ADHD in Prisons

Dene Robertson
Consultant Psychiatrist

South London and Maudsley NHS
NHS Foundation Trust

King’s College London
National Institute for Health Research
Rates of ADHD in Aberdeen prison sample

Key paper linking ADHD and behavioural management problems in prison settings

- 24% met childhood screening criteria for ADHD
- 6% met criteria for adult ADHD
- 8% met criteria for ADHD in partial remission
- 14% had persistent symptoms
- Population rate 2.5%

Young et al., 2009, Personality and Individual Differences (46)
Mean number of incidents among symptomatic and non-symptomatic prison inmates

No significant association with ASPD. MANOVA: Significant association with ADHD controlling for ASPD (p<.001, partial eta square = 0.138)

Young et al., 2009, Personality and Individual Differences (46)
Impairment by ADHD status

Impairment: defined as “the top 10% in any of the domains of critical incidents, i.e. verbal, physical, damage to property and self-injury”

Independent ratings by prison staff over past 3 months.

P<.001, OR=8.3 (95% CI: 3.2 – 21.4)

Young et al., 2009, Personality and Individual Differences (46)
A meta-analysis of the prevalence of attention deficit hyperactivity disorder in incarcerated populations

S. Young¹,²*, D. Moss³, O. Sedgwick⁴, M. Fridman⁵ and P. Hodgkins⁶

Estimated prevalence = 25.5%
Impact of adult ADHD on criminality

Proportion of Swedish adults with criminal convictions over a 4-year period (Jan 1, 2006 to Dec 31, 2009)

Medication for ADHD and criminality: observational Swedish database analysis

Hazard ratio for conviction for any crime during ADHD medication (2006–2009) vs. non-medication periods

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Men (n = 16,087) Hazard ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All medications</td>
<td>0.68 (0.63–0.73)</td>
</tr>
<tr>
<td>Stimulants</td>
<td>0.66 (0.61–0.71)</td>
</tr>
<tr>
<td>Atomoxetine</td>
<td>0.76 (0.63–0.91)</td>
</tr>
<tr>
<td>SSRI medication</td>
<td>1.04 (0.93–1.17)</td>
</tr>
</tbody>
</table>

- Crimes occurred less often during medication periods:
  - men 32% reduction
  - women 41% reduction

Association Between Prescription of Major Psychotropic Medications and Violent Reoffending After Prison Release

Zheng Chang, PhD; Paul Lichtenstein, PhD; Niklas Långström, MD; Henrik Larsson, PhD; Seena Fazel, MD

Figure 1. Between-Individual Associations Between Psychotropic Medications and Violent Reoffending Following Prison Release

<table>
<thead>
<tr>
<th>Medication</th>
<th>Medicated Periods</th>
<th>Nonmedicated Periods</th>
<th>Risk Difference in No. of Violent Reoffenses/1000 Person-Years (95% CI)</th>
<th>Hazard Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Antipsychotics</td>
<td>2063</td>
<td>1590</td>
<td>100</td>
<td>10941</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>5597</td>
<td>3831</td>
<td>224</td>
<td>30786</td>
</tr>
<tr>
<td>Psychostimulants</td>
<td>1197</td>
<td>1647</td>
<td>94</td>
<td>4538</td>
</tr>
<tr>
<td>Drugs used in addictive disorders</td>
<td>2063</td>
<td>1164</td>
<td>46</td>
<td>15565</td>
</tr>
<tr>
<td>Antiepileptics</td>
<td>2213</td>
<td>1972</td>
<td>152</td>
<td>10659</td>
</tr>
<tr>
<td>Adrenergic inhalants(^a)</td>
<td>2370</td>
<td>1289</td>
<td>38</td>
<td>12892</td>
</tr>
</tbody>
</table>
Association Between Prescription of Major Psychotropic Medications and Violent Reoffending After Prison Release

Zheng Chang, PhD; Paul Lichtenstein, PhD; Niklas Långström, MD; Henrik Larsson, PhD; Seena Fazel, MD

Figure 2. Within-Individual Associations Between Psychotropic Medications and Violent Reoffending Following Prison Release

