

Medical aspects of Neurodevelopmental Conditions

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- 14.00 Welcome and introduction
- 14.05 Max
- 14.45 Mark
- 15.25 Panel discussion
- 15.55 Thanks and closing comments
- 16.00 Close of webinar

Objectives

- To cover the main conditions/disorders seen by Paediatricians and Psychiatrists within Neurodevelopmental Conditions and summarise the types of medications commonly used.
- (Not to cover how to assess)
- (Not to cover non-pharmacological treatments)

Physical health aspects of Neurodevelopmental Conditions

Dr Max Davie

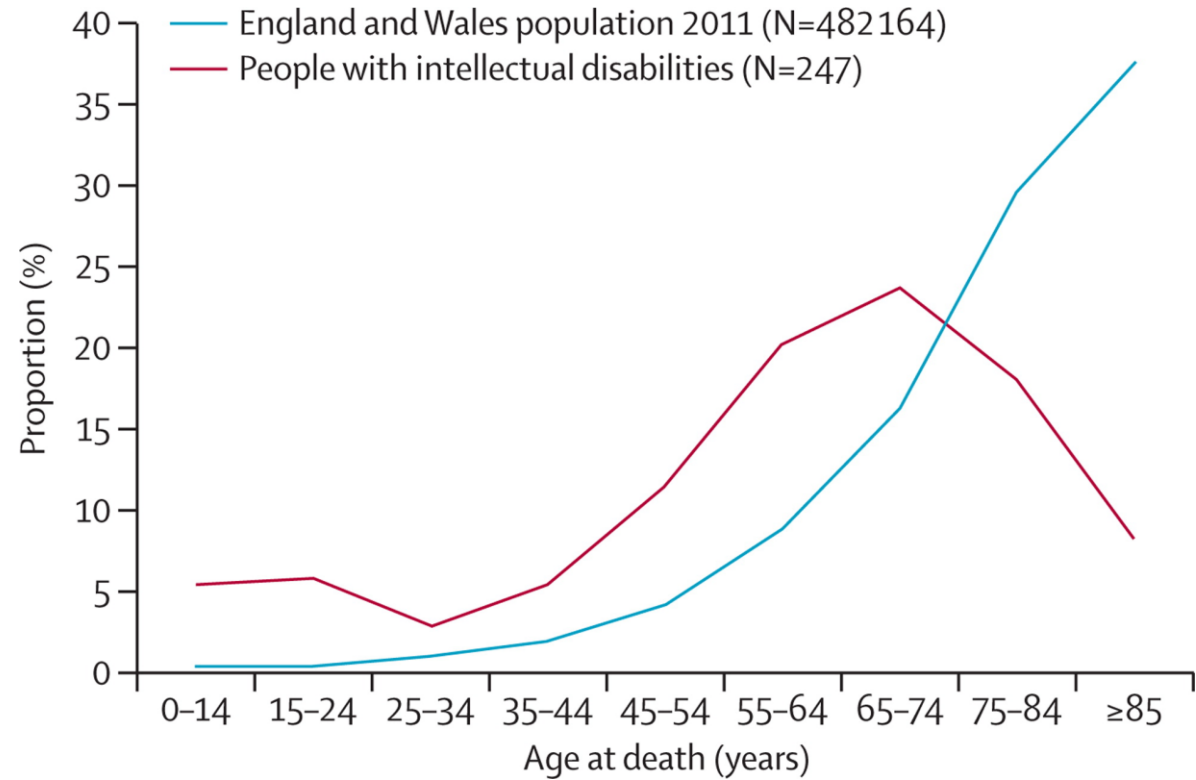
Consultant Community Paediatrician

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ACAMH NDC sig Chair

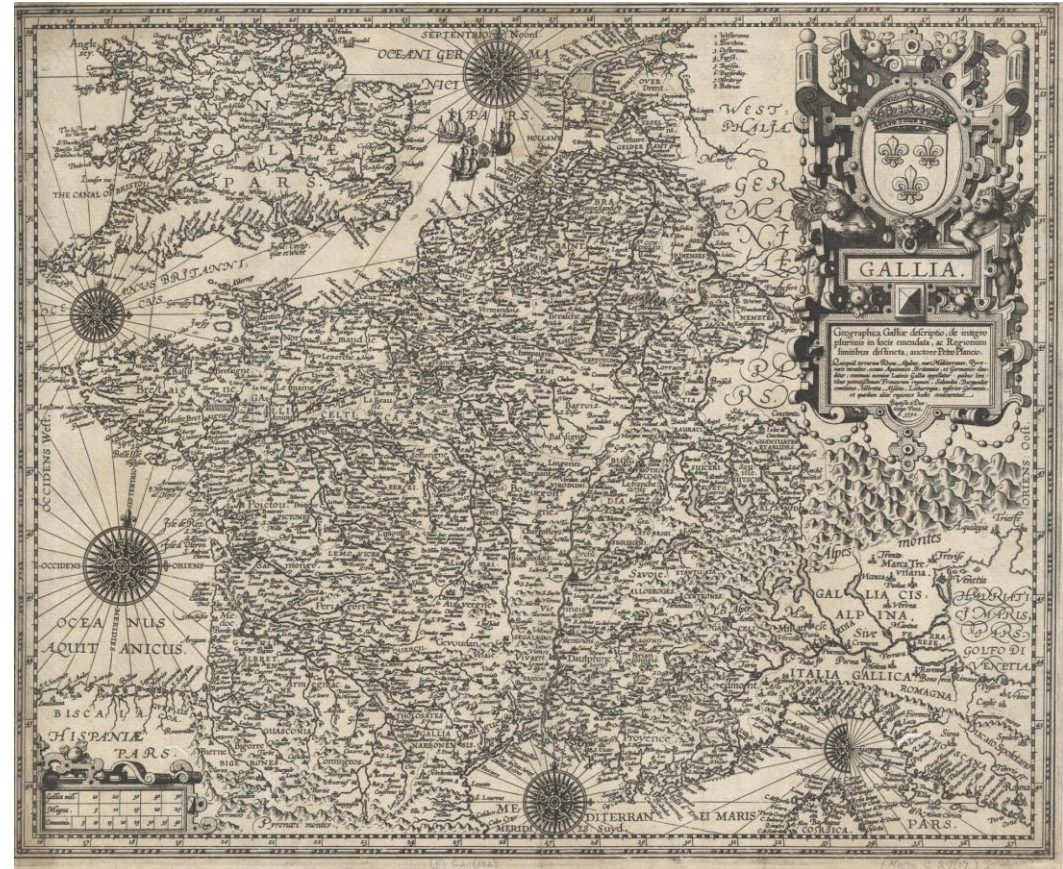
Physical health in NDCs

- Neglected (esp in ID)
- Misunderstood
- Silo working

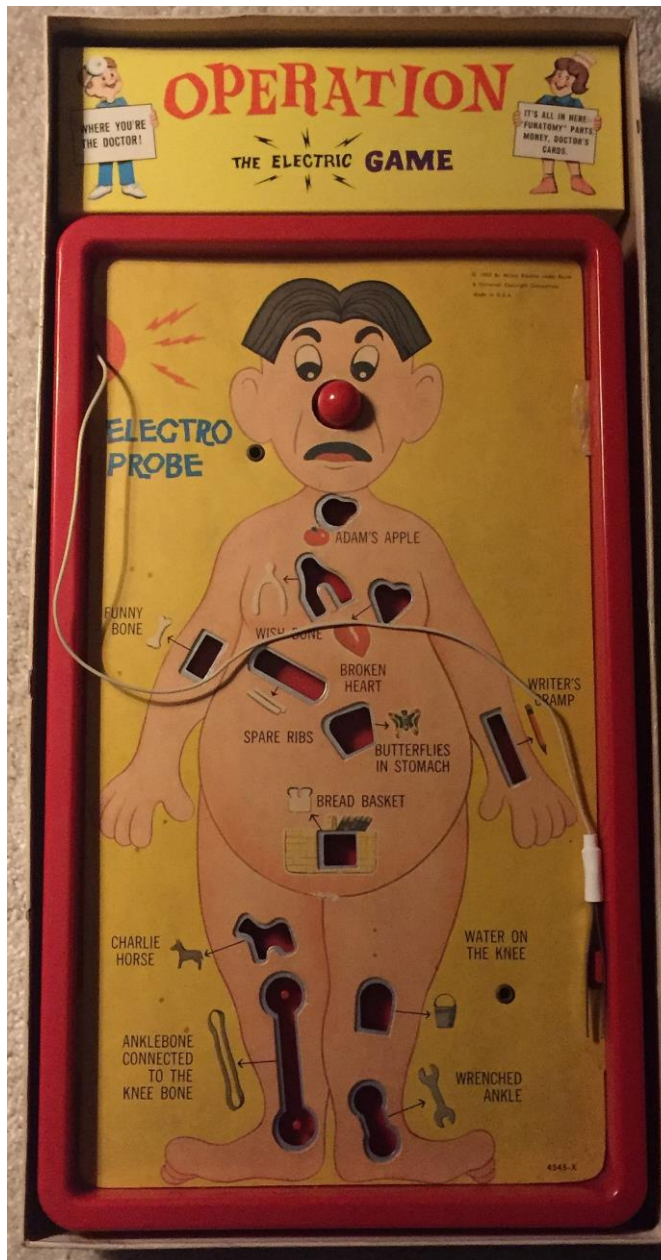


Assessment- taking a broad view

