋胶囊
1342 复方维生素C钠咀嚼片
1343 复方葡萄糖酸钙口服溶液
1344 复方氯化钠注射液
1345 复方氯化钠滴眼液
1346 复方蒿甲醚片
1347 复方酮康唑乳膏
1348 复方硼砂含漱液
1349 复方新霉素软膏
1350 复方樟脑酊
1351 复方醋酸甲地孕酮片
1352 复方醋酸地塞米松乳膏
1353 复方磺胺甲噁唑口服混悬液
1354 复方磺胺甲噁唑片
1355 复方磺胺甲噁唑注射液
1356 复方磺胺甲噁唑胶囊
1357 复方磺胺甲噁唑颗粒
1358 小儿复方磺胺甲噁唑片
1359 小儿复方磺胺甲噁唑颗粒
1360 复方磺胺嘧啶片
1361 复方磷酸萘酚喹片
1362 顺铂
1363 注射用顺铂
1364 胆茶碱
1365 胆茶碱片
1366 胆影酸
1367 胆影葡胺注射液
1368 胞磷胆碱钠
1369 胞磷胆碱钠片
1370 胞磷胆碱钠注射液
1371 胞磷胆碱钠葡萄糖注射液
1372 胞磷胆碱钠氯化钠注射液
1373 注射用胞磷胆碱钠
1374 注射用胞磷胆碱钠肌苷
1375 亮氨酸
1376 度米芬
1377 度米芬滴丸
1378 美司钠
1379 美司钠注射液
1380 美罗培南
1381 注射用美罗培南

1382 美洛西林钠
1383 注射用美洛西林钠
1384 美洛昔康
1385 美洛昔康片
1386 美洛昔康分散片
1387 美洛昔康胶囊
1388 前列地尔
1389 注射用前列地尔
1390 洛伐他汀
1391 洛伐他汀片
1392 洛伐他汀胶囊
1393 洛伐他汀颗粒
1394 洛莫司汀
1395 洛莫司汀胶囊
1396 浓戊二醛溶液
1397 稀戊二醛溶液
1398 浓过氧化氢溶液
1399 过氧化氢溶液
1400 稀氨溶液
1401 癸氟奋乃静
1402 癸氟奋乃静注射液
1403 绒促性素
1404 注射用绒促性素
1405 盐酸乙哌立松
1406 盐酸乙哌立松片
1407 盐酸乙胺丁醇
1408 盐酸乙胺丁醇片
1409 盐酸乙胺丁醇胶囊
1410 盐酸二甲双胍
1411 盐酸二甲双胍片
1412 盐酸二甲双胍肠溶片
1413 盐酸二甲双胍肠溶胶囊
1414 盐酸二甲双胍胶囊
1415 盐酸二甲弗林
1416 盐酸二氢埃托啡
1417 盐酸二氢埃托啡舌下片
1418 盐酸二氧丙嗪
1419 盐酸二氧丙嗪片
1420 盐酸丁丙诺啡
1421 盐酸丁丙诺啡舌下片
1422 盐酸丁丙诺啡注射液
1423 盐酸丁卡因
1424 注射用盐酸丁卡因
1425 盐酸丁螺环酮
1426 盐酸丁螺环酮片
1427 盐酸三氟拉嗪
1428 盐酸三氟拉嗪片
1429 盐酸土霉素
1430 盐酸土霉素片
1431 盐酸万古霉素
1432 注射用盐酸万古霉素
1433 盐酸大观霉素
1434 注射用盐酸大观霉素
1435 盐酸小檗碱
1436 盐酸小檗碱片
1437 盐酸小檗碱胶囊
1438 盐酸川芎嗪
1439 盐酸川芎嗪注射液
1440 盐酸马普替林
1441 盐酸马普替林片
1442 盐酸文拉法辛
1443 盐酸文拉法辛胶囊
1444 盐酸文拉法辛缓释片
1445 盐酸去甲万古霉素
1446 注射用盐酸去甲万古霉素
1447 盐酸去氧肾上腺素
1448 盐酸去氧肾上腺素注射液
1449 盐酸去氯羟嗪
1450 盐酸去氯羟嗪片
1451 盐酸艾司洛尔

1452 注射用盐酸艾司洛尔
1453 盐酸可卡因
1454 盐酸可乐定
1455 盐酸可乐定片
1456 盐酸可乐定注射液
1457 盐酸可乐定滴眼液
1458 盐酸丙卡巴肼
1459 盐酸丙卡巴肼肠溶片
1460 盐酸丙卡特罗
1461 盐酸丙卡特罗片
1462 盐酸丙卡特罗胶囊
1463 盐酸丙米嗪
1464 盐酸丙米嗪片
1465 盐酸丙帕他莫
1466 盐酸左布比卡因
1467 盐酸左布比卡因注射液
1468 盐酸左氧氟沙星
1469 盐酸左氧氟沙星片
1470 盐酸左氧氟沙星胶囊
1471 盐酸左旋咪唑
1472 盐酸左旋咪唑片
1473 盐酸左旋咪唑肠溶片
1474 盐酸左旋咪唑颗粒
1475 盐酸左旋咪唑糖浆
1476 盐酸布比卡因
1477 盐酸布比卡因注射液
1478 盐酸布桂嗪
1479 盐酸布桂嗪片
1480 盐酸布桂嗪注射液
1481 盐酸布替萘芬
1482 盐酸布替萘芬乳膏
1483 盐酸布替萘芬喷雾剂
1484 盐酸布替萘芬凝胶
1485 盐酸平阳霉素
1486 注射用盐酸平阳霉素
1487 盐酸卡替洛尔
1488 盐酸卡替洛尔滴眼液
1489 盐酸甲氧明
1490 盐酸甲氧明注射液
1491 盐酸甲氯芬酯
1492 盐酸甲氯芬酯胶囊
1493 注射用盐酸甲氯芬酯
1494 盐酸四环素
1495 盐酸四环素片
1496 盐酸四环素胶囊
1497 注射用盐酸四环素
1498 盐酸半胱氨酸
1499 盐酸头孢甲肟
1500 注射用盐酸头孢甲肟
1501 盐酸头孢他美酯
1502 盐酸头孢他美酯干混悬剂
1503 盐酸头孢他美酯片
1504 盐酸头孢他美酯胶囊
1505 盐酸头孢吡肟
1506 注射用盐酸头孢吡肟
1507 盐酸司来吉兰
1508 盐酸司来吉兰片
1509 盐酸尼卡地平
1510 盐酸尼卡地平片
1511 盐酸尼卡地平注射液
1512 盐酸尼卡地平葡萄糖注射液
1513 盐酸吉西他滨
1514 注射用盐酸吉西他滨
1515 盐酸托烷司琼
1516 盐酸托烷司琼片
1517 盐酸托烷司琼注射液
1518 盐酸托烷司琼胶囊
1519 注射用盐酸托烷司琼
1520 盐酸地匹福林
1521 盐酸地匹福林滴眼液

