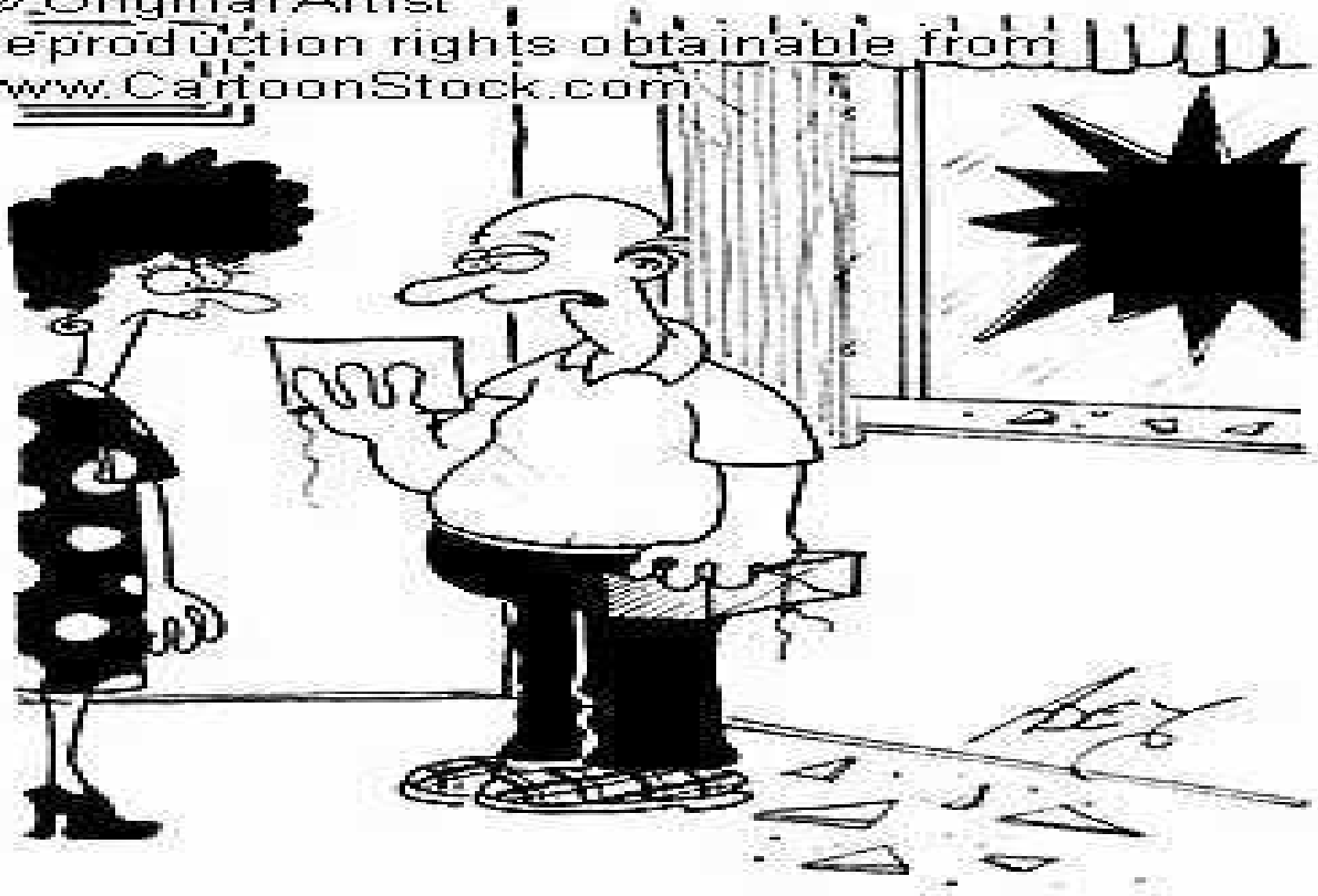
Violence and Aggression

Introduction, definitions, key concepts, disorders, assessments and medication management

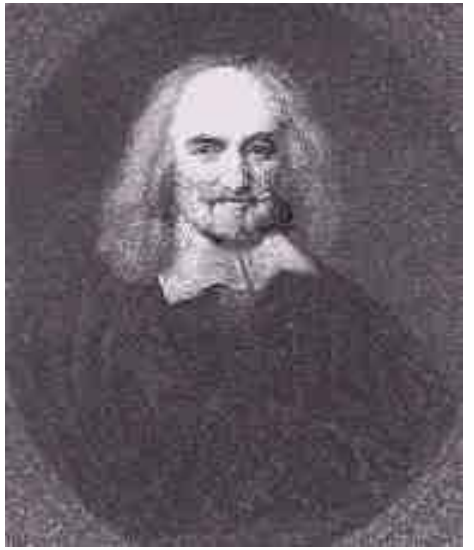


"It says. Please disregard this reminder if your payment has already been sent."

What is Aggression?

- Behavior intended to injure another
  - It is behavior (not angry feelings)
  - It is intended (not accidental harm)
  - It is aimed at hurting (not assertiveness or playfulness)
- It could be directed at self-deliberate self harm or suicide

Is Aggression an Instinct?



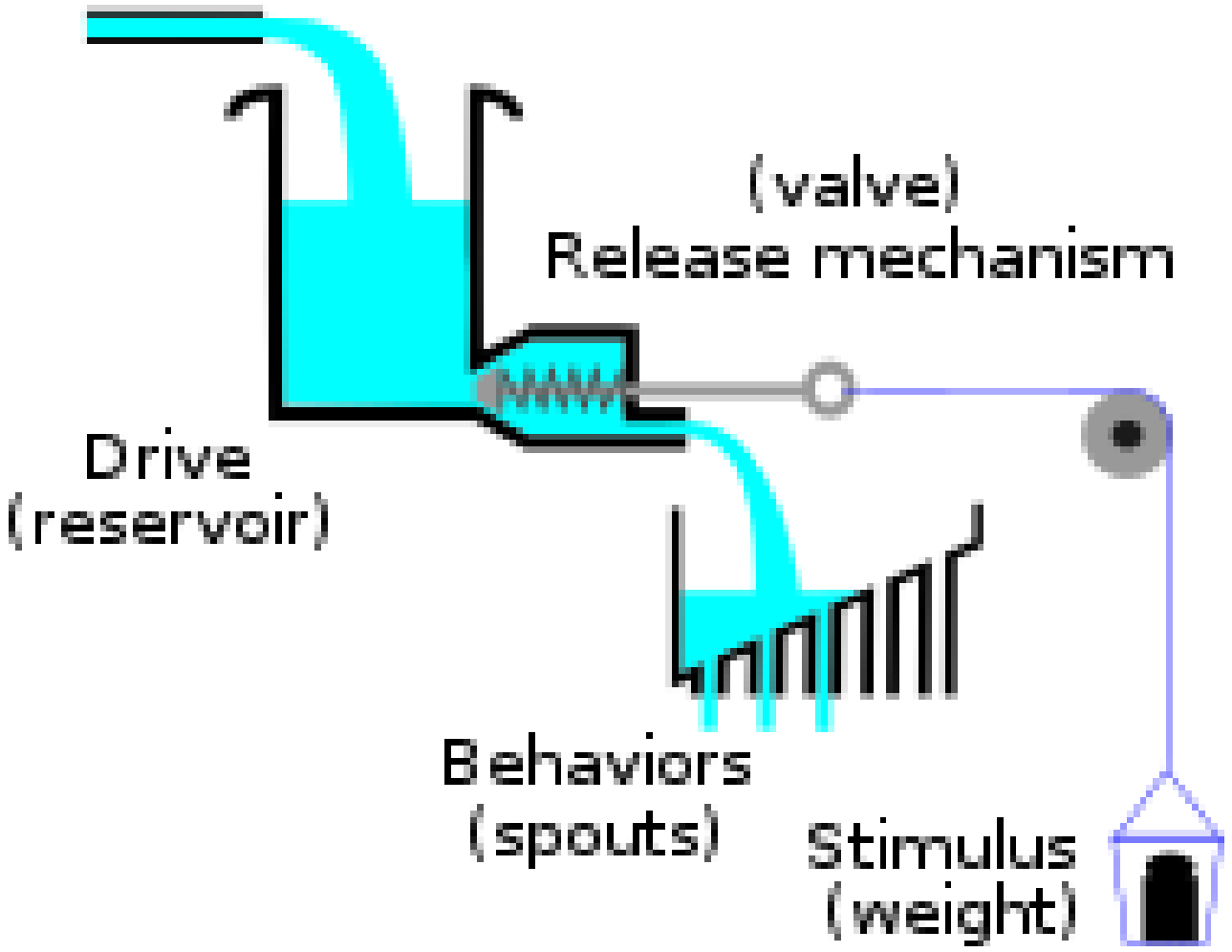
Hundreds of years of debate

- Jean-Jacques Rousseau: We are naturally gentle - restrictive society makes us hostile
- Thomas Hobbes: We are brutes and only law and government can help us
- Freud: Supports Hobbes. Argued that we had a powerful death instinct known as Thanatos – leads to aggressive actions

Freud and Aggression

- Believed that aggressive energy must be released – otherwise it builds up and causes illness.
  - A hydraulic theory
- Sublimation – society regulates this instinct. Helps people to turn destructive energy into useful behavior
  - E.g., danger seeking, competitive person becomes a race car driver