- Physical symptoms look different
- Psychological distress as physical
- Core symptoms of NDC vs. physical signs
- Different points of view

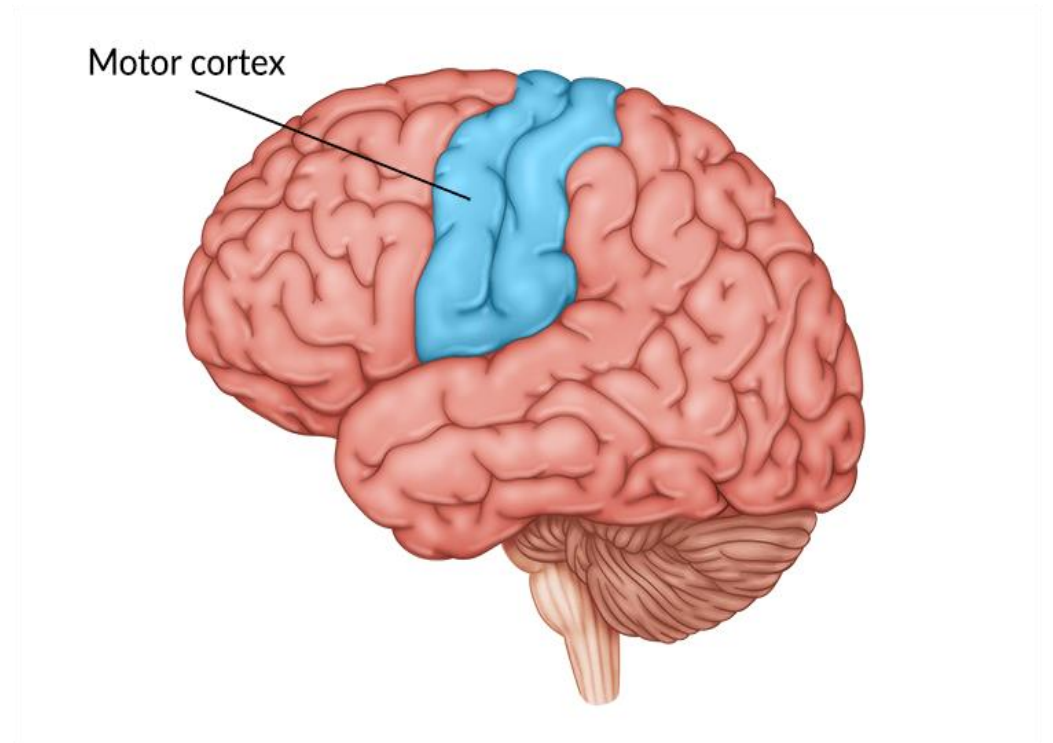


Some specifics



Neurological (well the bits that neurologists are interested in)

- Epilepsy and behaviour
- Physical disability and symptom
- Sensory modulation and pain



Gastro-Intestinal/ Urinary

- Constipation and interoception
- Soiling and mood
- Enuresis and distractibility