1522 盐酸地尔硫革
1523 盐酸地尔硫革片
1524 盐酸地尔硫革缓释片
1525 盐酸地芬尼多
1526 盐酸地芬尼多片
1527 盐酸地芬诺酯
1528 盐酸丙替利嗪
1529 盐酸丙替利嗪口服溶液
1530 盐酸丙替利嗪片
1531 盐酸丙替利嗪胶囊
1532 盐酸丙替利嗪滴剂
1533 盐酸曲马多
1534 盐酸曲马多片
1535 盐酸曲马多分散片
1536 盐酸曲马多注射液
1537 盐酸曲马多栓
1538 盐酸曲马多胶囊
1539 盐酸曲马多缓释片
1540 盐酸曲马多缓释胶囊
1541 盐酸曲美他嗪
1542 盐酸曲美他嗪片
1543 盐酸曲美他嗪胶囊
1544 盐酸曲普利啶
1545 盐酸吗啡
1546 盐酸吗啡片
1547 盐酸吗啡注射液
1548 盐酸吗啡缓释片
1549 盐酸伐昔洛韦
1550 盐酸伐昔洛韦片
1551 盐酸伐昔洛韦胶囊
1552 盐酸伪麻黄碱
1553 盐酸伊托必利
1554 盐酸伊托必利片
1555 盐酸伊托必利分散片
1556 盐酸伊托必利胶囊
1557 盐酸伊达比星
1558 注射用盐酸伊达比星
1559 盐酸多巴胺
1560 盐酸多巴胺注射液
1561 盐酸多巴酚丁胺
1562 盐酸多巴酚丁胺注射液
1563 盐酸多西环素
1564 盐酸多西环素片
1565 盐酸多西环素胶囊
1566 盐酸多沙普仑
1567 盐酸多沙普仑注射液
1568 盐酸多奈哌齐
1569 盐酸多柔比星
1570 注射用盐酸多柔比星
1571 盐酸多塞平
1572 盐酸多塞平片
1573 盐酸齐拉西酮
1574 盐酸齐拉西酮片
1575 盐酸齐拉西酮胶囊
1576 盐酸米托蒽醌
1577 盐酸米托蒽醌氯化钠注射液
1578 注射用盐酸米托蒽醌
1579 盐酸米多君
1580 盐酸米多君片
1581 盐酸米诺环素
1582 盐酸米诺环素片
1583 盐酸米诺环素胶囊
1584 盐酸安他唑啉
1585 盐酸安他唑啉片
1586 盐酸安非他酮
1587 盐酸安非他酮片
1588 盐酸安非他酮缓释片
1589 盐酸异丙肾上腺素
1590 盐酸异丙肾上腺素注射液
1591 盐酸异丙嗪

1592 盐酸异丙嗪片
1593 盐酸异丙嗪注射液
1594 盐酸苄丝肼
1595 多巴丝肼片
1596 多巴丝肼胶囊
1597 盐酸克仑特罗
1598 盐酸克仑特罗栓
1599 盐酸克林霉素
1600 盐酸克林霉素胶囊
1601 盐酸克林霉素棕榈酸酯
1602 盐酸克林霉素棕榈酸酯干混悬
1603 盐酸克林霉素棕榈酸酯颗粒
1604 盐酸吡硫醇
1605 盐酸吡硫醇片
1606 盐酸吡硫醇胶囊
1607 盐酸利多卡因
1608 盐酸利多卡因注射液
1609 盐酸利多卡因注射液（溶剂用）
1610 盐酸利多卡因胶浆（Ⅰ）
1611 盐酸利多卡因凝胶
1612 盐酸妥卡尼
1613 盐酸妥卡尼片
1614 盐酸妥卡尼胶囊
1615 盐酸妥拉唑林
1616 盐酸妥拉唑林片
1617 盐酸妥拉唑林注射液
1618 盐酸阿扑吗啡
1619 盐酸阿扑吗啡注射液
1620 盐酸阿米洛利
1621 盐酸阿米洛利片
1622 盐酸阿米替林
1623 盐酸阿米替林片
1624 盐酸阿莫地喹片
1625 盐酸阿普林定
1626 盐酸阿普林定片
1627 盐酸阿糖胞苷
1628 注射用盐酸阿糖胞苷
1629 盐酸纳美芬
1630 盐酸纳美芬注射液
1631 盐酸纳洛酮
1632 盐酸纳洛酮注射液
1633 注射用盐酸纳洛酮
1634 盐酸表柔比星
1635 注射用盐酸表柔比星
1636 盐酸环丙沙星
1637 盐酸环丙沙星片
1638 盐酸环丙沙星胶囊
1639 盐酸环丙沙星滴眼液
1640 盐酸苯乙双胍
1641 盐酸苯乙双胍片
1642 盐酸苯海拉明
1643 盐酸苯海拉明片
1644 盐酸苯海拉明注射液
1645 盐酸苯海索
1646 盐酸苯海索片
1647 盐酸林可霉素
1648 盐酸林可霉素片
1649 盐酸林可霉素注射液
1650 盐酸林可霉素胶囊
1651 盐酸林可霉素滴耳液
1652 盐酸林可霉素滴眼液
1653 盐酸奈福泮
1654 盐酸奈福泮片
1655 盐酸奈福泮注射液
1656 盐酸奈福泮胶囊
1657 盐酸非那吡啶
1658 盐酸非那吡啶片
1659 盐酸昂丹司琼
1660 盐酸昂丹司琼片
1661 盐酸昂丹司琼注射液