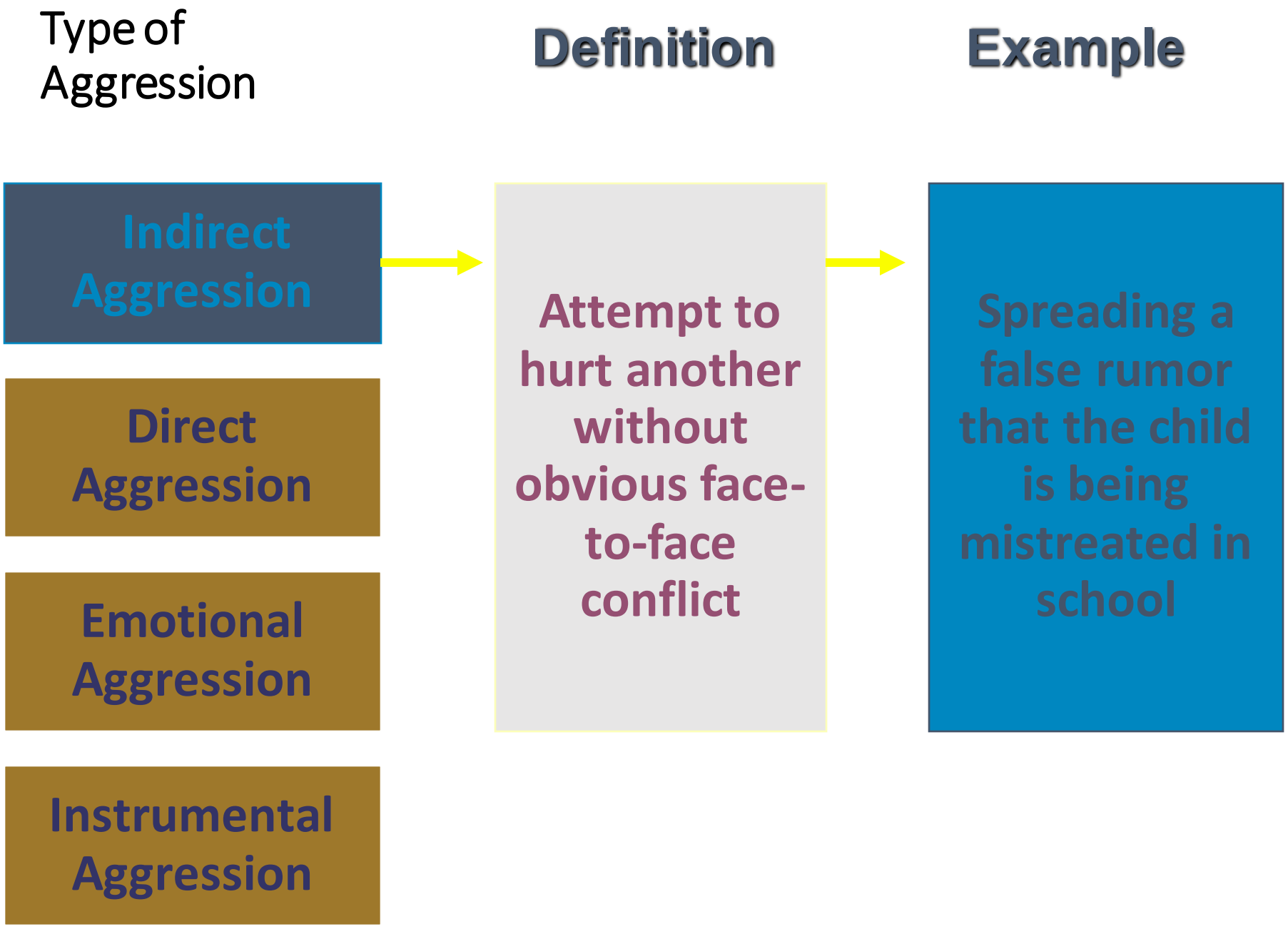
Hydraulic Theory of aggression



Evolutionary Arguments

- Lore and Schultz: argue that aggression has survival value.
  - However, most species seem to have developed inhibitory mechanisms that allow them to suppress aggression
  - Thus, aggression is an optional strategy
- Regional differences in aggression suggest "strategic" view of aggression

Type of Aggression	Definition	Example
Indirect Aggression		
Direct Aggression		
Emotional Aggression		
Instrumental Aggression		


Type of Aggression
Definition
Example
Indirect Aggression
Direct Aggression
Emotional Aggression
Instrumental Aggression
Attempt to hurt another without obvious face-to-face conflict
Spreading a false rumor that the child is being mistreated in school

Type of Aggression

Definition

Example

Indirect Aggression

Direct Aggression

Emotional Aggression

Instrumental Aggression

Behavior intended to hurt someone "to his or her face"

Child/teenager punching/threatening a fellow student/sibling

Type of Aggression

Definition

Example

Indirect Aggression

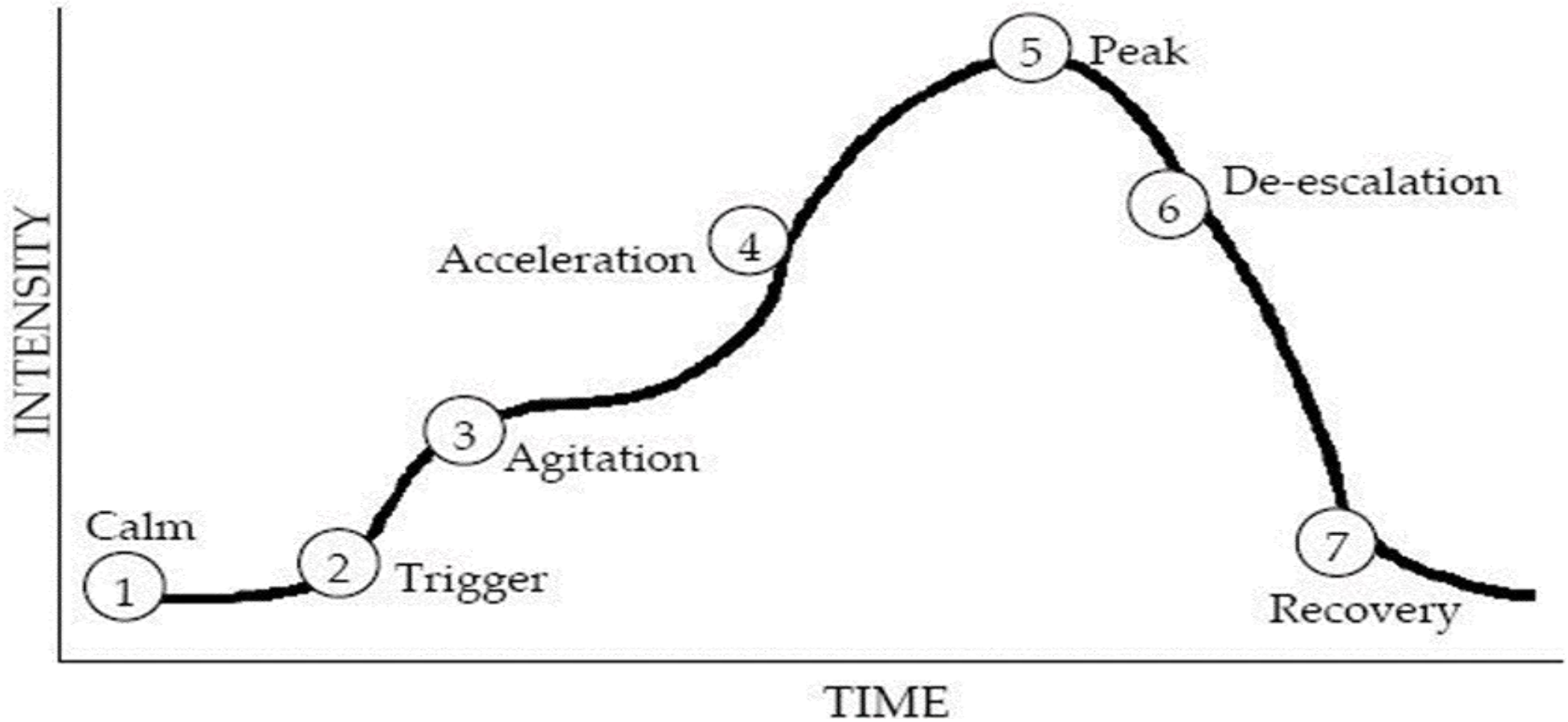
Direct Aggression

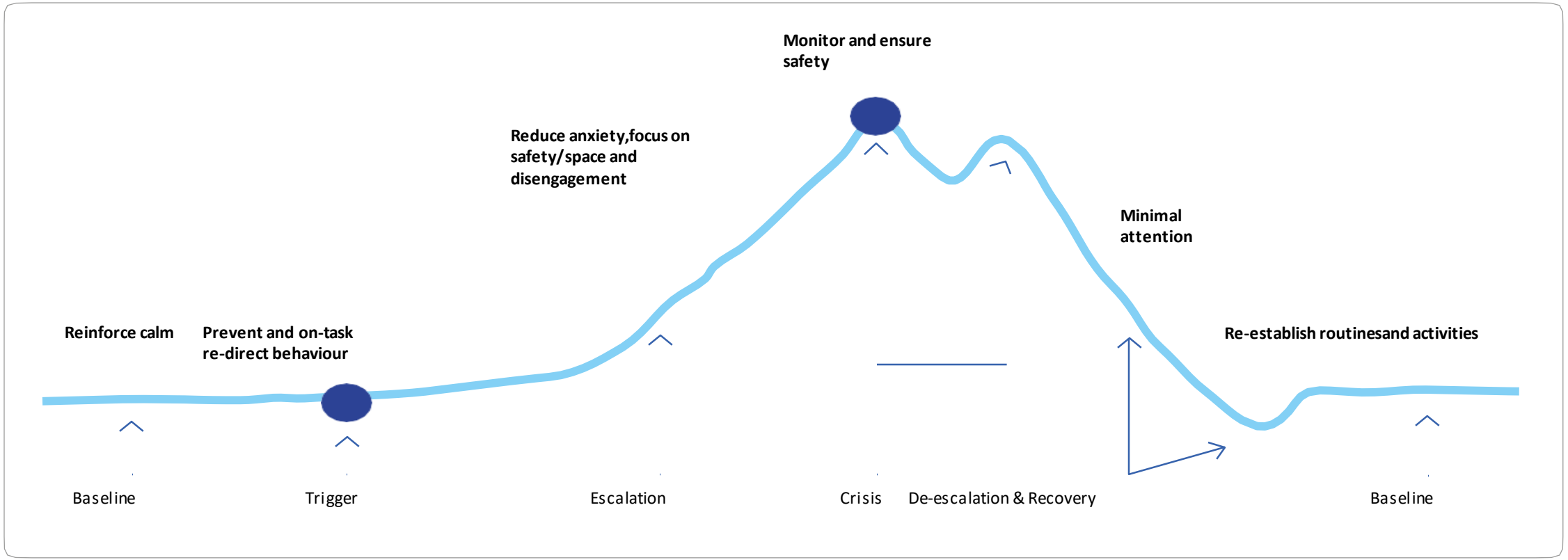
Emotional Aggression

Instrumental Aggression

Hurtful behavior that stems from angry feelings

A child displaying aggression after a painful procedure or being held in hospital


INTENSITY
TIME
1
Calm
2
Trigger
3
Agitation
4
Acceleration
5
Peak
6
De-escalation
7
Recovery


Monitor and ensure safety
Reduce anxiety,focus on safety/space and disengagement
Minimal attention
Reinforce calm
Prevent and on-task re-direct behaviour
Re-establish routinesand activities
Baseline
Trigger
Escalation
Crisis
De-escalation & Recovery
Baseline

Type of Aggression

Definition

Example

Indirect Aggression

Direct Aggression

Emotional Aggression

Instrumental Aggression

Hurting another to accomplish another (non-aggressive) goal

A child hitting out at staff at school or at the parents at home to avoid a punishment

Other types

- Impulsive vs Pre-meditated
- Overt vs covert
- Verbal, physical, sexual
- State dependent vs non state dependent
- Group related vs Singular
- Good vs Bad

‘Good aggression’-The powerful M1A2 Abrams

World’s most destructive main battle tank

‘Good guy’ aggression

British SAS

‘Weird Bad guy’ aggression

Indirect aggression

A Cumulative Model for Understanding Aggression in hospital

- Genes
- Gender
- Social learning
- Cognitive Reasoning
- Illness & response
- Environment-hospital
- Some neurosciences findings

Genes

- Twin & family studies-impulsive aggression (44-75% heritability)
- Genes for the 5HT transporter & MAO-A interact with childhood maltreatment & adversity violence
- XYY chromosome found in some serial murderers

Gender: How Do Boys Become Aggressive?