Resp/ ENT

- Snoring/ apnoea
- Communication and hearing
- Housing and breathing



Dermatological

- Neurocutaneous syndromes
- Eczema and sleep
- Acne and mood



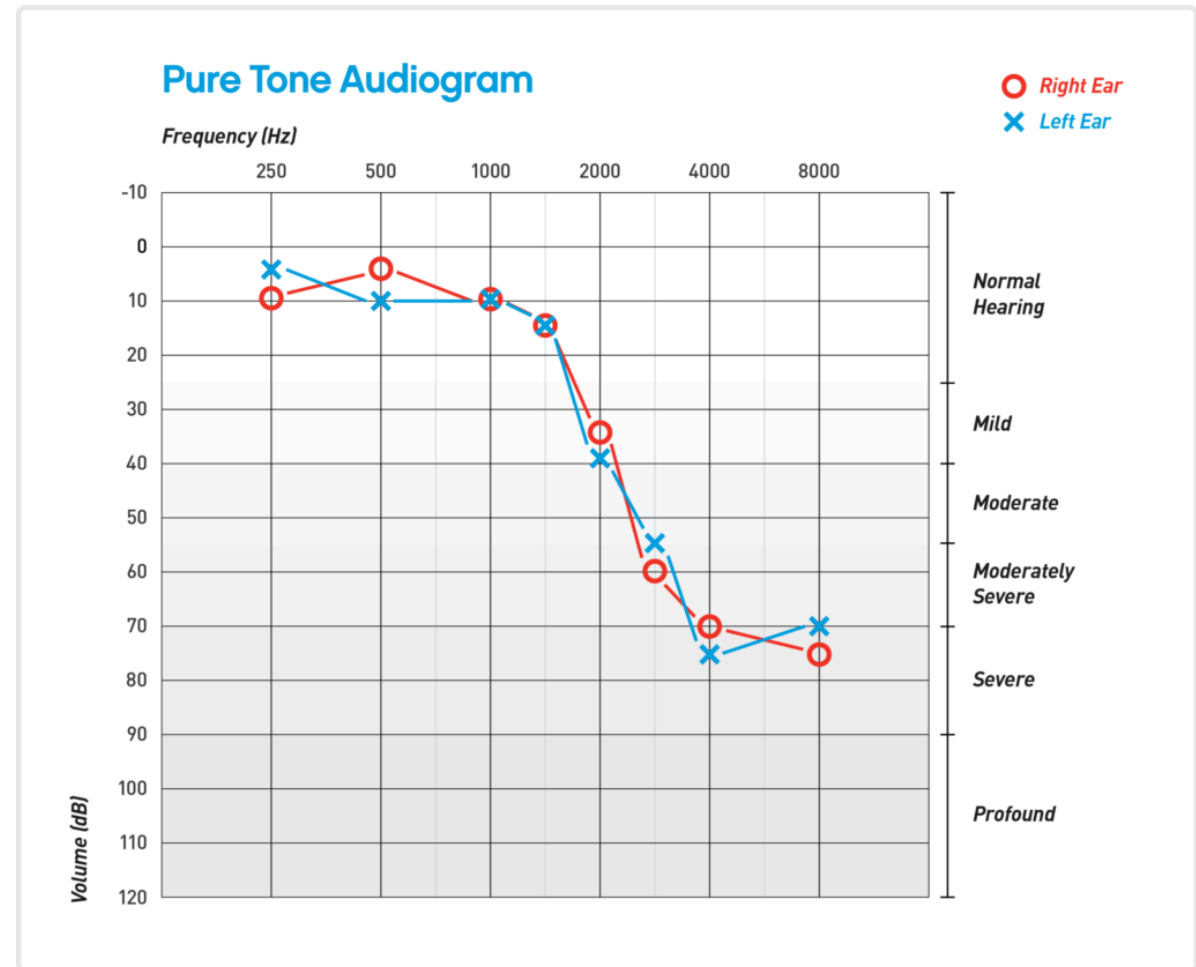
Pain/ MSK

- Dental pain in ID
- Abdominal pain and anxiety
- Hypermobility/ MSK pain
- Exercise and moof