1662 盐酸罗哌卡因
1663 盐酸罗哌卡因注射液
1664 注射用盐酸罗哌卡因
1665 盐酸罗通定
1666 盐酸罗通定片
1667 盐酸帕罗西汀
1668 盐酸帕罗西汀片
1669 盐酸依米丁
1670 盐酸依米丁注射液
1671 盐酸舍曲林
1672 盐酸舍曲林片
1673 盐酸舍曲林胶囊
1674 盐酸金刚乙胺
1675 盐酸金刚乙胺片
1676 盐酸金刚乙胺颗粒
1677 盐酸金刚烷胺
1678 盐酸金刚烷胺片
1679 盐酸金刚烷胺胶囊
1680 盐酸金刚烷胺颗粒
1681 盐酸金刚烷胺糖浆
1682 盐酸金霉素
1683 盐酸金霉素软膏
1684 盐酸金霉素眼膏
1685 盐酸肼屈嗪
1686 盐酸肼屈嗪片
1687 盐酸法舒地尔
1688 盐酸法舒地尔注射液
1689 盐酸组氨酸
1690 盐酸哌甲酯
1691 盐酸哌甲酯片
1692 盐酸哌唑嗪
1693 盐酸哌唑嗪片
1694 盐酸哌替啶
1695 盐酸哌替啶片
1696 盐酸哌替啶注射液
1697 盐酸氟西汀
1698 盐酸氟西汀片
1699 盐酸氟西汀胶囊
1700 盐酸氟西泮
1701 盐酸氟西泮胶囊
1702 盐酸氟奋乃静
1703 盐酸氟奋乃静片
1704 盐酸氟奋乃静注射液
1705 盐酸氟桂利嗪
1706 盐酸氟桂利嗪片
1707 盐酸氟桂利嗪分散片
1708 盐酸氟桂利嗪胶囊
1709 盐酸度洛西汀
1710 盐酸度洛西汀肠溶片
1711 盐酸度洛西汀肠溶胶囊
1712 盐酸美他环素
1713 盐酸美他环素片
1714 盐酸美他环素胶囊
1715 盐酸美西律
1716 盐酸美西律片
1717 盐酸美西律注射液
1718 盐酸美西律胶囊
1719 盐酸美克洛嗪
1720 盐酸美克洛嗪片
1721 盐酸美沙酮
1722 盐酸美沙酮口服溶液
1723 盐酸美沙酮片
1724 盐酸美沙酮注射液
1725 盐酸洛贝林
1726 盐酸洛非西定
1727 盐酸洛非西定片
1728 盐酸洛哌丁胺
1729 盐酸洛哌丁胺胶囊
1730 盐酸洛美沙星
1731 盐酸洛美沙星片

1732 盐酸洛美沙星胶囊
1733 盐酸柔红霉素
1734 注射用盐酸柔红霉素
1735 盐酸班布特罗
1736 盐酸班布特罗片
1737 盐酸莫雷西嗪
1738 盐酸莫雷西嗪片
1739 盐酸索他洛尔
1740 盐酸索他洛尔片
1741 盐酸格拉司琼
1742 盐酸格拉司琼片
1743 盐酸格拉司琼注射液
1744 盐酸氨溴索
1745 盐酸氨溴索口服溶液
1746 盐酸氨溴索片
1747 盐酸氨溴索注射液
1748 盐酸氨溴索胶囊
1749 盐酸氨溴索缓释胶囊
1750 盐酸氨溴索糖浆
1751 盐酸特比萘芬
1752 盐酸特比萘芬片
1753 盐酸特比萘芬乳膏
1754 盐酸特拉唑嗪
1755 盐酸特拉唑嗪片
1756 盐酸特拉唑嗪胶囊
1757 盐酸倍他司汀
1758 盐酸倍他司汀片
1759 盐酸胺碘酮
1760 盐酸胺碘酮片
1761 盐酸胺碘酮注射液
1762 盐酸胺碘酮胶囊
1763 盐酸黄酮哌酯
1764 盐酸黄酮哌酯片
1765 盐酸黄酮哌酯胶囊
1766 盐酸萘甲唑啉
1767 盐酸萘甲唑啉滴眼液
1768 盐酸萘甲唑林滴鼻液
1769 盐酸萘替芬
1770 盐酸萘替芬软膏
1771 盐酸萘替芬溶液
1772 盐酸酚苄明
1773 盐酸酚苄明片
1774 盐酸酚苄明注射液
1775 盐酸麻黄碱
1776 盐酸麻黄碱注射液
1777 盐酸麻黄碱滴鼻液
1778 盐酸羟甲唑啉
1779 盐酸羟甲唑啉喷雾剂
1780 盐酸羟甲唑啉滴鼻液
1781 盐酸羟考酮
1782 盐酸羟考酮片
1783 盐酸羟苄唑
1784 盐酸羟苄唑滴眼液
1785 盐酸维拉帕米
1786 盐酸维拉帕米片
1787 盐酸维拉帕米注射液
1788 盐酸维拉帕米缓释片
1789 盐酸替扎尼定
1790 盐酸替扎尼定片
1791 盐酸硫必利
1792 盐酸硫必利注射液
1793 盐酸硫利达嗪
1794 盐酸硫利达嗪片
1795 盐酸喹那普利
1796 盐酸氮芥
1797 盐酸氮芥注射液
1798 盐酸氮革斯汀
1799 盐酸氮革斯汀片
1800 盐酸氮革斯汀鼻喷雾剂
1801 盐酸氯丙那林