Differential Parenting

Keenen & Shaw study of low income families (1994) hypothesis:

- Parent criminality predicts boys' aggression, but not until age 4-5
- Not biology alone, but also socialization
- Differential parent responses to boys' aggression i.e. tolerated as cultural/gender specific norm
- Influence of aggressive modeling by parents

How Do Boys Become Aggressive?

Social Learning Model Bandura et al.

- Observation of a Model
- Observe sib, parent, and peer behavior
- Observe models in media
- What behaviors pay-off?
- Direct Experience
- Can I do it?
- How did it turn out?

How Do Boys Become Aggressive?

Coercive Family Process - Patterson et al.

- Punishment paradigms are narrow, inconsistent, and harsh
- Children become increasingly coercive and aggressive
- Process becomes *bi-directional as child* aggressiveness & non-compliance increases, and parent effectiveness decreases

How Do Boys Become Aggressive?

Coercive Family Process – Patterson et al.

- Pre-schoolers acquire aggressive behaviors through social learning
- Sib and parent compliance demands are obtained through threats or physical aggression; *attack -counterattack -positive outcome*
- Prosocial behaviors ignored or go unrecognized

How Do Boys Become Aggressive?

- If the family setting is the early training ground for aggressive behavior,
- the school is where the behaviours are practiced, reinforced, and solidified

Is it Testosterone?

- The primary *androgen, a class of steroid* hormones that develop and maintain masculine features
- Research is somewhat mixed
- Aggressive effects are predominantly in animal studies
- Better explanations in social –environmental influences

Social and environmental influences :Even in sport

A nice group of gentlemen having a passionate discussion one Sunday afternoon in a stadium

Social influences: We teach them and they learn!!!

Nature/Impact of girls' aggression

- Across lifespan, aggression rates highest when children are 2 or 3; as children acquire language and social skills, aggression decreases.
- Girls' aggression decreases at a faster rate than boys' aggression.
- Aggression less normative for girls than boys: may have a higher social cost.
- Girls and boys have similar capacities for the full range of aggression: physical, verbal, social.
- Higher proportion of girls' aggression is social, rather than physical, compared to boys.

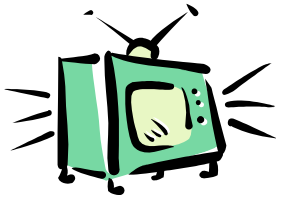
Girl aggression-epidemic in the CBD-The Age-Dec 2010

Social Aggression

- Form of aggression founded on relationships.
- Aggression aimed at damaging the other's relationships through indirect aggression (e.g.,gossip, exclusion), gestures, etc.
- "Advantages": covert, safer than physical aggression, strengthens in-group relations.

Social Learning and Mass Media

- Idea of learning from aggressive models begins with Bandura
- TV could be a source of violent models
- Larson et al-High correlation between the amount of TV watched and viewer's subsequent aggression – this data is correlational
- Thomas et al demonstrated that viewing TV violence can numb people's reactions when they are faced with real-life aggression



Effect of media and violent video games in causing aggression in children

Short term effects

- Priming process through which spreading activation in the brain's neural network from the locus representing an external observed stimulus excites another brain node representing a cognition, emotion, or behavior.
- The external stimulus can be inherently linked to a cognition, e.g., the sight of a gun is inherently linked to the concept of aggression [5], or the external stimulus can be something inherently neutral like a particular ethnic group (e.g., African-American) that has become linked in the past to certain beliefs or behaviors (e.g., welfare).
- The primed concepts make behaviors linked to them more likely. When media violence primes aggressive concepts, aggression is more likely.

Effect of media and violent video games in causing aggression in children

Short term effects

- Arousal: aggressive behavior may also become more likely in the short run for two possible reasons -- excitation transfer and general arousal.
- For example, immediately following an exciting media presentation, excitation transfer could cause more aggressive responses to provocation.
- Alternatively, the increased general arousal stimulated by the media presentation may simply reach such a peak that inhibition of inappropriate responses is diminished, and dominant learned responses are displayed in social problem solving, e.g. direct instrumental aggression.
- Mimicry: The third short term process, imitation of specific behaviors, can be viewed as a special case of the more general long-term process of observational learning.
- In recent years evidence has accumulated that human and primate young have an innate tendency to mimic whomever they observe

Media and Video games mediating violence

Long term effects

- Observational learning: During early, middle, and late childhood children encode in memory social scripts to guide behavior though observation of family, peers, community, and mass media. Consequently observed behaviors are imitated long after they are observed
- Desensitization: Long-term socialization effects of the mass media are also quite likely increased by the way the mass media and video games affect emotions. Repeated exposures to emotionally activating media or video games can lead to habituation of certain natural emotional reactions.
- Enactive learning: players of violent video games are not just observers but also “active” participants in violent actions, and are generally reinforced for using violence to gain desired goals, At the same time, because some video games are played together by social groups (e.g., multi-person games) and because individual games may often be played together by peers, more complex social conditioning processes may be involved

Cognitive reasoning

Information processing & social cognition (Dodge)

1. Encode hostile aspects of interactions
2. Attribute hostile intent to ambiguous social cues
3. Access & Favor aggressive responses
4. May be assoc with physical abuse

Physiological

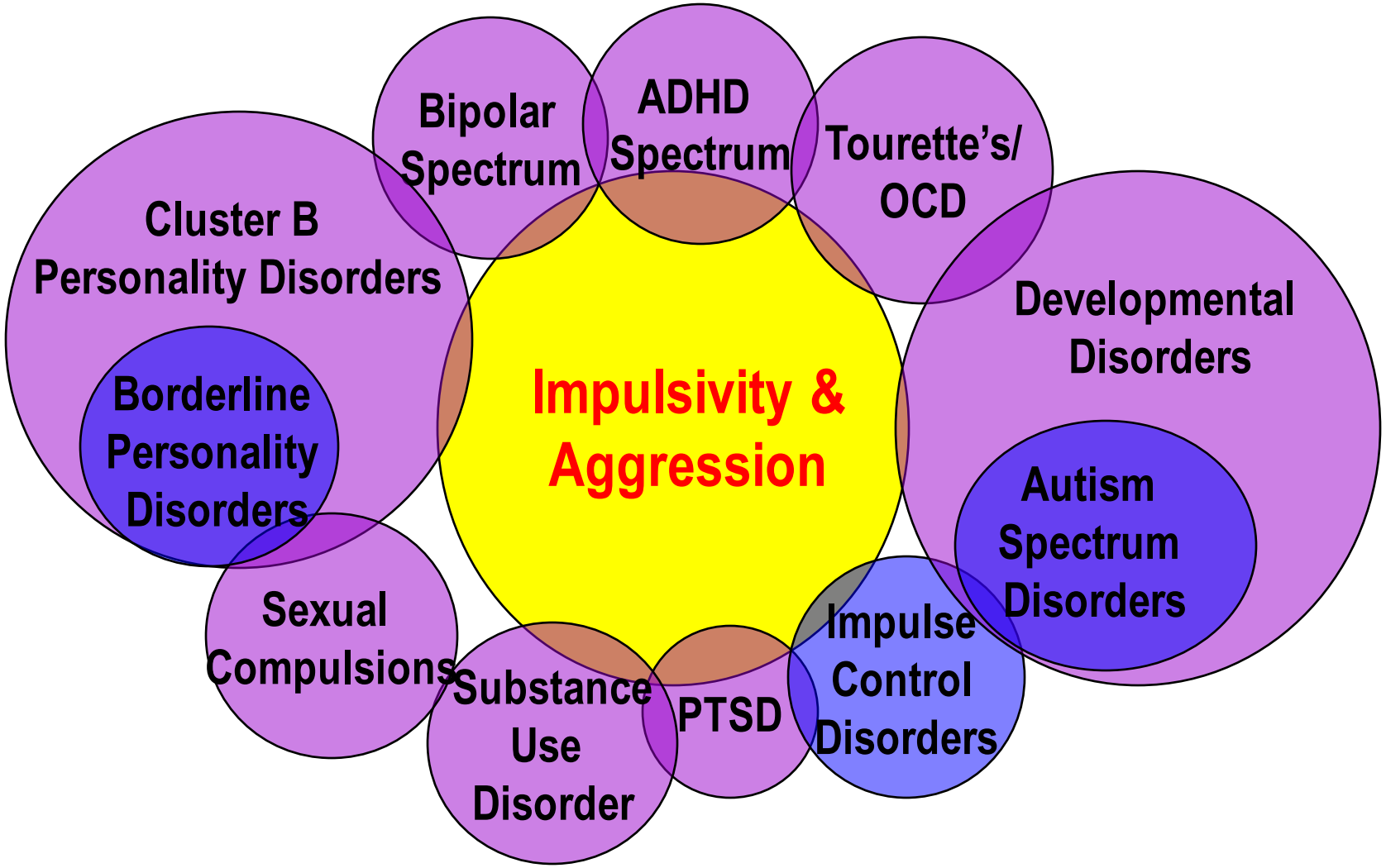
- IQ & developmental status
- Illness & response-parent, child
- Pain & discomfort
- Substance use