<table>
<thead>
<tr>
<th>Medication</th>
<th>Medicated Periods</th>
<th>Nonmedicated Periods</th>
<th>Risk Difference in No. of Violent Reoffenses/1000 Person-Years (95% CI)</th>
<th>Hazard Ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Individuals, No.</td>
<td>Person-Years</td>
<td>Violent Reoffenses, No.</td>
<td>Individuals, No.</td>
</tr>
<tr>
<td>Antipsychotics</td>
<td>2085</td>
<td>1596</td>
<td>100</td>
<td>2767</td>
</tr>
<tr>
<td>Antidepressants</td>
<td>5660</td>
<td>3846</td>
<td>224</td>
<td>7421</td>
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<tr>
<td>Psychostimulants</td>
<td>1202</td>
<td>1648</td>
<td>94</td>
<td>1352</td>
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<tr>
<td>Drugs used in addictive disorders</td>
<td>2077</td>
<td>1168</td>
<td>46</td>
<td>3055</td>
</tr>
<tr>
<td>Antiepileptics</td>
<td>2235</td>
<td>1976</td>
<td>152</td>
<td>2736</td>
</tr>
<tr>
<td>Adrenergic inhalants&lt;sup&gt;a&lt;/sup&gt;</td>
<td>2387</td>
<td>1291</td>
<td>38</td>
<td>2878</td>
</tr>
</tbody>
</table>

Hazard Ratio (95% CI)
Remarkable effect of methylphenidate in prisoners with ADHD

Intention-to-treat population: CAARS-O:SV total sum-score as a function of treatment group and time

- Randomised controlled trial: week 0–5; open-label extension: week 6–52

CAARS-O:SV, Conners’ Adult ADHD Rating Scale – Observer: Screening Version; LOCF, last observation carried forward; NNT, number needed to treat; OROS MPH, osmotic-release oral system methylphenidate

A gradient of childhood self-control predicts health, wealth, and public safety

Terrie E. Moffitt\textsuperscript{a,b}, Louise Arseneault\textsuperscript{b}, Daniel Belsky\textsuperscript{a}, Nigel Dickson\textsuperscript{c}, Robert J. Hancox\textsuperscript{c}, Honalee Harrington\textsuperscript{a}, Renate Houts\textsuperscript{a}, Richie Poulton\textsuperscript{c}, Brent W. Roberts\textsuperscript{d}, Stephen Ross\textsuperscript{a}, Malcolm R. Sears\textsuperscript{e,f}, W. Murray Thomson\textsuperscript{g}, and Avshalom Caspi\textsuperscript{a,b,1}

Childhood Self-Control.
Children's self-control during their first decade of life was measured using nine measures of self-control:
- observational ratings of children's lack of control (3 and 5 y of age)
- parent, teacher, and self-reports of impulsive aggression, hyperactivity, lack of persistence, inattention, and impulsivity (5, 7, 9, and 11 y of age).

Adult Outcomes.
Health, wealth, and crime outcomes were assessed at age 32 y by physical examinations, blood tests, personal interviews, record searches, and informant reports.
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C

Percent with Offspring Reared in Single-parent Homes

\textbf{Single-parent Child-rearing}

\begin{itemize}
  \item Low
  \item Childhood Self-control in Quintiles
  \item High
  \item Percent with Offspring Reared in Single-parent Homes
\end{itemize}

D

Percent with an Adult Criminal Conviction

\textbf{Adult Criminal Conviction}

\begin{itemize}
  \item Low
  \item Childhood Self-control in Quintiles
  \item High
  \item Percent with an Adult Criminal Conviction
\end{itemize}

PNAS, 2010, 7: 2693-2687
Child
ADHD

Criminal behaviour
Aggression
Conduct Disorder
Emotional instability
Personality disorder
Substance abuse
Potential mediators

- Educational failure
- Peer influences
- Poor parenting (supportive/unstructured, abusive)
- Substance abuse disorders
- Conduct Disorder
- Specific and general Learning Difficulties
- Genes (e.g. COMT)
Potential mediators

- Educational failure
- Peer influences
- Poor parenting (supportive/unstructured, abusive)
- Substance abuse disorders
- Conduct Disorder
- Specific and general Learning Difficulties
- Genes (e.g. COMT)
- SEVERITY and PERSISTENCE OF ADHD

Child ADHD

Criminal behaviour
Aggression
Conduct Disorder
Emotional instability
Personality disorder
Substance abuse
**Child ADHD**

- ADHD symptoms
- Emotional lability
- Impulsivity
- Self-regulation of behaviour
- Novelty seeking (risk taking)

**Criminal behaviour**
- Aggression
- Conduct Disorder
- Emotional instability
- Personality disorder
- Substance abuse

**Persistent traits linked to ADHD**
The CIAO Project

Professor Philip Asherson - Chief Investigator

Clare Evans - Research Worker/Project Coordinator

Co-investigators: Susan Young, Andrew Forester, Declan Murphy

HM Prison Service

South London and Maudsley NHS Trust

MRC Social Genetic and Developmental Psychiatry
CIAO: A pilot study of Concerta XL In Adult Offenders with ADHD

Aim: To evaluate the effectiveness of Concerta XL in reducing levels of aggression, increasing engagement with educational activities and reducing symptoms of ADHD, in young male offenders with ADHD

Method: 12-week open label study of 100 offenders with ADHD, with 6-month extension.