1802 盐酸氮丙那林片
1803 盐酸氮丙嗪
1804 盐酸氮丙嗪片
1805 盐酸氮丙嗪注射液
1806 盐酸氮米帕明
1807 盐酸氮米帕明片
1808 盐酸氮米帕明注射液
1809 盐酸氮胺酮
1810 盐酸氮胺酮注射液
1811 盐酸奥布卡因
1812 盐酸奥布卡因滴眼液
1813 盐酸奥昔布宁
1814 盐酸奥昔布宁片
1815 盐酸普罗帕酮
1816 盐酸普罗帕酮片
1817 盐酸普罗帕酮注射液
1818 盐酸普罗帕酮胶囊
1819 盐酸普萘洛尔
1820 盐酸普萘洛尔片
1821 盐酸普萘洛尔注射液
1822 盐酸普鲁卡因
1823 盐酸普鲁卡因注射液
1824 注射用盐酸普鲁卡因
1825 盐酸普鲁卡因胺
1826 盐酸普鲁卡因胺片
1827 盐酸普鲁卡因胺注射液
1828 盐酸瑞芬太尼
1829 注射用盐酸瑞芬太尼
1830 盐酸赖氨酸
1831 盐酸雷尼替丁
1832 盐酸雷尼替丁片
1833 盐酸雷尼替丁泡腾颗粒
1834 盐酸雷尼替丁注射液
1835 盐酸雷尼替丁胶囊
1836 盐酸溴己新
1837 盐酸溴己新片
1838 盐酸罂粟碱
1839 盐酸罂粟碱片
1840 盐酸罂粟碱注射液
1841 盐酸精氨酸
1842 盐酸精氨酸片
1843 盐酸精氨酸注射液
1844 盐酸赛庚啶
1845 盐酸赛庚啶片
1846 盐酸赛洛唑啉
1847 盐酸赛洛唑啉滴鼻液
1848 盐酸噻氯匹定
1849 盐酸噻氯匹定片
1850 盐酸噻氯匹定胶囊
1851 桂利嗪
1852 桂利嗪片
1853 桂利嗪胶囊
1854 格列本脲
1855 格列本脲片
1856 格列齐特
1857 格列齐特片（II）
1858 格列吡嗪
1859 格列吡嗪片
1860 格列吡嗪胶囊
1861 格列吡嗪缓释胶囊
1862 格列美脲
1863 格列美脲片
1864 格列美脲胶囊
1865 格列喹酮
1866 格列喹酮片
1867 格隆溴铵
1868 格隆溴铵片
1869 核黄素磷酸钠
1870 核黄素磷酸钠注射液
1871 恩曲他滨

1872 恩曲他滨胶囊
1873 恩氟烷
1874 氧
1875 氧化亚氮
1876 氧化淀粉
1877 氧化锌
1878 氧化锌软膏
1879 氧化镁
1880 氧氟沙星
1881 氧氟沙星片
1882 氧氟沙星胶囊
1883 氧氟沙星眼膏
1884 氧氟沙星氯化钠注射液
1885 氧氟沙星滴耳液
1886 氧氟沙星滴眼液
1887 氧烯洛尔
1888 氧烯洛尔片
1889 氨力农
1890 注射用氨力农
1891 氨甲环酸
1892 氨甲环酸片
1893 氨甲环酸注射液
1894 氨甲环酸胶囊
1895 氨曲南
1896 注射用氨曲南
1897 氨苄西林
1898 氨苄西林丙磺舒颗粒
1899 氨苄西林钠
1900 注射用氨苄西林钠
1901 氨苯砜
1902 氨苯砜片
1903 氨苯蝶啶
1904 氨苯蝶啶片
1905 氨茶碱
1906 氨茶碱片
1907 氨茶碱注射液
1908 氨茶碱氯化钠注射液
1909 氨茶碱缓释片
1910 氨基己酸
1911 氨基己酸注射液
1912 氨酚待因片（Ⅰ）
1913 氨酚待因片（Ⅱ）
1914 氨鲁米特
1915 氨鲁米特片
1916 氨糖美辛肠溶片
1917 氨糖美辛肠溶胶囊
1918 特非那定
1919 特非那定片
1920 胸腺五肽
1921 胸腺五肽注射液
1922 注射用胸腺五肽
1923 胸腺法新
1924 注射用胸腺法新
1925 倍他米松
1926 倍他米松片
1927 倍他米松乳膏
1928 倍他米松磷酸钠
1929 倍他米松磷酸钠注射液
1930 胰岛素
1931 胰岛素注射液
1932 精蛋白锌胰岛素注射液
1933 精蛋白锌胰岛素注射液（30R）
1934 胰蛋白酶
1935 注射用胰蛋白酶
1936 胰酶
1937 胰酶肠溶片
1938 胰酶肠溶胶囊
1939 胰激肽原酶
1940 胰激肽原酶肠溶片
1941 胱氨酸

1942 胱氨酸片
1943 脂肪乳注射液（$C_{14\sim24}$）
1944 胶体果胶铋
1945 胶体果胶铋胶囊
1946 高三尖杉酯碱
1947 高三尖杉酯碱注射液
1948 高锰酸钾
1949 高锰酸钾外用片
1950 烟酰胺
1951 烟酰胺片
1952 烟酰胺注射液
1953 烟酸
1954 烟酸片
1955 烟酸注射液
1956 烟酸占替诺
1957 烟酸占替诺注射液
1958 烟酸占替诺氯化钠注射液
1959 酒石酸长春瑞滨
1960 酒石酸长春瑞滨注射液
1961 酒石酸双氢可待因
1962 酒石酸双氢可待因片
1963 酒石酸布托啡诺
1964 酒石酸布托啡诺注射液
1965 酒石酸麦角胺
1966 麦角胺咖啡因片
1967 酒石酸美托洛尔
1968 酒石酸美托洛尔片
1969 酒石酸美托洛尔注射液
1970 酒石酸美托洛尔胶囊
1971 酒石酸美托洛尔缓释片
1972 酒石酸唑吡坦
1973 酒石酸唑吡坦片
1974 酒石酸溴莫尼定
1975 酒石酸溴莫尼定滴眼液
1976 消旋山莨菪碱
1977 消旋山莨菪碱片
1978 盐酸消旋山莨菪碱注射液
1979 消旋卡多曲
1980 消旋卡多曲颗粒
1981 诺氟沙星
1982 诺氟沙星片
1983 诺氟沙星软膏
1984 诺氟沙星乳膏
1985 诺氟沙星胶囊
1986 诺氟沙星滴眼液
1987 培哚普利叔丁胺
1988 培哚普利叔丁胺片
1989 黄体酮
1990 黄体酮注射液
1991 萘丁美酮
1992 萘丁美酮片
1993 萘丁美酮胶囊
1994 萘哌地尔
1995 萘哌地尔片
1996 萘敏维滴眼液
1997 萘普生
1998 萘普生片
1999 萘普生栓
2000 萘普生胶囊
2001 萘普生颗粒
2002 萘普生钠
2003 萘普生钠片
2004 萘普待因片
2005 萘磺酸右丙氧芬
2006 萝巴新
2007 酞丁安
2008 酞丁安乳膏
2009 酞丁安搽剂
2010 酞丁安滴眼液
2011 酚咖片