Substance use/abuse

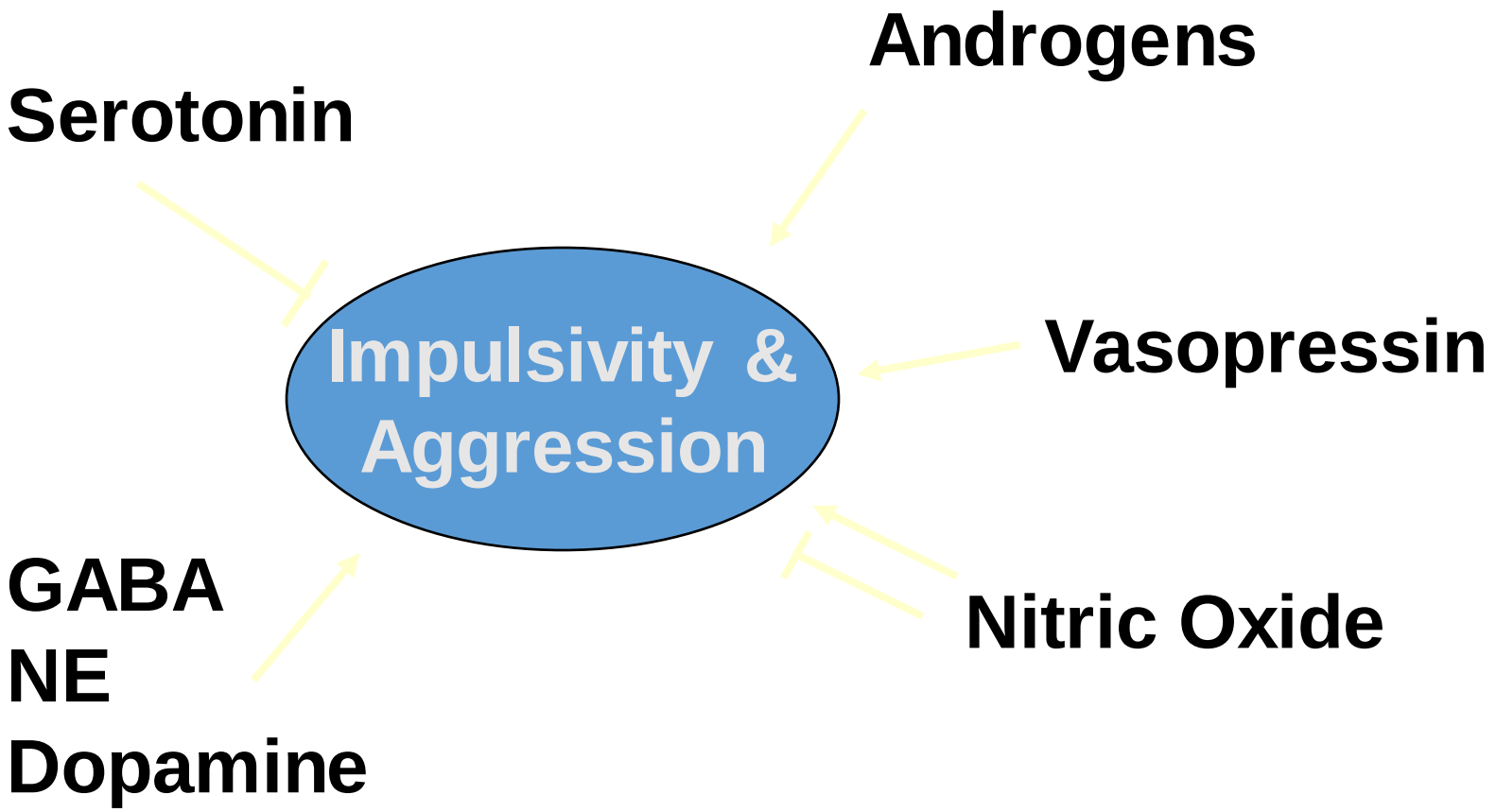
- Drug or alcohol affected youth in ED
- Higher risk with alcohol, methamphetamine, cocaine, ecstasy.
- Medications interacting with substances of abuse
- Medications, substances & head injury

- Highest risk of aggression regardless of age

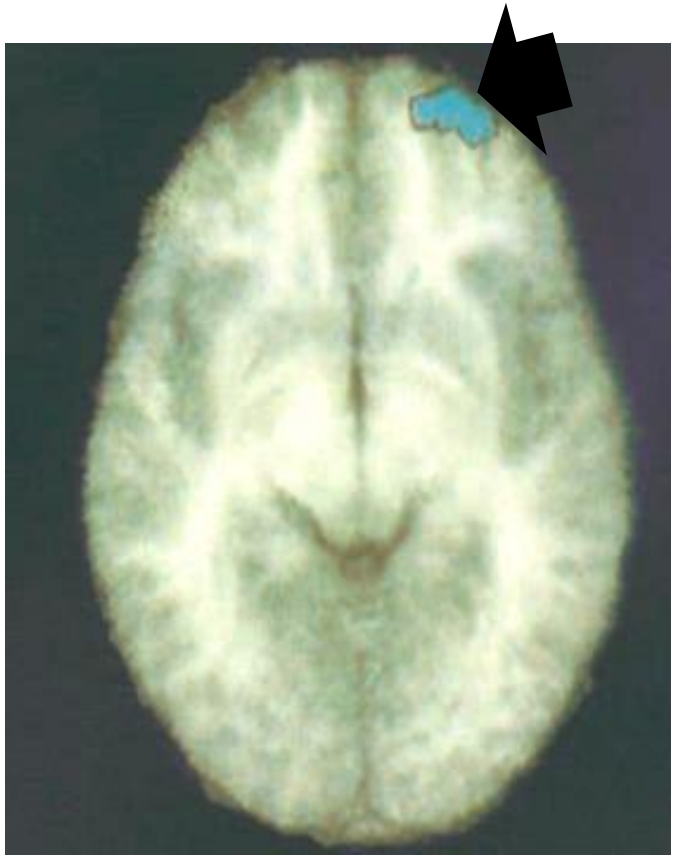
Impulsive-Aggressive Spectrum



Neurochemistry of Impulsive Aggression

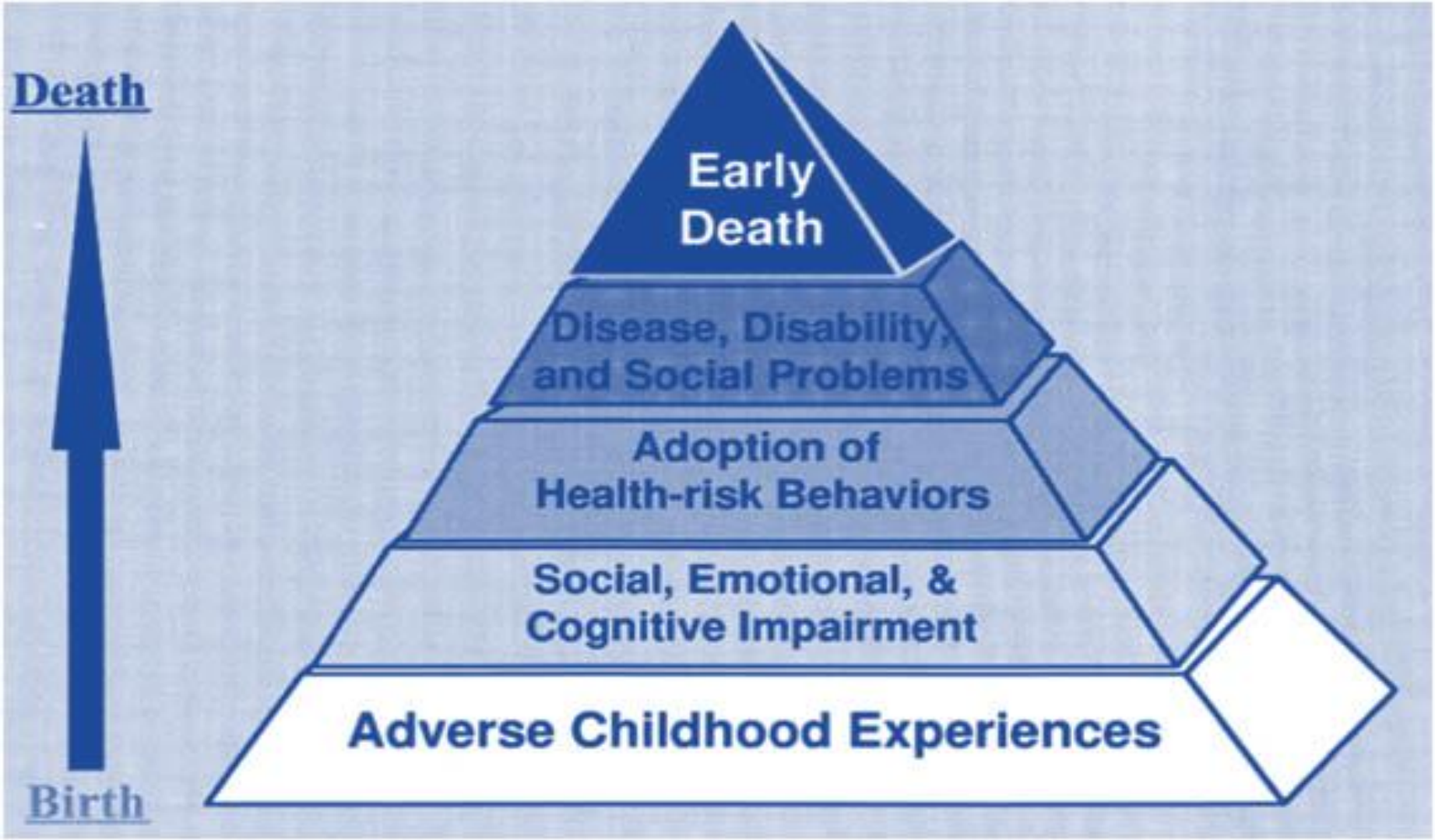


FDG-PET in Patients with Intermittent Explosive Disorder (N=6)



p<0.05 patient increase with fenfluramine less than normal increase; Siever et al, 1999

Trauma informed thinking of causes of aggression



Symptoms of ODD and CD

Unusually frequent or severe temper tantrums for the child's developmental level.

Often argues with adults.

Often actively defies or refuses adults' requests or rules.

Often, apparently deliberately, does things that annoy other people.