Drug: Concerta XL 18 – 90 mg titrated to optimal effect

Participants: Male prisoners aged 18-30 (most 18-24)

Site: HMPYOI Isis.
Flow chart for randomised placebo controlled trial of Concerta on antisocial behaviour in young male prisoners with Attention-Deficit/Hyperactivity Disorder

PARTICIPANT SELECTION
- Screening step using DSM-IV rating scale
- Research diagnostic assessment using DIVA interview, followed by full medical review and check of all inclusion and exclusion criteria

8-WEEK RANDOMISED CONTROLLED TRIAL (efficacy and mechanisms trial for Concerta XL on antisocial behaviour)
- Randomisation stratified by site
- Initiate Concerta XL 18 mg or placebo
- Titrate weekly to optimal dose, Concerta XL/placebo 18-72 mg
- Week 5: mediator variables (inattention, hyperactivity-impulsivity, emotional dysregulation)
- Week 8: All primary and secondary endpoint measures
**CURRENT BEHAVIOUR SCALE – SELF-REPORT**

**Instructions**
Please circle the number next to each item that best describes your behaviour **DURING THE PAST 6 MONTHS**

<table>
<thead>
<tr>
<th>Items:</th>
<th>Never or Rarely</th>
<th>Sometimes</th>
<th>Often</th>
<th>Very Often</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fail to give close attention to details or make careless mistakes in my work</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>2. Fidget with hands or feet or squirm in seat</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>3. Have difficulty sustaining my attention in tasks or fun activities</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>4. Leave my seat in situations in which sitting is expected</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>5. Don’t listen when spoken to directly</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>6. Feel restless</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>7. Don’t follow through on instructions and fail to finish work</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>8. Have difficulty engaging in leisure activities or doing fun things quietly</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>9. Have difficulty organising tasks and activities</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>10. Feel “on the go” or “driven by a motor”</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>11. Avoid, dislike, or am reluctant to engage in work that requires sustained mental effort</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>12. Talk excessively</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>13. Lose things necessary for tasks or activities</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>14. Blurt out answers before questions have been completed</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>15. Easily distracted</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>16. Have difficulty awaiting turn</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>17. Forgetful in daily activities</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>18. Interrupt or intrude on others</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

- ≥ 4 or more symptoms in either domain
- Do not use ASRS
- Self-ratings tend to be low e.g. “sometimes” is a common response
- Trained raters can increase the screen positive rate dramatically
DIVA 2.0

Diagnostic Interview for ADHD in adults (DIVA)

www.divacenter.eu
The CIAO study

- Screened
  - N = 1,922

- Screen positive
  - N = 473 (25%)

- Diagnostic assessment
  - 398 (84%)

- Positive assessments
  - N = 278 (77%)

- 19.3% of prison population met DSM-5 ADHD criteria
- 121 (40%) treated with OROS-MPH

CIAO: final report 2015
CIAO: Observer rated ADHD symptoms scores

CIAO: final report 2015
Investigator rated emotional instability
Temper control; Mood lability (AL); Emotional Reactivity (ER)

P<.0001 for all baseline to week 5 changes
CIAO: Maudsley Violence Questionnaire

![Graph showing baseline and 12-week scores for MVQ-A and MVQ-M, with a significant decrease for MVQ-M (P<.005) and no significant change for MVQ-A (NS).]
Preliminary report: Number of critical incidents recorded in prison records:

- Total critical incidents includes:
  - Total serious assault
  - Total assault
  - Total fights
  - Total property damage
  - Total self harm
  - Total taking drugs
  - Total disobey

CIAO: Based on data 8th December 2013
## Summary of significant effect sizes (Cohen’s d)