2012 酚酞
2013 酚酞片
2014 酚磺乙胺
2015 注射用酚磺乙胺
2016 辅酶 Q10
2017 辅酶 Q10 片
2018 辅酶 Q10 软胶囊
2019 辅酶 Q10 注射液
2020 辅酶 Q10 胶囊
2021 铝酸铋
2022 铝碳酸镁
2023 铝碳酸镁咀嚼片
2024 铝镁司片
2025 脯氨酸
2026 麻醉乙醚
2027 羟丁酸钠
2028 羟丁酸钠注射液
2029 羟甲香豆素
2030 羟甲香豆素片
2031 羟甲香豆素胶囊
2032 羟苯磺酸钙
2033 羟苯磺酸钙胶囊
2034 羟基脲
2035 羟基脲片
2036 液状石蜡
2037 维 A 酸
2038 维 A 酸片
2039 维 A 酸乳膏
2040 维生素 A
2041 维生素 A 软胶囊
2042 维生素 AD 软胶囊
2043 维生素 AD 滴剂
2044 维生素 B_1
2045 维生素 B_1 片
2046 维生素 B_1 注射液
2047 维生素 B_2
2048 维生素 B_2 片
2049 维生素 B_2 注射液
2050 维生素 B_6
2051 维生素 B_6 片
2052 维生素 B_6 注射液
2053 维生素 B_{12}
2054 维生素 B_{12} 注射液
2055 维生素 B_{12} 滴眼液
2056 维生素 C
2057 维生素 C 片
2058 维生素 C 泡腾片
2059 维生素 C 泡腾颗粒
2060 维生素 C 注射液
2061 维生素 C 颗粒
2062 维生素 C 钙
2063 维生素 C 钠
2064 维生素 D_2
2065 维生素 D_2 软胶囊
2066 维生素 D_2 注射液
2067 维生素 D_3
2068 维生素 D_3 注射液
2069 维生素 E
2070 维生素 E 片
2071 维生素 E 软胶囊
2072 维生素 E 注射液
2073 维生素 E 粉
2074 维生素 K_1
2075 维生素 K_1 注射液
2076 琥乙红霉素
2077 琥乙红霉素片
2078 琥乙红霉素分散片
2079 琥乙红霉素胶囊
2080 琥乙红霉素颗粒
2081 琥珀氯霉素

2082 注射用琥珀氯霉素
2083 琥珀酸舒马普坦片
2084 替加氟
2085 替加氟片
2086 替加氟注射液
2087 替加氟胶囊
2088 替考拉宁
2089 注射用替考拉宁
2090 替米沙坦
2091 替莫唑胺
2092 替莫唑胺胶囊
2093 替硝唑
2094 替硝唑片
2095 替硝唑阴道片
2096 替硝唑阴道泡腾片
2097 替硝唑含片
2098 替硝唑栓
2099 替硝唑胶囊
2100 替硝唑葡萄糖注射液
2101 替硝唑氯化钠注射液
2102 联苯双酯
2103 联苯双酯滴丸
2104 联苯苄唑
2105 联苯苄唑乳膏
2106 联苯苄唑栓
2107 联苯苄唑溶液
2108 联磺甲氧苄啶片
2109 葛根素
2110 葛根素注射液
2111 注射用葛根素
2112 葡甲胺
2113 葡萄糖
2114 无水葡萄糖
2115 葡萄糖注射液
2116 葡萄糖粉剂
2117 葡萄糖氯化钠注射液
2118 葡萄糖酸亚铁
2119 葡萄糖酸亚铁片
2120 葡萄糖酸亚铁胶囊
2121 葡萄糖酸亚铁糖浆
2122 葡萄糖酸钙
2123 葡萄糖酸钙口服溶液
2124 葡萄糖酸钙片
2125 葡萄糖酸钙含片
2126 葡萄糖酸钙注射液
2127 葡萄糖酸钙氯化钠注射液
2128 葡萄糖酸钙颗粒
2129 葡萄糖酸锌
2130 葡萄糖酸锌口服溶液
2131 葡萄糖酸锌片
2132 葡萄糖酸锌颗粒
2133 葡萄糖酸锑钠
2134 葡萄糖酸锑钠注射液
2135 葡萄糖酸氯己定溶液
2136 稀葡萄糖酸氯己定溶液
2137 葡萄糖酸氯己定含漱液
2138 棓丙酯
2139 注射用棓丙酯
2140 棕榈氯霉素
2141 棕榈氯霉素混悬液
2142 棕榈氯霉素（B型）片
2143 棕榈氯霉素（B型）颗粒
2144 硬脂酸红霉素
2145 硬脂酸红霉素片
2146 硬脂酸红霉素胶囊
2147 硬脂酸红霉素颗粒
2148 硝西泮
2149 硝西泮片
2150 硝苯地平
2151 硝苯地平片

2152 硝苯地平软胶囊
2153 硝苯地平胶囊
2154 硝普钠
2155 注射用硝普钠
2156 硝酸毛果芸香碱
2157 硝酸毛果芸香碱滴眼液
2158 硝酸甘油溶液
2159 硝酸甘油气雾剂
2160 硝酸甘油片
2161 硝酸甘油注射液
2162 硝酸异山梨酯
2163 硝酸异山梨酯片
2164 硝酸异山梨酯乳膏
2165 硝酸异山梨酯注射液
2166 硝酸异山梨酯葡萄糖注射液
2167 硝酸异山梨酯喷雾剂
2168 硝酸异山梨酯缓释胶囊
2169 注射用硝酸异山梨酯
2170 硝酸咪康唑
2171 硝酸咪康唑阴道片
2172 硝酸咪康唑阴道软胶囊
2173 硝酸咪康唑阴道泡腾片
2174 硝酸咪康唑乳膏
2175 硝酸咪康唑栓
2176 硝酸咪康唑胶囊
2177 硝酸咪康唑搽剂
2178 硝酸益康唑
2179 硝酸益康唑阴道膨胀栓
2180 硝酸益康唑乳膏
2181 硝酸益康唑栓
2182 硝酸益康唑喷雾剂
2183 硝酸益康唑溶液
2184 硝酸硫胺
2185 硫代硫酸钠
2186 硫代硫酸钠注射液
2187 硫鸟嘌呤
2188 硫鸟嘌呤片
2189 硫唑嘌呤
2190 硫唑嘌呤片
2191 硫酸小诺霉素
2192 硫酸小诺霉素口服溶液
2193 硫酸小诺霉素片
2194 硫酸小诺霉素注射液
2195 硫酸长春地辛
2196 注射用硫酸长春地辛
2197 硫酸长春新碱
2198 注射用硫酸长春新碱
2199 硫酸长春碱
2200 注射用硫酸长春碱
2201 硫酸巴龙霉素
2202 硫酸巴龙霉素片
2203 硫酸双肼屈嗪
2204 硫酸双肼屈嗪片
2205 硫酸卡那霉素
2206 硫酸卡那霉素注射液
2207 硫酸卡那霉素滴眼液
2208 注射用硫酸卡那霉素
2209 硫酸亚铁
2210 硫酸亚铁片
2211 硫酸亚铁缓释片
2212 硫酸西索米星
2213 硫酸西索米星注射液
2214 硫酸吗啡
2215 硫酸吗啡注射液
2216 硫酸吗啡缓释片
2217 硫酸多黏菌素 B
2218 注射用硫酸多黏菌素 B
2219 硫酸庆大霉素
2220 硫酸庆大霉素片
2221 硫酸庆大霉素注射液