Often blames others for one's own mistakes or misbehaviour.

Often touchy or easily annoyed by others.

Often angry or resentful.

Often spiteful or vindictive.

ODD ≥ 4 symptoms from orange and blue (but ≤2 from blue)

CD ≥ 3 symptoms from blue

Frequent and marked lying.

Excessive fighting with other children, with frequent initiation of fights.

Uses a weapon that can cause serious physical harm to others

Often stays out after dark without permission (beginning before 13 years of age).

Physical cruelty to other people (e.g. ties up, cuts or burns a victim).

Physical cruelty to animals.

Deliberate destruction of others' property.

Deliberate fire-setting with a risk or intention of causing serious damage.

At least two episodes of stealing of objects of value from home.

At least two episodes of stealing outside the home without confrontation with the victim

Frequent truancy from school beginning before 13 years of age.

Running away from home.

Any episode of crime involving confrontation with a victim

Forcing another person into sexual activity against their wishes.

Frequent bullying of others (i.e. deliberate infliction of pain or hurt including persistent intimidation, tormenting, or molestation).

Breaks into someone else's house, building or car.

Conduct Disorder

Symptoms of Conduct Disorder may include:
a repetitive and persistent pattern of behaviour in which the basic rights of others or major age-appropriate societal norms or rules are violated.

- bullying, threatening, or intimidating others;
- initiating physical fights;
- using weapons that can cause serious physical harm to others;
- being physically cruel to people and/or animals;
- stealing while confronting victims;
- forcing people into sexual activities.
- deliberately engaging in fire setting with the intent of causing serious damage
- intentionally destroying others' property by other methods
- breaking into others' houses, buildings, or cars
- lying to obtain goods or favours to avoid obligations
- stealing items of nontrivial value without confronting victims such as shoplifting
- often staying out at night despite parental prohibitions
- running away form home overnight
- being truant from school

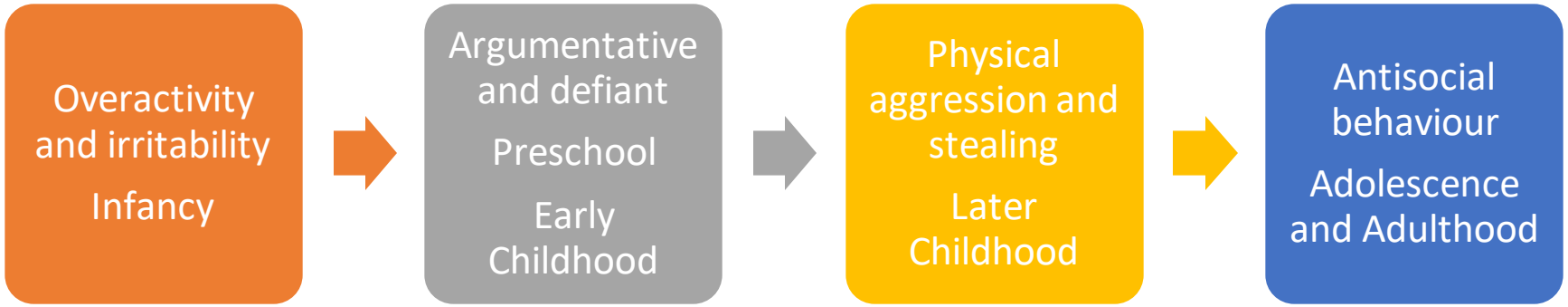
How common are conduct problems

In general population lifetime prevalence from National comorbidity Survey Replication in USA (> 3000 adults)

- Oppositional Defiant Disorder = 10.2%
  - M > F
  - Most emerge by 6 years

- Conduct disorder = 9.5%
  - In childhood M > F for prevalence and severity, more similar rates in adolescence
  - Fully fledged behaviours less usual before 9 – 10 (but younger onset linked with > severity and persistence)

Progression over time



But there is desistance at every stage.

While virtually every case of childhood CD had earlier ODD, most of those with earlier ODD don't develop CD

While virtually every case of adult antisocial personality disorder (APD) had CD as a youth, most of those with CD don't develop APD

Around 10% of children with ODD eventually develop APD

Different pathways for Conduct Disorder

Childhood onset

Life course persistent

- Starts with early ODD and persists into adulthood
- Greater levels of
  - Heritability
  - Family history of CD, APD
  - neuropsychological deficits
    - Autonomic dysregulation
    - EF deficits
    - Emotional dysregulation
    - Low IQ
  - ADHD
  - Impulsivity
  - Internalizing disorders (anx, dep)
- Still have high levels of environmental disadvantage

Adolescent onset

- Tends not to persist into adulthood
- Lack of distinct temperamental or personality deficits prior to adolescence
- Lower levels of
  - Heritability
  - Family dysfunction
  - Comorbid psychopathology
  - Neuropsychological deficits
  - Academic and peer difficulties
- Often seen as
  - Exaggeration of processes typical to adolescence
  - “a maladaptive and misguided attempt to obtain a subjective sense of maturity and adult status”
- Highly influenced by delinquent peers
- Can be attempt to achieve social status

Comorbidity is the norm rather than the exception

- Meta analysis general population studies (ODD or CD) Angold et al 1999
  - ADHD 3.1 – 41%
  - Depression 2.2 – 45.9%
  - Anxiety 4.8 – 55.3%

- National comorbidity Survey Replication
  - ODD (92.4% had at least one comorbidity)
    - ADHD 35%
    - Anxiety 62.3%
    - SUD 47.2%
    - Mood disorder 45.8%

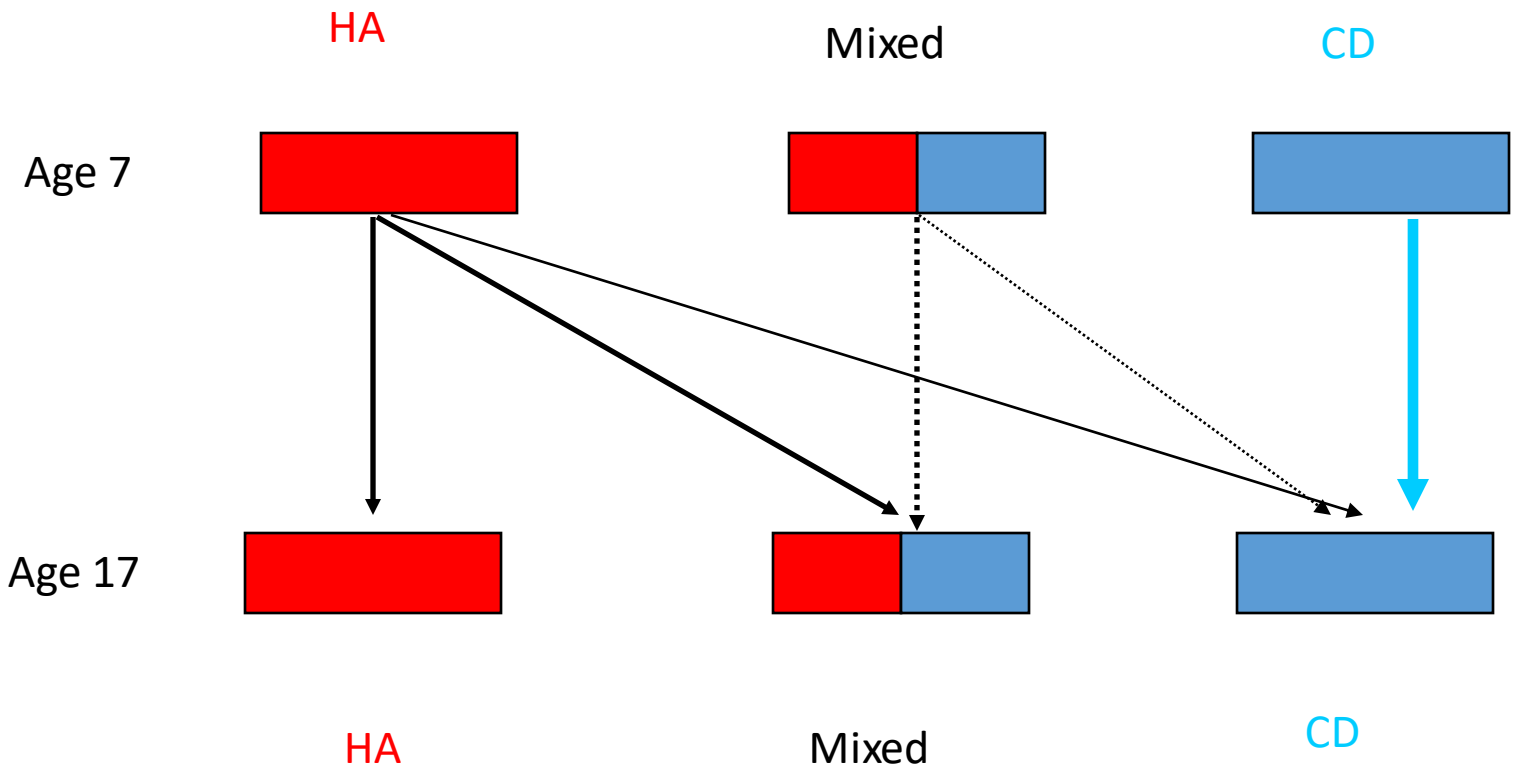
Clinic referred sample (Greene et al 2002)

- CD
  - ADHD 80%
  - Depression 50%
  - Anxiety 40%

- Compared to CD alone those with ADHD + CD have increased
  - Deviance and aggression
  - Chronic deviancy and recidivism
  - Peer rejection.
  - Persistence of social and academic difficulties