<table>
<thead>
<tr>
<th>Outcome</th>
<th>Investigator rated (I) or self-rated scales (S)</th>
<th>Cohen’s d ITT</th>
<th>Cohen’s d pp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inattention (I)</td>
<td></td>
<td>2.27</td>
<td>3.00</td>
</tr>
<tr>
<td>Hyperactivity-impulsivity (I)</td>
<td></td>
<td>2.11</td>
<td>2.78</td>
</tr>
<tr>
<td>Emotional dysregulation (I)</td>
<td></td>
<td>1.49</td>
<td>1.71</td>
</tr>
<tr>
<td>Affective lability (S)</td>
<td></td>
<td>1.19</td>
<td>1.65</td>
</tr>
<tr>
<td>MVQ-Machismo (MVQ) (S)</td>
<td></td>
<td>0.60</td>
<td>0.98</td>
</tr>
<tr>
<td>MVQ-Acceptance of violence (S)</td>
<td></td>
<td>0.37</td>
<td>0.40</td>
</tr>
<tr>
<td>Prison records of behaviour</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sum of adjudications</td>
<td></td>
<td>0.30</td>
<td>0.53</td>
</tr>
<tr>
<td>Percentage attended activities</td>
<td></td>
<td>0.07 (ns)</td>
<td>0.34</td>
</tr>
<tr>
<td>Sum of positive IEPs</td>
<td></td>
<td>0.25</td>
<td>0.36</td>
</tr>
<tr>
<td>Days in enhanced regime</td>
<td></td>
<td>0.14</td>
<td>0.19</td>
</tr>
</tbody>
</table>

CIAO: final report 2015
ADHD

Education and occupation

Impulsivity and emotional dysregulation
Qualitative reports of improvement

- Less irritable and angry
- Feeling calmer – time to stop and think before acting
- Reduced physical and verbal aggression
- Attending educational and rehabilitation sessions – able to sit still and listen – less distracted – less disruptive
- Writing letters to family
- Less anxious and depressed – improved mood
- Less panic attack
- Less self-harm
- Sleeping better
Feedback from Prison Inspectorate

• Outside unbiased perspective
• Inspectors highlighted the CIAO project:

“All prisoners were offered screening for attention deficit hyperactivity disorder (ADHD) through the specialist Concerta (an ADHD treatment) in adult offenders (CIAO) trial…Some prisoners on the CIAO programme to whom we spoke were experiencing some stability of behaviour for the first time in their lives.”

The HMIP report recommended continued support beyond the prison:

“There should be efforts to ensure the continued prescribing of medication and ongoing specialist support for prisoners started on the CIAO trial following their release”

Her Majesty’s Inspectorate of Prisons’ report carried out in February of 2014
Compliance with 12-week protocol

- 121 initiated trial
- 72 completed 12-week trial

Common Adverse Effects
- Appetite reduction
- Sleep disruption
- Headaches
- Dry Mouth
- Feeling nauseous
- Over-thinking
## Some common barriers to treatment

<table>
<thead>
<tr>
<th>Problem</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not unlocked from cell</td>
<td>Work with prison officers</td>
</tr>
<tr>
<td>Did not want to get up</td>
<td>Work with offenders and nursing staff</td>
</tr>
<tr>
<td>Strict timing of medication</td>
<td>Some flexibility helpful</td>
</tr>
<tr>
<td>Not taking medication in the morning</td>
<td>Mid-day dosing</td>
</tr>
<tr>
<td>Symptoms re-emerge at late afternoon</td>
<td>08:00 and 17:00 dosing</td>
</tr>
<tr>
<td>Common adverse effects</td>
<td>Explanation and support</td>
</tr>
<tr>
<td>Over-thinking</td>
<td>Support and explanation</td>
</tr>
</tbody>
</table>
Recent Proportion of drug and alcohol use in young offenders with and without ADHD

- **Cannabis use**
  - Controls (n=60): 0.91
  - ADHD (n=60): 0.67
- **Daily cannabis use**
  - Controls (n=60): 0.37
  - ADHD (n=60): 0.71
- **Alcohol use**
  - Controls (n=60): 0.67
  - ADHD (n=60): 0.81
- **Alcohol abuse**
  - Controls (n=60): 0.10
  - ADHD (n=60): 0.19
- **CNS stimulants**
  - Controls (n=60): 0.14
  - ADHD (n=60): 0.39
- **Opiates**
  - Controls (n=60): 0.00
  - ADHD (n=60): 0.00

CIAO: final report 2015
Abuse potential and diversion

- Stimulants are controlled drugs with risk for diversion
- Psychiatric drugs diverted within prisons (e.g. Mirtazapine)
- Diversion in the community usually by college students
- Limited abuse potential unless insufflated or injected
- Preparations that are difficult to abuse: Concerta XL and Elvanse
- Limited drug seeking behaviour observed in Concerta trial
Plasma Levels - Amphetamine vs Cocaine

Hours after Dose

- iv / smoke cocaine
- nasal cocaine
- iv amphetamine
- oral amphetamine
Methylphenidate: IV vs Oral

- Is there a ‘high’?