2222 硫酸庆大霉素缓释片
2223 硫酸庆大霉素颗粒
2224 硫酸庆大霉素滴眼液
2225 硫酸异帕米星
2226 硫酸异帕米星注射液
2227 硫酸沙丁胺醇
2228 硫酸沙丁胺醇片
2229 硫酸沙丁胺醇吸入气雾剂
2230 硫酸沙丁胺醇吸入粉雾剂
2231 硫酸沙丁胺醇注射液
2232 硫酸沙丁胺醇胶囊
2233 硫酸沙丁胺醇缓释片
2234 硫酸沙丁胺醇缓释胶囊
2235 硫酸阿托品
2236 硫酸阿托品片
2237 硫酸阿托品注射液
2238 硫酸阿托品眼膏
2239 硫酸阿米卡星
2240 硫酸阿米卡星注射液
2241 注射用硫酸阿米卡星
2242 硫酸软骨素钠
2243 硫酸软骨素钠片
2244 硫酸软骨素钠胶囊
2245 硫酸茚地那韦胶囊
2246 硫酸奈替米星
2247 硫酸奈替米星注射液
2248 硫酸依替米星
2249 硫酸依替米星注射液
2250 注射用硫酸依替米星
2251 硫酸鱼精蛋白
2252 硫酸鱼精蛋白注射液
2253 硫酸卷曲霉素
2254 注射用硫酸卷曲霉素
2255 硫酸奎宁
2256 硫酸奎宁片
2257 硫酸奎尼丁
2258 硫酸奎尼丁片
2259 硫酸钡（Ⅰ型）
2260 硫酸钡（Ⅰ型）干混悬剂
2261 硫酸钡（Ⅱ型）
2262 硫酸钡（Ⅱ型）干混悬剂
2263 硫酸氢氯吡格雷
2264 硫酸氢氯吡格雷片
2265 硫酸胍乙啶
2266 硫酸胍乙啶片
2267 硫酸核糖霉素
2268 注射用硫酸核糖霉素
2269 硫酸特布他林
2270 硫酸特布他林片
2271 硫酸特布他林吸入气雾剂
2272 硫酸链霉素
2273 注射用硫酸链霉素
2274 硫酸锌
2275 硫酸锌口服溶液
2276 硫酸锌片
2277 硫酸锌颗粒
2278 硫酸普拉睾酮钠
2279 注射用硫酸普拉睾酮钠
2280 硫酸新霉素
2281 硫酸新霉素片
2282 硫酸新霉素滴眼液
2283 硫酸镁
2284 硫酸镁注射液
2285 硫酸黏菌素
2286 硫酸黏菌素片
2287 硫糖铝
2288 硫糖铝口服混悬液
2289 硫糖铝分散片
2290 硫糖铝咀嚼片
2291 硫糖铝胶囊

2292 紫杉醇
2293 紫杉醇注射液
2294 氯贝丁酯
2295 氯贝丁酯胶囊
2296 氯化钙
2297 氯化钙注射液
2298 氯化钠
2299 生理氯化钠溶液
2300 氯化钠注射液
2301 浓氯化钠注射液
2302 氯化钾
2303 氯化钾片
2304 氯化钾注射液
2305 氯化钾葡萄糖注射液
2306 氯化钾氯化钠注射液
2307 氯化钾缓释片
2308 氯化铵
2309 氯化铵片
2310 氯化琥珀胆碱
2311 氯化琥珀胆碱注射液
2312 氯化筒箭毒碱
2313 氯化筒箭毒碱注射液
2314 氯芬待因片
2315 氯沙坦钾
2316 氯沙坦钾片
2317 氯沙坦钾胶囊
2318 氯法齐明
2319 氯法齐明软胶囊
2320 氯唑西林钠
2321 氯唑西林钠胶囊
2322 氯唑西林钠颗粒
2323 注射用氯唑西林钠
2324 氯诺昔康
2325 氯诺昔康片
2326 注射用氯诺昔康
2327 氯烯雌醚
2328 氯烯雌醚滴丸
2329 氯硝西泮
2330 氯硝西泮片
2331 氯硝西泮注射液
2332 氯硝柳胺
2333 氯硝柳胺片
2334 氯氮平
2335 氯氮平片
2336 氯氮䓬
2337 氯氮䓬片
2338 氯普噻吨
2339 氯普噻吨片
2340 氯普噻吨注射液
2341 氯碘羟喹
2342 氯碘羟喹乳膏
2343 氯雷他定
2344 氯雷他定片
2345 氯雷他定胶囊
2346 氯雷他定颗粒
2347 氯霉素
2348 氯霉素片
2349 氯霉素胶囊
2350 氯霉素眼膏
2351 氯霉素滴耳液
2352 氯霉素滴眼液
2353 氯磺丙脲
2354 氯磺丙脲片
2355 氯噻酮
2356 氯噻酮片
2357 氯膦酸二钠
2358 氯膦酸二钠注射液
2359 氯膦酸二钠胶囊
2360 奥扎格雷
2361 奥扎格雷钠