  And is a premorbid indicator of adult psychopathy

Hyperactivity & conduct disorder



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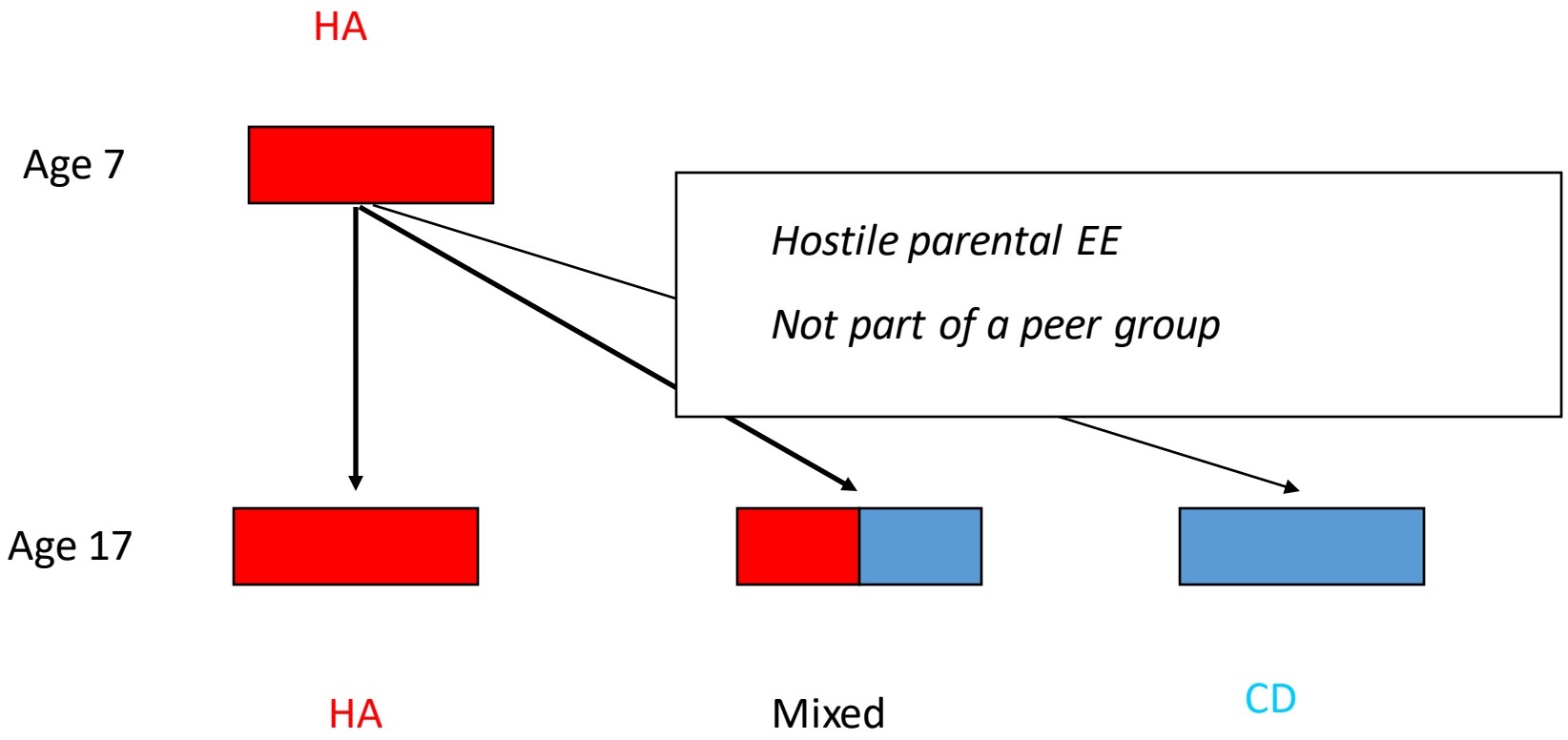
Hyperactivity & conduct disorder



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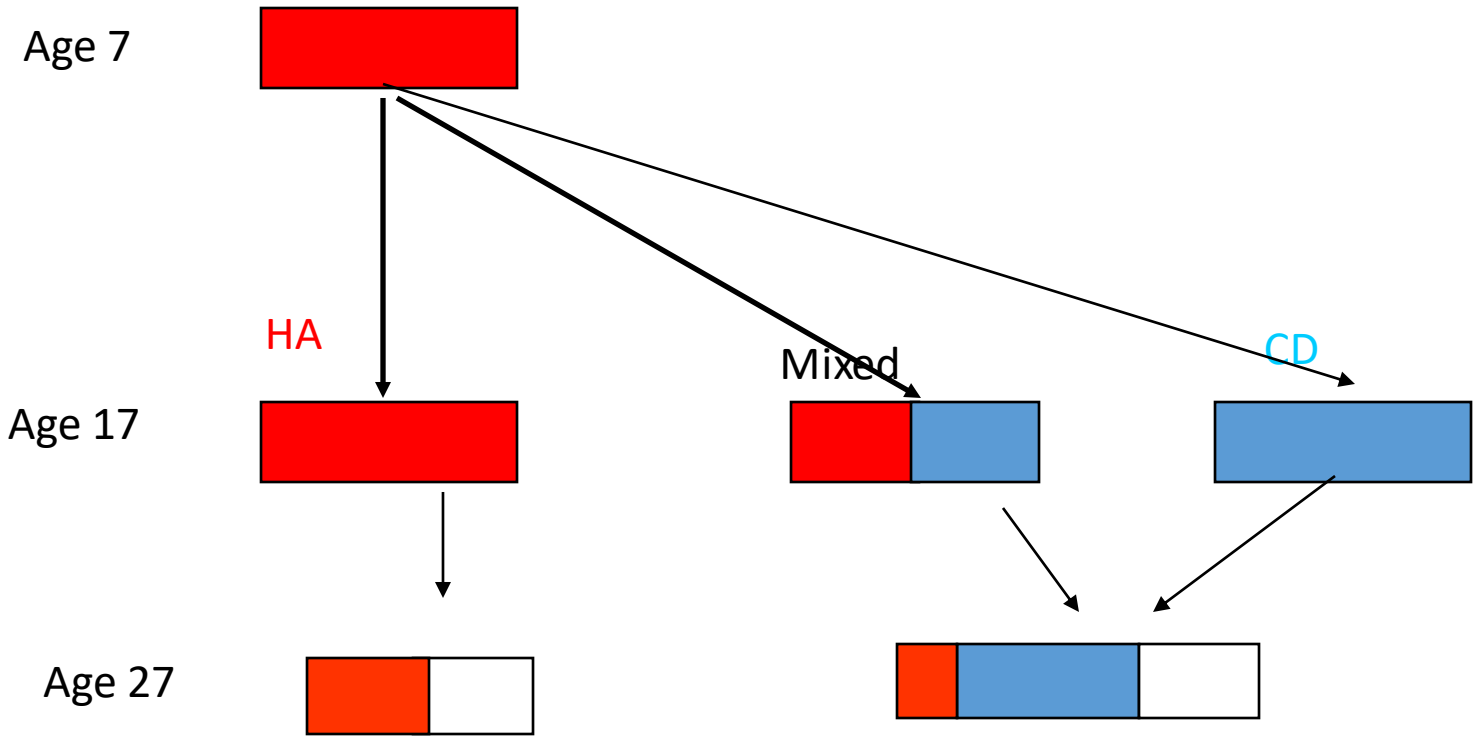

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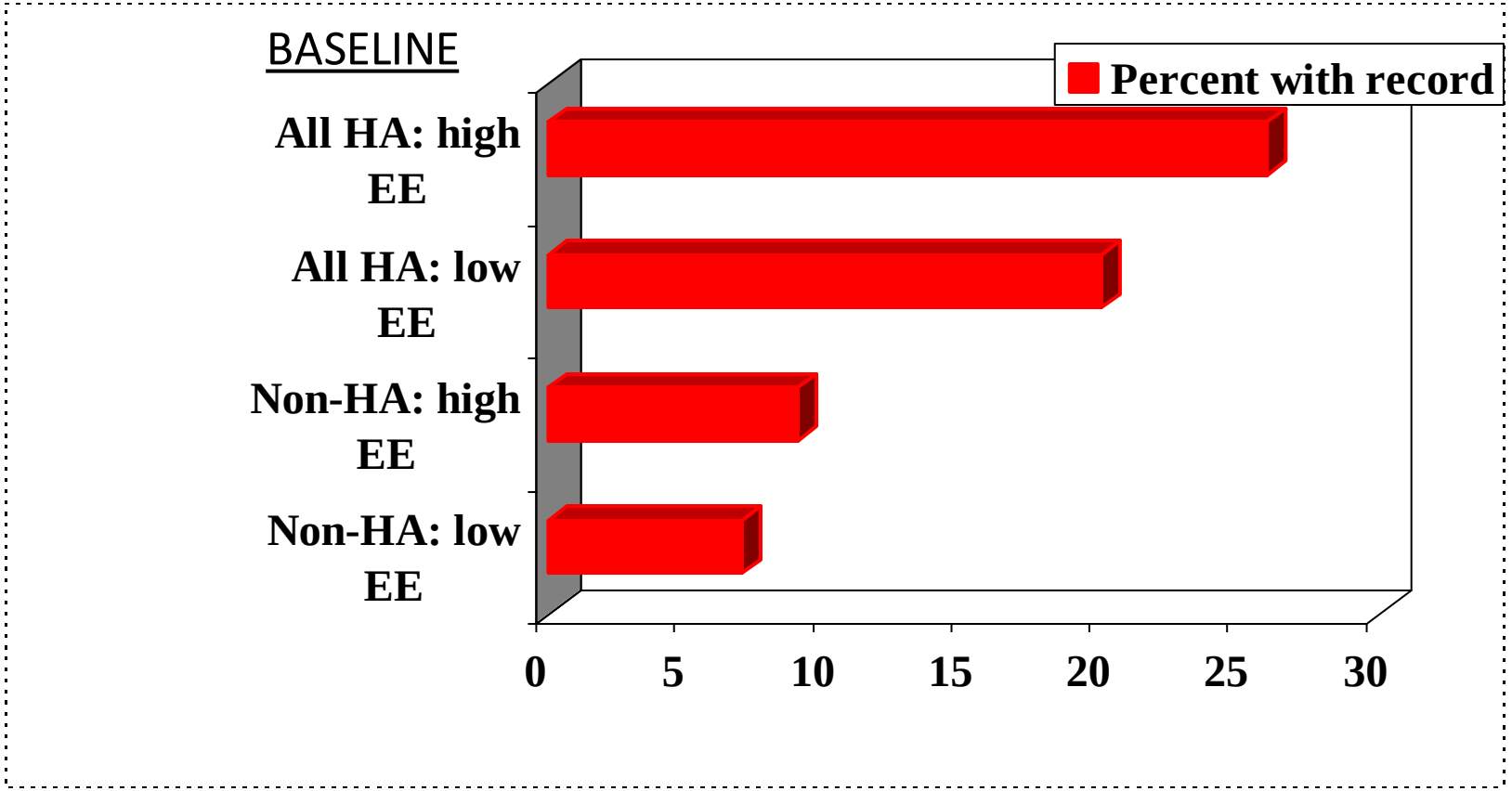
Predicting police records before age 18 years