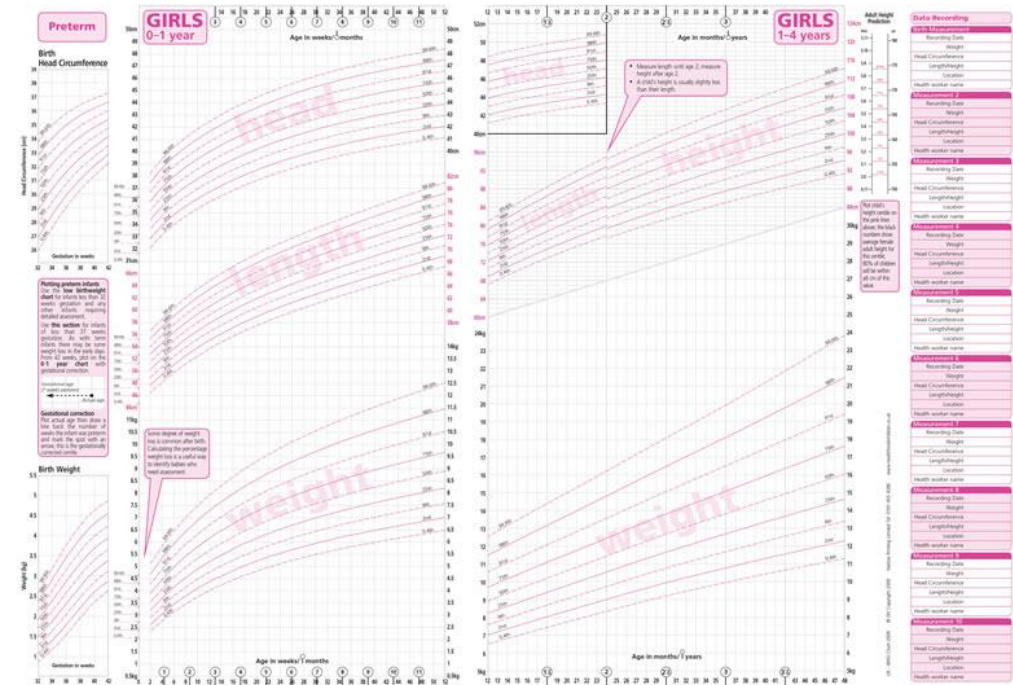
Sensory

- Hearing and communication
- Vision and attention
- Sensory modulation and ADHD



Endocrine

- Growth, care and genetics
- Puberty- not all about the hormones
- It's probably not their thyroid