2362 奥卡西平
2363 奥卡西平片
2364 奥沙西泮
2365 奥沙西泮片
2366 奥沙利铂
2367 注射用奥沙利铂
2368 奥沙普秦
2369 奥沙普秦肠溶片
2370 奥沙普秦肠溶胶囊
2371 奥美拉唑
2372 奥美拉唑肠溶片
2373 奥美拉唑肠溶胶囊
2374 奥美拉唑钠
2375 奥美拉唑钠肠溶片
2376 注射用奥美拉唑钠
2377 奥美拉唑镁肠溶片
2378 奥硝唑
2379 奥硝唑片
2380 奥硝唑阴道泡腾片
2381 奥硝唑阴道栓
2382 奥硝唑注射液
2383 奥硝唑胶囊
2384 奥氮平
2385 奥氮平片
2386 舒巴坦钠
2387 注射用舒巴坦钠
2388 注射用头孢哌酮钠舒巴坦钠
2389 注射用氨苄西林钠舒巴坦钠
2390 舒必利
2391 舒必利片
2392 舒林酸
2393 舒林酸片
2394 普伐他汀钠
2395 普伐他汀钠片
2396 普伐他汀钠胶囊
2397 普罗布考
2398 普罗布考片
2399 普罗碘铵
2400 普罗碘铵注射液
2401 普鲁卡因青霉素
2402 注射用普鲁卡因青霉素
2403 富马酸比索洛尔
2404 富马酸比索洛尔片
2405 富马酸比索洛尔胶囊
2406 富马酸亚铁
2407 富马酸亚铁片
2408 富马酸亚铁咀嚼片
2409 富马酸亚铁胶囊
2410 富马酸亚铁颗粒
2411 富马酸喹硫平
2412 富马酸喹硫平片
2413 富马酸氯马斯汀
2414 富马酸氯马斯汀干混悬剂
2415 富马酸氯马斯汀片
2416 富马酸酮替芬
2417 富马酸酮替芬口服溶液
2418 富马酸酮替芬片
2419 富马酸酮替芬胶囊
2420 富马酸酮替芬滴眼液
2421 富马酸酮替芬滴鼻液
2422 富马酸福莫特罗
2423 富马酸福莫特罗片
2424 巯嘌呤
2425 巯嘌呤片
2426 瑞格列奈
2427 瑞格列奈片
2428 蒿甲醚
2429 蒿甲醚胶囊
2430 蒙脱石
2431 蒙脱石分散片

2432 蒙脱石散
2433 赖氨匹林
2434 注射用赖氨匹林
2435 赖诺普利
2436 赖诺普利片
2437 赖诺普利胶囊
2438 酮咯酸氨丁三醇
2439 酮咯酸氨丁三醇注射液
2440 酮洛芬
2441 酮洛芬肠溶胶囊
2442 酮洛芬搽剂
2443 酮康唑
2444 酮康唑乳膏
2445 酮康唑洗剂
2446 酪氨酸
2447 碘
2448 碘甘油
2449 碘酊
2450 碘化油
2451 碘化油软胶囊
2452 碘化油注射液
2453 碘化钠
2454 碘化钾
2455 碘化钾片
2456 碘佗拉酸
2457 碘佗拉葡胺注射液
2458 碘佛醇
2459 碘佛醇注射液
2460 碘苷
2461 碘苷滴眼液
2462 碘苯酯
2463 碘苯酯注射液
2464 碘帕醇注射液
2465 碘海醇
2466 碘海醇注射液
2467 碘番酸
2468 碘番酸片
2469 碘解磷定
2470 碘解磷定注射液
2471 碘酸钾
2472 碘酸钾片
2473 碘酸钾颗粒
2474 硼砂
2475 硼酸
2476 硼酸软膏
2477 硼酸溶液
2478 雷贝拉唑钠
2479 雷贝拉唑钠肠溶片
2480 雷贝拉唑钠肠溶胶囊
2481 雷米普利
2482 雷米普利片
2483 腺苷
2484 腺苷注射液
2485 腺苷钴胺
2486 腺苷钴胺片
2487 羧甲司坦
2488 羧甲司坦口服溶液
2489 羧甲司坦片
2490 羧甲司坦颗粒
2491 羧苄西林钠
2492 注射用羧苄西林钠
2493 溴丙胺太林
2494 溴丙胺太林片
2495 溴吡斯的明
2496 溴吡斯的明片
2497 溴新斯的明
2498 溴新斯的明片
2499 塞克硝唑
2500 塞克硝唑片
2501 塞克硝唑胶囊

2502 塞替派
2503 塞替派注射液
2504 福尔可定
2505 福尔可定片
2506 聚维酮碘
2507 聚维酮碘乳膏
2508 聚维酮碘栓
2509 聚维酮碘溶液
2510 聚维酮碘凝胶
2511 碱式碳酸铋
2512 碱式碳酸铋片
2513 碳酸利多卡因注射液
2514 碳酸钙
2515 碳酸钙咀嚼片
2516 碳酸钙颗粒
2517 碳酸氢钠
2518 碳酸氢钠片
2519 碳酸氢钠注射液
2520 碳酸锂
2521 碳酸锂片
2522 碳酸锂缓释片
2523 罂粟果提取物
2524 罂粟果提取物粉
2525 雌二醇
2526 雌二醇缓释贴片
2527 鲑降钙素
2528 鲑降钙素注射液
2529 注射用鲑降钙素
2530 精氨酸
2531 熊去氧胆酸
2532 熊去氧胆酸片
2533 缩宫素注射液
2534 注射用缩宫素
2535 樟脑（天然）
2536 樟脑（合成）
2537 醋氨己酸锌
2538 醋氨己酸锌胶囊
2539 醋氨苯砜
2540 醋氨苯砜注射液
2541 醋氯芬酸
2542 醋氯芬酸片
2543 醋氯芬酸胶囊
2544 醋酸去氧皮质酮
2545 醋酸去氨加压素
2546 去氨加压素片
2547 去氨加压素注射液
2548 注射用去氨加压素
2549 醋酸可的松
2550 醋酸可的松片
2551 醋酸可的松注射液
2552 醋酸丙氨瑞林
2553 注射用醋酸丙氨瑞林
2554 醋酸甲地孕酮
2555 醋酸甲地孕酮片
2556 醋酸甲地孕酮分散片
2557 醋酸甲地孕酮胶囊
2558 醋酸甲萘氢醌
2559 醋酸甲萘氢醌片
2560 醋酸甲羟孕酮
2561 醋酸甲羟孕酮片
2562 醋酸甲羟孕酮分散片
2563 醋酸甲羟孕酮胶囊
2564 醋酸甲羟孕酮混悬注射液
2565 醋酸地塞米松
2566 醋酸地塞米松片
2567 醋酸地塞米松乳膏
2568 醋酸地塞米松注射液
2569 醋酸由安奈德
2570 醋酸由安奈德乳膏
2571 醋酸由安奈德注射液