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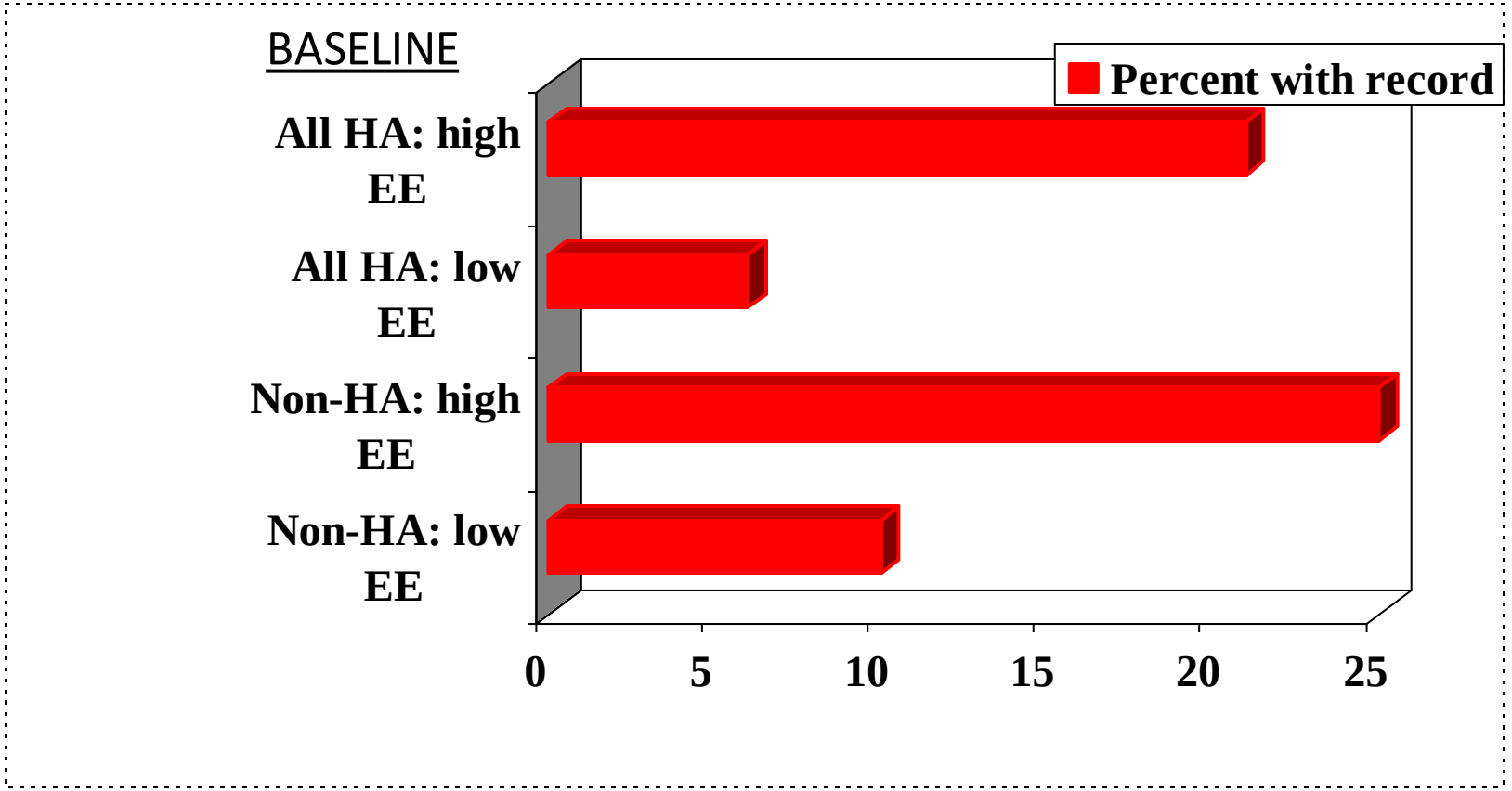
Predicting first offences after age 18 years



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Comprehensive assessment of children and young people with antisocial behaviour and conduct disorders

- A comprehensive assessment of a child or young person with a suspected conduct disorder should be undertaken by a health or social care professional who is competent to undertake the assessment and should:
  - offer the child or young person the opportunity to meet the professional on their own
  - involve a parent, carer or other third party known to the child or young person who can provide information about current and past behaviour
  - if necessary involve more than 1 health or social care professional to ensure a comprehensive assessment is undertaken.

NICE Guideline 158

Comprehensive assessment of children and young people with antisocial behaviour and conduct disorders

The standard components of a comprehensive assessment of conduct disorders should include asking about and assessing the following:

- core conduct disorders symptoms including:
    - patterns of negativistic, hostile, or defiant behaviour in children aged under 11 years
    - aggression to people and animals, destruction of property, deceitfulness or theft and serious violations of rules in children aged over 11 years
- current functioning at home, at school or college and with peers
- parenting quality
- history of any past or current mental or physical health problems.
    - learning difficulties or disabilities
    - neurodevelopmental conditions such as ADHD and autism
    - neurological disorders including epilepsy and motor impairments
    - other mental health problems (for example, depression, post-traumatic stress disorder and bipolar disorder)
    - substance misuse
    - communication disorders (for example, speech and language problems).

NICE Guideline 158

Comprehensive assessment of children and young people with antisocial behaviour and conduct disorders

- Assess the risks faced by the child or young person and if needed develop a risk management plan for self-neglect, exploitation by others, self-harm or harm to others.

- Assess for the presence or risk of physical, sexual and emotional abuse in line with local protocols for the assessment and management of these problems.

NICE Guideline 158

Comprehensive assessment of children and young people with antisocial behaviour and conduct disorders

- Conduct a comprehensive assessment of the child or young person's parents or carers, which should cover:
  - positive and negative aspects of parenting, in particular any use of coercive discipline
  - the parent–child relationship
  - positive and negative adult relationships within the child or young person's family, including domestic violence
  - parental wellbeing, encompassing mental health, substance misuse (including whether alcohol or drugs were used during pregnancy) and criminal behaviour.

NICE Guideline 158

Care Plan

- Develop a care plan with the child or young person and their parents or carers that includes a profile of their needs, risks to self or others, and any further assessments that may be needed.
- This should encompass the development and maintenance of the conduct disorder and any associated behavioural problems, any coexisting mental or physical health problems and speech, language and communication difficulties, in the context of:
  - any personal, social, occupational, housing or educational needs
  - the needs of parents or carers
  - the strengths of the child or young person and their parents or carers.

NICE Guideline 158

Identifying effective treatment and care options

- When discussing treatment or care interventions with a child or young person with a conduct disorder and, if appropriate, their parents or carers, take account of:
  - their past and current experience of the disorder
  - their experience of, and response to, previous interventions and services
  - the nature, severity and duration of the problem(s)
  - the impact of the disorder on educational performance
  - any chronic physical health problem
  - any social or family factors that may have a role in the development or maintenance of the identified problem(s)
  - any coexisting conditions.

NICE Guideline 158

Identifying effective treatment and care options

When making a referral for treatment or care interventions for a conduct disorder, take account of the preferences of the child or young person and, if appropriate, their parents or carers when choosing from a range of evidence-based interventions.

NICE Guideline 158

Conduct Disorder

Symptoms of Conduct Disorder may include:
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- often staying out at night despite parental prohibitions
- running away form home overnight
- being truant from school

Mark Dadds Callous unemotional

https://www.youtube.com/watch?v=O9sM_XEIdf4

Disruptive Mood Dysregulation Disorder (DMDD)

- Severe temper outbursts at least three times a week
- Sad, irritable or angry mood almost every day
- Reaction is bigger than expected
- Child must be at least six years old
- Symptoms begin before age ten
- Symptoms are present for at least a year
- Child has trouble functioning in more than one place (e.g., home, school and/or with friends)

DMDD: The good news and bad news

- DMDD provides a diagnostic home and treatment focus for explosive children and has reduced the numbers misdiagnosed with bipolar disorder
- On the other hand
  - It is just as likely to be abused as bipolar disorder as it doesn't capture the vast majority of explosive children
  - It may well mask conditions we already know about and can treat
- A better solution for explosive behaviours and severe irritability may be to have them as a modifier of existing disorders

Schizophrenia DSM 5 diagnostic criteria

- The presence of at least two of the following five items, each present for a clinically significant portion of time during a 1-month period (or less if successfully treated), with at least one of them being items 1), 2), or 3): 1) delusions, 2) hallucinations, 3) disorganized speech, 4) grossly disorganized or catatonic behavior, and 5) negative symptoms (e.g., decreased motivation and diminished expressiveness).
- For a clinically significant portion of the time since the onset of the disturbance, the level of functioning in one or more major areas (e.g., work, interpersonal relations, or self-care) is markedly below the level achieved before onset; when the onset is in childhood or adolescence, the expected level of interpersonal, academic, or occupational functioning is not achieved.
- Continuous signs of the disturbance persist for a period of at least 6 months, which must include at least 1 month of symptoms (or less if successfully treated); prodromal symptoms often precede the active phase, and residual symptoms may follow it, characterized by mild or subthreshold forms of hallucinations or delusions.
- Schizoaffective disorder and depressive or bipolar disorder with psychotic features have been ruled out because either no major depressive, manic, or mixed episodes have occurred concurrently with the active-phase symptoms or any mood episodes that have occurred during active-phase symptoms have been present for a minority of the total duration of the active and residual periods of the illness.
- The disturbance is not attributable to the physiological effects of a substance (e.g., a drug of abuse or a medication) or another medical condition. If there is a history of autism spectrum disorder or a communication disorder of childhood onset, the additional diagnosis of schizophrenia is made only if prominent delusions or hallucinations, in addition to the other required symptoms or schizophrenia, are also present for at least 1 month (or less if successfully treated).
- In addition to the symptom domain areas identified in the first diagnostic criterion, assessment of cognition, depression, and mania symptom domains is vital for distinguishing between schizophrenia and other psychotic disorders.