Volkow and Swanson, 2003
Emotional lability (EL)

Excessive emotional reactions, frequent mood changes: Irritability, volatility, hot temper

60-70% heritable

---

Traditional criteria for ‘ADHD’

**HIDE:**
- Hyperactivity
- Impulsivity
- Distractibility
- Emotional lability

**DSM-IV ADHD:**
- Hyperactivity
- Impulsivity
- Inattention

**Emotional dysregulation:**
- Mood instability
- Affective lability

Gabrielle Carlsson, personal communication
(Eric Cantwell)
Symptoms of Emotional Impulsiveness in an adult follow-up (mean = age 27) sample of children with ADHD and community controls

Barkley and Fischer, JAACAP, 2010
Predictors of functional impairment in adults with ADHD

<table>
<thead>
<tr>
<th>Impairment/predictors</th>
<th>Beta</th>
<th>R</th>
<th>R²</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Family</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional lability (CNS-LS)</td>
<td>.59</td>
<td>.59</td>
<td>.35</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional lability (CNS-LS)</td>
<td>.44</td>
<td>.44</td>
<td>.19</td>
<td>.013</td>
</tr>
<tr>
<td><strong>Life Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional lability (CNS-LS)</td>
<td>.61</td>
<td>.61</td>
<td>.38</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Self concept</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comorbid symptoms (CIS-R)</td>
<td>.55</td>
<td>.55</td>
<td>.30</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Social problems</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Emotional lability (CNS-LS)</td>
<td>.35</td>
<td>.56</td>
<td>.32</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Hyperactivity-impulsivity (BRS)</td>
<td>.35</td>
<td>.68</td>
<td>.40</td>
<td>&lt;.001</td>
</tr>
<tr>
<td><strong>Risk (inverse transformed)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hyperactivity-impulsivity (BRS)</td>
<td>-.48</td>
<td>.48</td>
<td>.23</td>
<td>.001</td>
</tr>
</tbody>
</table>

Skirrow & Asherson, JAD, 2013
# Treatment studies of emotional dysregulation in adult ADHD

<table>
<thead>
<tr>
<th>Author of RCT</th>
<th>Age group</th>
<th>Diagnosis</th>
<th>Treatment</th>
<th>ED outcome measure</th>
<th>Effect size ED</th>
<th>Effect size ADHD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reimherr et al., 2005</td>
<td>Adult</td>
<td>ADHD + ED</td>
<td>ATX</td>
<td>WRAADS-ED (Investigator)</td>
<td>0.66</td>
<td>0.58</td>
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<tr>
<td>Reimherr et al., 2007</td>
<td>Adults</td>
<td>ADHD</td>
<td>MPH</td>
<td>WRAADS-ED (Investigator)</td>
<td>0.70</td>
<td>0.69</td>
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<tr>
<td>Rosler et al., 2010</td>
<td>Adults</td>
<td>ADHD</td>
<td>MPH</td>
<td>WRAADS-ED (Investigator)</td>
<td>0.37</td>
<td>0.28</td>
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<tr>
<td>Marchant et al., 2011</td>
<td>Adults</td>
<td>ADHD, ADHD+ED, ADHD+ODD</td>
<td>MPH</td>
<td>WRAADS-ED (Investigator)</td>
<td>0.30</td>
<td>0.45</td>
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<tr>
<td>Asherson et al., 2015 (meta-analysis)</td>
<td>Adults</td>
<td>ADHD, ADHD+ED</td>
<td>ATX</td>
<td>BRIEF-EL (Self)</td>
<td>0.21, 0.28</td>
<td>0.47, 0.62</td>
</tr>
</tbody>
</table>
Treatment algorithm

Chronic emotional lability identified

Screen for ADHD

No ADHD

Establish alternative diagnosis and treat accordingly (e.g. Bipolar disorder, personality disorder/ODD, anxiety/depression, alcohol/drug abuse, severe mood dysregulation)

Yes ADHD

No comorbidity or comorbid personality disorder

** Drug treatment for ADHD

Significant depression, bipolar disorder, other condition

Treat comorbid disorder first in most cases

Review and consider additional treatments: CBT, anger management, other medication

** In children consider non-drug intervention first, if mild to moderate impairment
General considerations

- Screen and diagnostic assessments for ADHD
- Provide optimal medical treatment
- Provide individual and group support in prison
  - psychoeducation
  - support during titration phase of medical treatment
  - psychological support and treatment
- Provide support and treatment in the community
  - Access to medication
  - Access to expert mental health advice
  - Social support: critical time interventions
  - Social support: longer term support

Problems:
Disorganisation, forgetfulness, motivation, emotional instability
Housing, unemployment, poverty, social relationships, peer pressure