2572 醋酸曲普瑞林
2573 醋酸曲普瑞林注射液
2574 醋酸泼尼松
2575 醋酸泼尼松片
2576 醋酸泼尼松眼膏
2577 醋酸泼尼松龙
2578 醋酸泼尼松龙片
2579 醋酸泼尼松龙乳膏
2580 醋酸泼尼松龙注射液
2581 醋酸氟轻松
2582 醋酸氟轻松乳膏
2583 醋酸氟氢可的松
2584 醋酸氟氢可的松乳膏
2585 醋酸氢化可的松
2586 醋酸氢化可的松片
2587 醋酸氢化可的松乳膏
2588 醋酸氢化可的松注射液
2589 醋酸氢化可的松眼膏
2590 醋酸氢化可的松滴眼液
2591 醋酸氯己定
2592 醋酸氯己定软膏
2593 醋酸氯地孕酮
2594 醋酸奥曲肽
2595 醋酸奥曲肽注射液
2596 注射用醋酸奥曲肽
2597 醋酸赖氨酸
2598 醋酸磺胺米隆
2599 缬沙坦
2600 缬沙坦片
2601 缬沙坦胶囊
2602 缬氨酸
2603 薄荷麝香草酚搽剂
2604 磺苄西林钠
2605 注射用磺苄西林钠
2606 磺胺甲噁唑
2607 磺胺甲噁唑片
2608 磺胺多辛
2609 磺胺多辛片
2610 磺胺异噁唑
2611 磺胺异噁唑片
2612 磺胺嘧啶
2613 磺胺嘧啶片
2614 磺胺嘧啶软膏
2615 磺胺嘧啶眼膏
2616 磺胺嘧啶混悬液
2617 磺胺嘧啶钠
2618 磺胺嘧啶钠注射液
2619 注射用磺胺嘧啶钠
2620 磺胺嘧啶银
2621 磺胺嘧啶银软膏
2622 磺胺嘧啶银乳膏
2623 磺胺嘧啶锌
2624 磺胺嘧啶锌软膏
2625 磺胺醋酰钠
2626 磺胺醋酰钠滴眼液
2627 噻苯唑
2628 噻苯唑片
2629 凝血酶冻干粉
2630 糖精钠
2631 磷酸二氢钠
2632 磷酸川芎嗪
2633 磷酸川芎嗪片
2634 磷酸川芎嗪胶囊
2635 磷酸可待因
2636 磷酸可待因片
2637 磷酸可待因注射液
2638 磷酸可待因糖浆
2639 磷酸丙吡胺
2640 磷酸丙吡胺片
2641 磷酸丙吡胺注射液

2642 磷酸肌酸钠
2643 磷酸伯氨喹
2644 磷酸伯氨喹片
2645 磷酸苯丙哌林
2646 磷酸苯丙哌林口服溶液
2647 磷酸苯丙哌林片
2648 磷酸苯丙哌林胶囊
2649 磷酸苯丙哌林颗粒
2650 磷酸组胺
2651 磷酸组胺注射液
2652 磷酸哌喹
2653 磷酸哌喹片
2654 磷酸哌嗪
2655 磷酸哌嗪片
2656 磷酸咯萘啶
2657 磷酸咯萘啶肠溶片
2658 磷酸咯萘啶注射液
2659 磷酸氟达拉滨
2660 注射用磷酸氟达拉滨
2661 磷酸氢钙
2662 磷酸氢钙片
2663 磷酸氯喹
2664 磷酸氯喹片
2665 磷酸氯喹注射液
2666 磷酸奥司他韦
2667 磷酸奥司他韦胶囊
2668 磷酸腺嘌呤
2669 磷酸腺嘌呤片
2670 磷霉素钙
2671 磷霉素钙片
2672 磷霉素钙胶囊
2673 磷霉素钙颗粒
2674 磷霉素钠
2675 注射用磷霉素钠
2676 磷霉素氨丁三醇
2677 磷霉素氨丁三醇散
2678 螺内酯
2679 螺内酯片
2680 螺内酯胶囊
2681 糜蛋白酶
2682 注射用糜蛋白酶

品种正文　第二部分

2683 来昔决南钐[^{153}Sm]注射液
2684 氙［^{133}Xe］注射液
2685 邻碘［^{131}I］马尿酸钠注射液
2686 注射用亚锡亚甲基二膦酸盐
2687 注射用亚锡依替菲宁
2688 注射用亚锡喷替酸
2689 注射用亚锡植酸钠
2690 注射用亚锡焦磷酸钠
2691 注射用亚锡聚合白蛋白
2692 枸橼酸镓［^{67}Ga］注射液
2693 氟［^{18}F］脱氧葡糖注射液
2694 胶体磷［^{32}P］酸铬注射液
2695 高锝［^{99m}Tc］酸钠注射液
2696 铬［^{51}Cr］酸钠注射液
2697 氯化亚铊［^{201}Tl］注射液
2698 氯化锶[^{89}Sr]注射液
2699 碘[^{125}I]密封籽源
2700 碘［^{131}I］化钠口服溶液
2701 诊断用碘［^{131}I］化钠胶囊
2702 锝[^{99m}Tc]双半胱乙酯注射液
2703 锝[^{99m}Tc]双半胱氨酸注射液
2704 锝[^{99m}Tc]甲氧异腈注射液
2705 锝［^{99m}Tc］亚甲基二膦酸盐注
2706 锝［^{99m}Tc］依替菲宁注射液
2707 锝［^{99m}Tc］植酸盐注射液
2708 锝［^{99m}Tc］喷替酸盐注射液
2709 锝［^{99m}Tc］焦磷酸盐注射液
2710 锝［^{99m}Tc］聚合白蛋白注射液

2711 磷［^{32}P］酸钠盐口服溶液
2712 磷［^{32}P］酸钠盐注射液