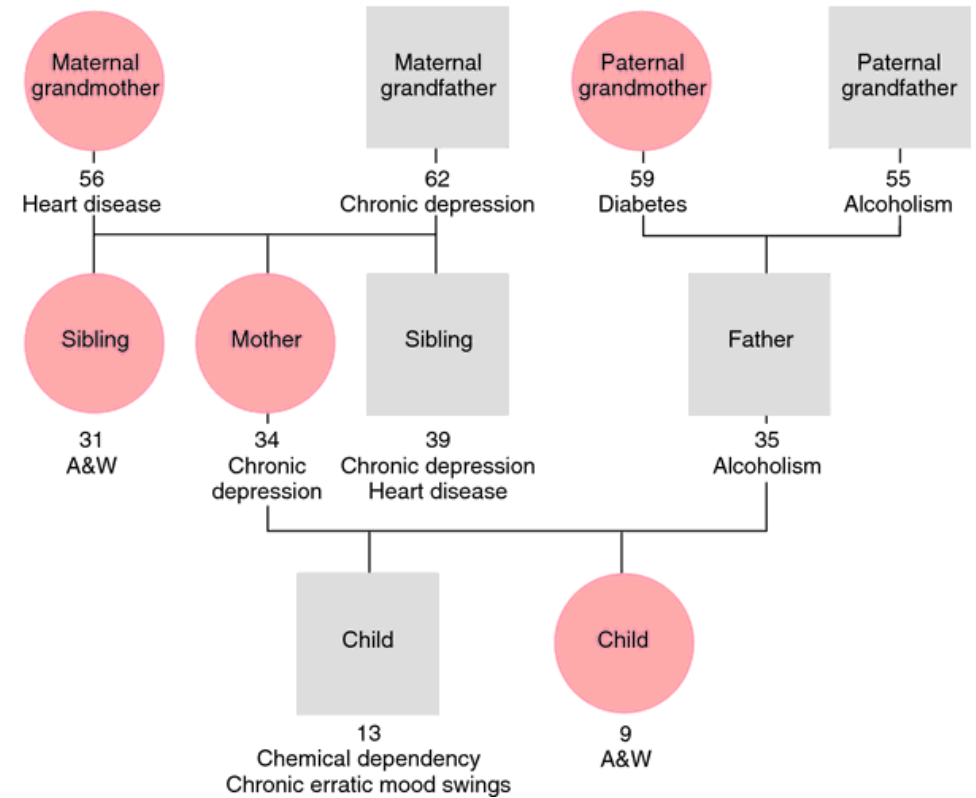
Nutrition

- Restricted diets and cultural expectation
- Feeding as a warzone (previous talk)
- Superfoods and miracle diets



Genetics

- Syndromes
- Genetic micro-changes
- Family history: the best tool?



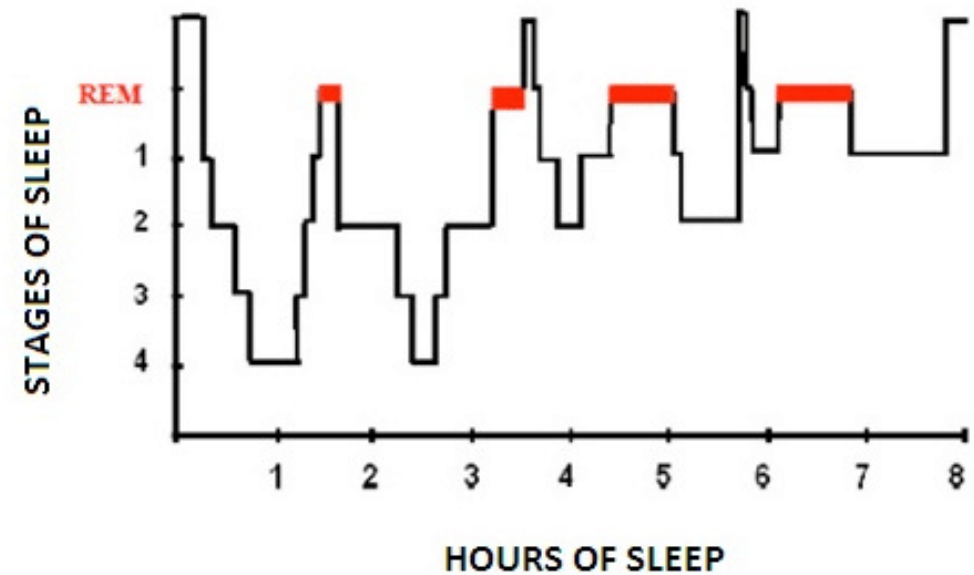
Bloods?

- Iron deficiency and sleep
- Pica
- Vit D and bone pain



Sleep

- Previous talk in NDC series
- No magic number
- Sleep associations
- Melatonin- the sometime switch



'Physical Health' medications and Mental Health/NDCs

- Side effects
 - Epileptic meds
 - Asthma meds
 - Steroids
- Cautions
- Contraindications
- Interactions



Psychiatric Aspects of Neurodevelopmental Conditions

Dr Mark Lovell

Consultant Child and Adolescent Intellectual Disability Psychiatrist

Tees, Esk and Wear Valleys NHS Foundation Trust

ACAMH NDC sig Vice-Chair

Psychiatrist/Non-Medical Prescribers

- Role of the Psychiatrist/NMP (within an MDT)
- Expertise/training
- After comprehensive Psychiatric history, physical if needed, tests if needed, MDT assessments...
- Diagnosis (ICD/DSM) vs formulation (Bio-Psycho social/6P) vs needs based plan
- Mental Health/NDC/Behavioural Treatments- (Bio)
- NB not everything has a pharmacological treatment

Bio-Psycho-Social vs 6Ps

	Biological	Psychological	Social
Presenting			
Predisposing			
Precipitating			
Perpetuating			
Protective			
Plan			