DSM 5 Criteria for Major Depressive Disorder

- The individual must be experiencing five or more symptoms during the same 2-week period and at least one of the symptoms should be either (1) depressed mood or (2) loss of interest or pleasure.
- Depressed mood most of the day, nearly every day.
- Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day.
- Significant weight loss when not dieting or weight gain, or decrease or increase in appetite nearly every day.
- A slowing down of thought and a reduction of physical movement (observable by others, not merely subjective feelings of restlessness or being slowed down).
- Fatigue or loss of energy nearly every day.
- Feelings of worthlessness or excessive or inappropriate guilt nearly every day.
- Diminished ability to think or concentrate, or indecisiveness, nearly every day.
- Recurrent thoughts of death, recurrent suicidal ideation without a specific plan, or a suicide attempt or a specific plan for committing suicide.
- To receive a diagnosis of depression, these symptoms must cause the individual clinically significant distress or impairment in social, occupational, or other important areas of functioning. The symptoms must also not be a result of substance abuse or another medical condition.

DSM 5-MDD specifiers

- With Mixed Features – This specifier allows for the presence of manic symptoms as part of the depression diagnosis in patients who do not meet the full criteria for a manic episode.
- With Anxious Distress – The presence of anxiety in patients may affect prognosis, treatment options, and the patient's response to them. Clinicians will need to assess whether or not the individual experiencing depression also presents with anxious distress.

Rating and assessment tools

Rating the level of aggression cross sectionally

Modified Overt Aggression Scale MOAS Clinician version

- https://depts.washington.edu/dbpeds/Screening%20Tools/Modified-Overt-Aggression-Scale-MOAS.pdf

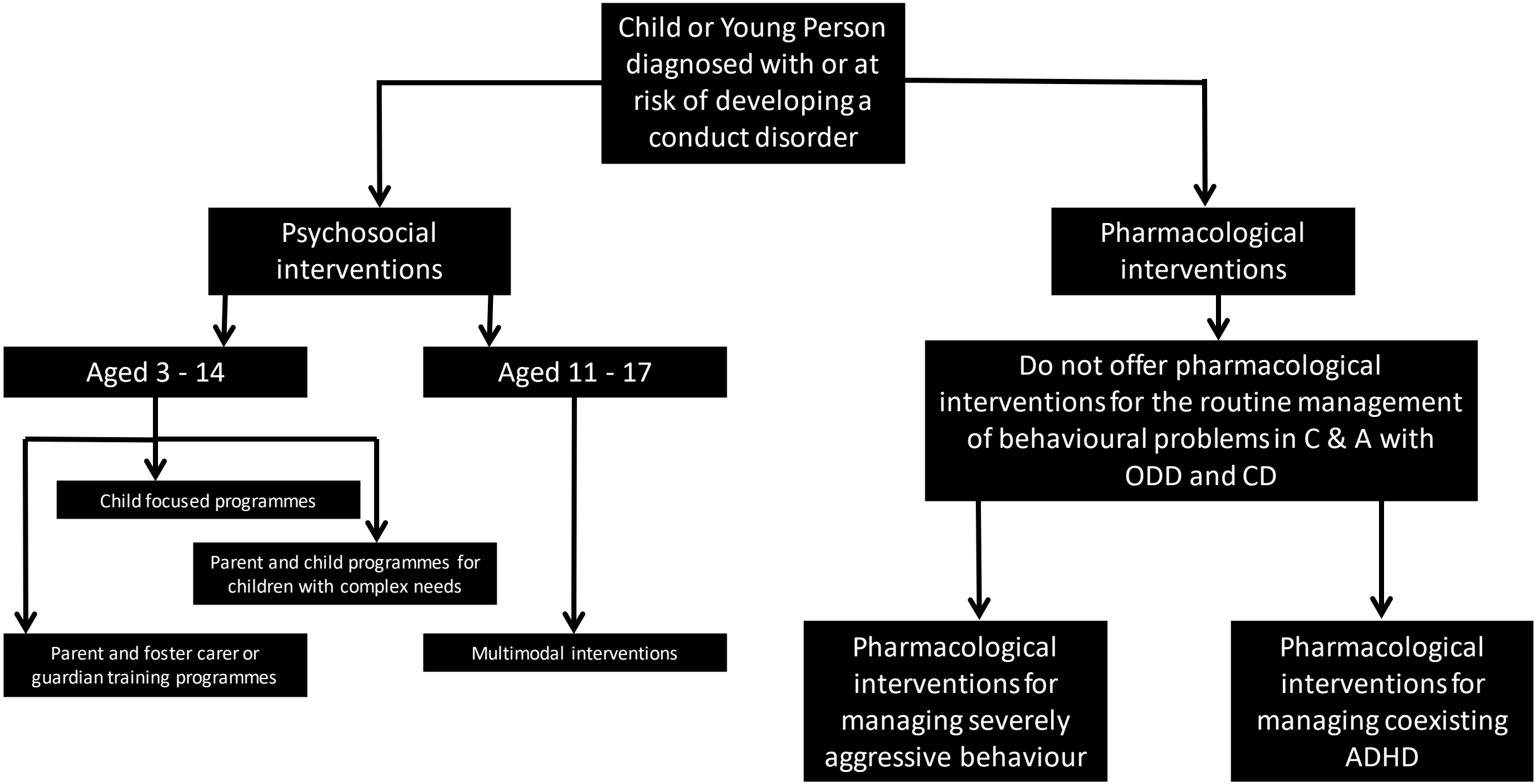
Modified Overt Aggression Scale MOAS Parent version

- https://www.thereachinstitute.org/images/MOAS_Parent.pdf

Assessing offending and violence risk longitudinally

Structured Assessment of Violence Risk in Youth SAVRY

- Assess risk of violence in individuals ages 12-18 years, Paper-and-Pencil, 10-15 minutes to administer and is hand Scored



NICE Guideline 158

Medications with some evidence for use in treating CD / Reducing aggression

- Antipsychotics
  - Typicals (Haloperidol, Molindone) ✓
  - Risperidone ✓ ✓ (ID)
  - Olanzapine
  - Quetiapine ? Open label only
  - Aripiprazole
- Stimulants ✓
- SNRI X
  - Atomoxetine
  - Reboxetine
- Mood stabilizers
  - Lithium Carbonate ✓ low quality
  - Carbamazepine X
  - Divalproax Sodium (sodium Valproate) ?
- Antidepressants X
  - SSRI ?
  - Trazodone

Medication for severely aggressive behaviours

Consider risperidone for the short-term management of severely aggressive behaviour in young people with a conduct disorder who have problems with explosive anger and severe emotional dysregulation and who have not responded to psychosocial interventions.

- Provide young people and their parents or carers with age-appropriate information and discuss the likely benefits and possible side effects of risperidone including:
  - metabolic (including weight gain and diabetes)
  - extrapyramidal (including akathisia, dyskinesia and dystonia)
  - cardiovascular (including prolonging the QT interval)
  - hormonal (including increasing plasma prolactin)
  - other (including unpleasant subjective experiences).

NICE Guideline 158

Risperidone for aggression

Record the following baseline investigations:

- weight and height (both plotted on a growth chart)
- waist and hip measurements
- pulse and blood pressure
- fasting blood glucose, HbA_{1c}, blood lipid and prolactin levels
- assessment of any movement disorders
- assessment of nutritional status, diet and level of physical activity.

Monitor and record systematically throughout treatment, but especially during titration:

- efficacy, including changes in symptoms and behaviour
- the emergence of movement disorders
- weight and height (weekly)
- fasting blood glucose, HbA_{1c}, blood lipid and prolactin levels
- adherence to medication
- physical health, including warning parents or carers and the young person about symptoms and signs of neuroleptic malignant syndrome.

Review the effects of risperidone after 3–4 weeks and discontinue it if there is no indication of a clinically important response at 6 weeks.

Effect size for selected medications in Conduct Disorder

Medication	Effect size
Risperidone	0.9
Typical antipsychotics	0.7 – 0.8
Stimulants (primarily MPH)	0.7 - 0.8
Lithium	0.4
SSRI	0.3 (but mostly ADHD samples not CD)

Pappadopulos et al 2006

Neuroleptic Malignant Syndrome

- Symptoms include:
  - high fever
  - Sweating
  - unstable blood pressure
  - Stupor
  - muscular rigidity
  - autonomic dysfunction.

- In most cases, the disorder develops within the first 2 weeks of treatment with the drug; however, the disorder may develop any time during the therapy period.

Treatment

- Generally, intensive care is needed. The neuroleptic or antipsychotic drug is discontinued, and the fever is treated aggressively. A muscle relaxant may be prescribed. Dopaminergic drugs, such as a dopamine agonist, have been reported to be useful

Common cognitive behavioural treatment components

- Cognitive skills Training on general thinking and decision-making skills such as to stop and think before acting, generate alternative solutions, evaluate consequences, and make decisions about appropriate behaviour
- Cognitive restructuring: Activities and exercises aimed at recognizing and modifying cognitive distortions and errors that trigger violence Interpersonal problem solving
- Training in problem-solving skills for dealing with interpersonal conflict and peer pressure
- Social skills Training in prosocial behaviours, interpreting social cues, taking other persons' feelings into account

Common cognitive behavioural treatment components

- Anger control Training in techniques for identifying triggers and cues that arouse anger and maintaining self-control
- Relapse prevention Training on strategies to recognize and cope with high-risk situations and halt the relapse cycle before lapses turn into full relapses
- Moral reasoning** Activities designed to improve the ability to reason about right and wrong behaviour and raise the level of moral development
- Victim impact** Activities aimed and getting people to consider the impact of their behaviour on others

Sensory modulations interventions

- Identifying sensory triggers and physiological reactivity are essential to any effort to understand the antecedents of a violent episode and to develop person-specific strategies for early intervention and de-escalation.
- Teaching someone to recognize the changes in their own sensory experience enables them to more fully participate in the recovery process.
- Sensory modulation techniques allow for the creation of individualized tools to manage one's own physiological state. It is much easier for a person served to make their way in the world using personalized sensory
- tools under their conscious control than to rely on the presence of a staff member to do the same. Sensory modulation methods allow for choice and empowerment and decrease the sense of shame associated with being "less than" or "dependent."

Relationship between trauma-induced feelings and appropriate psychosocial interventions

Challenging emotions	Antidote emotions	Interventions	Examples
Fear	Compassion	Sensory modulation	Grounding, sensory kits, body-based therapies, trauma-informed yoga, muscle relaxation, breath work, EMDR
Anger	Empathy	Intra- and interpersonal therapies	DBT, individual therapy, group therapy, addiction work, anger management, mindfulness-based therapies
Shame	Pride	Skill mastery	CBT, cognitive enhancing therapy, stress management, motivational interviewing, skills training, vocational and educational training