Assessments

- Principles- holistic
- Modifications:
 - understanding how a mental health disorder may present in the presence of a NDC
 - Reasonable adjustments
 - observation
 - Parents/carers/professionals vs child info
 - Symptomatology may be masked, different or more biological than psychological
 - Separating out mental health symptoms from core symptoms of the NDC
 - Diagnostic overshadowing

Mental Health

- Anxiety- particularly change/transition/fear of the unknown, PTSD, ICD, phobias, generalised
- Mood- depression/bipolar
- Eating disorders incl PICA and ARFID
- Psychosis- schizophrenia
- Conduct disorders (aggression, refusal, breaking rules)/ Behaviour that challenges
- Catatonia eg in ASD
- Complex Trauma
- Attachment
- Bereavement/loss
- adjustment reactions to events/triggers
- Gender identity
- Forensics

Psychiatric Treatments

- Principles- no different to treating others- use the evidence base, guidance, licensing where possible
- Modifications- reasonable adjustments

Psychosis- pharmacological Treatments

- Antipsychotics
- Oral
- IM
- Monitoring
- BP, Pulse, Height, weight, ECG, bloods (FBC, U&E, LFT, Fasting Glucose, lipids, HBA1C,
- Prolactin
- WBCs- Clozaril

Mood disorders

- Depression
- Antidepressants

- Bipolar
- Mood stabilisers
- Antipsychotics
- Antidepressants

Anxiety (PTSD, OCD, Generalised)

- Anxiolytics
- SSRIs
- Betablockers
- Benzodiazepines/other sedatives

Eating Disorders

- SSRIs- mood, anxiety components
- Antipsychotics- hyperarousal

- Medications/supplements for malnutrition

- Feeding Disorders
- NB Iron and PICA

Medical options for hyperarousal as a symptom

- Sedating agent:
 - Antihistamine- eg promethazine
 - Benzodiazepine eg lorazepam, diazepam
 - Antipsychotic eg Risperidone, Aripiprazole
-
- NB short term license for Risperidone for severe aggression in ASD or CD

Hyperarousal as symptom

- Awareness of duration of the hyperarousal- may settle before a PRN treatment would help
- Frustration
- Anger
- Aggression
- What is the meaning of the behaviour? Communication, understanding, upset, sensory driven...
- Sometimes you have not identified a cause, or the cause can't be treated or treating the cause is taking too long- to manage risk/reduce distress you may need to treat the symptom.

Remember for Behaviour That Challenges management:

- Often Socio-psycho-bio
- Bio-psycho-social (only when a clear physical/mental health cause is identified)

Clinical experience

- The more experienced and skilled the MD/MA team are, reduces the likelihood of prescribing solely for the symptom of hyperarousal
- Need for good social support- respite, activities
- Good educational support
- Good support for parents/carers
- A skilled team in understanding PBS, attachment, communication, sensory, physical and mental health identification.

'Mental Health' medications and Physical health/NDCs

- Side effects (epilepsy, tics, + multiple other physical side effects)
- Cautions:
- Contraindications
- Interactions

Overlap Aspects (Paediatric/Psychiatric)

- NDCs
- Somatisation/Dissociation
- Medically unexplained symptoms
- Catatonia
- Eating Disorders/Feeding Disorders
- Gender Identity
- Chronic fatigue
- Regression
- Co-working

Assessments- NDCs

- Principles- holistic
- Modifications:
 - understanding how an NDC may present in the presence of another NDC
- Reasonable adjustments
- History/Observation/tests
- Parents/carers/professionals vs child info
- Symptomatology may be masked or resemble another NDC
- Diagnostic overshadowing

Neurodevelopmental conditions (NDCs)

- Differential Diagnoses/Co-occurring conditions:
- ADHD- impulsivity, attention, hyperactivity (emotional regulation, frustration)
- ASD- social communication, repetitive behaviours (aggression, self injury, emotional regulation)-
- ID/LD- IQ, adaptive behaviours (understanding, skill sets)
- Tics- motor, vocal (social acceptance)
- Specific Learning Difficulties eg Dyslexia, Dyscalculia
- Language Disorders
- Motor Disorders

NDCs

- Each NDC increases the chances of others being present
- Important to assess for more than just 1
- Important to identify and treat
- More important to assess and meet needs
- Acknowledge that diagnoses are sometimes needed eg- evidence base, collective understanding, access to services.

NDCs with pharmacological treatments (most don't)

- **ADHD:**
- Stimulants (methylphenidate I/R, M/R, Dexamphetamine, Lis-Dexamphetamine), Atomoxetine, Guanfacine
- Monitoring- BP, Pulse, Height, weight
- NB Iron deficiency and ADHD
- **Tics/Tourettes-:**
- Antipsychotics-
- Risperidone, aripirazole, Haloperidol
- Monitoring BP, Pulse, height, weight, ECG, Bloods (FBC, U&E, LFT, Fasting Glucose, Lipids, HBA1C, Prolactin)
- Clonidine (Guanfacine in ADHD + tics)
- Monitoring BP

Catatonia in ASD

- Benzodiazepines (may need high doses)
- Cautions
- (SSRIs)
- (Antipsychotics)

Regression

- ASD
- Retts
- Epileptic encephalopathy and other neurodegenerative disorder

Somatisation/Dissociation

- Somatisation is when a psychological issue is presented in a physical manner eg stomach ache in anxiety
- treatment is psychological/psychiatric after physical health ruled out

- Dissociation – a psychological process where an individual is disconnected from their thoughts, memories, feelings, sense of identity or reality
- May be part of another mental health disorder/distress/post-trauma
- Treatment is psychological (occasionally physical health may need ruling out eg epilepsy)

Medically Unexplained symptoms

- Can overlap with Dissociation and Somatisation
- Need to rule out physical cause
- Treatment may be psychological (may include medication if mental health disorder identified)
- Eg non-epileptic 'seizures', chronic pain
- NB sometimes can occur at the same time as a physical condition eg epilepsy

Gender Identity

- Pharmacological aspects- hormones (blockers/substitutions)
- (Surgery)

Chronic fatigue

- May have physical and mental health components
- Treatments- see NICE guideline 2021 (NG206)
- Management, no cure, energy/pain/fluid/diet/psychological management
- No medications.
- Caution- other medications may need lower doses

General Principles of prescribing

TREAT THE CAUSE!

- Otherwise you are allowing the cause to continue- ethics!
- Go earlier in a chain: eg trigger-anxiety-anger
- You need to have looked thoroughly for a cause 1st
- Physical interventions may not be just medication
- Psychiatric interventions may not be just medication
- If treatable side effects, treat them too, or change medications

Considerations- Why?

- STOMP-STAMP campaign
- Effects- what do we want it to do?
- Side effects (of the medication, of the effect, sedating agents may lead to inhibition)
- Evidence base- the research
- Licensing- eg Risperidone has a short term license for serious aggression in ASD or Conduct Disorder (becomes off license after 6 weeks)
- Guidance eg NICE, CBF, Maudsley

Considerations- Who?

- Who is this treating?
- Who does it benefit?
- Preferences- of the person, parents etc

- Who should assess?
- Who should treat?

Considerations- What?

- Choice of medication type
- Choice of specific medication
- Available preparations- dose options, liquids, tastes, ability to swallow tablets
- Awareness of doses, rate of change, monotherapy, side effects, interactions.

Considerations- Where?

- Specific to situations/locations eg home vs school,

Considerations- When?

- Duration of action- PRN vs regular (pros and cons)
- When to start
- When to stop
- How long for?
- Exit strategy?
- Timings- over the day, over the week, weekends, holidays

Considerations- How?

- How will we know if it's worked?
- Balance of risks- to the person, to others
- Ability to monitor for harm?
- Difficulties with getting blood tests, blood pressures, ECGs etc
- Legislation- children act, mental capacity act, mental health act

Conclusions

- Paediatrics and Psychiatry are interlinked
- NDCs commonly overlap with other NDCs, Physical, mental health and behavioural conditions
- Both have a role to play in the assessment and treatment of NDCs and their co-occurring conditions
- Keep an open mind for other conditions
- Adapt/reasonably adjust
- STOMP-STAMP
- Go low, start slow and monitor lots
- Remember- safeguarding/safety
- The 'medical model' is only part of the picture.