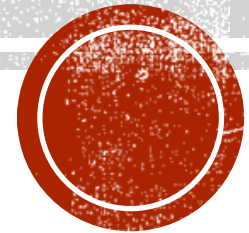


# **AUTISM SPECTRUM DISORDER**

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**NO FINANCIAL DISCLOSURES**



# LEARNING OBJECTIVES

- Describe the early signs of Autism and how to make a diagnosis
- Identify therapy options for a patient with Autism and how to access them



# DEFINITION OF AUTISM

- Neurodevelopmental disorder with a wide range of symptoms and abilities
- Must have symptoms in 2 domains (DSM-5)
  - Social communication impairments
  - Restricted, repetitive patterns of behaviour and interests
- Incidence is 1 in 60 Canadian children aged 5-17 years
- Can be reliably diagnosed by 2 years BUT mean age of diagnosis is 4-5 years
- Strong risk factors include male sex and positive family history



# DIAGNOSTIC CRITERIA — DSM-5

- Impairment in Social Interaction and Communication – must have all 3 for diagnosis
  - Social and emotional reciprocity
  - Impairment of non-verbal behaviours
  - Failure to develop and maintain relationships



# DIAGNOSTIC CRITERIA — DSM-5

- Abnormal and restricted, repetitive behaviours, interests and activities – must have 2 out of 4
  - Stereotyped speech and behaviours
  - Insistence on sameness/resistance to change
  - Restricted, fixated interests
  - Hyper- or hypo-sensitivity to sensory input



# DIAGNOSTIC CRITERIA — DSM-5

- Signs and symptoms must be present during early development but may not be fully evident until later
- Symptoms interfere with everyday functioning
- Symptoms are not better explained by intellectual disability or GDD
- May occur with or without medical, genetic, neurodevelopmental, mental or behavioural disorders, intellectual or language impairment
- Must define level of severity



# RED FLAGS (CPS STATEMENT, 2019)

- Symptoms can be seen as early as 6 months and beyond
  - Delayed motor control – persistent head lag
  - Feeding issues
  - Sleeping difficulties
  - Excessive passivity or reactivity
- Core symptoms usually present between 12 and 24 months
- Regression in communication skills is always concerning





# EARLY WARNING SIGNS — CPS, 2019

## 6-12 months

- Decreased social smiles
- Decreased eye contact
- Limited reciprocal sharing of smiles, sounds or facial expression
- Decreased babbling or gestures
- Limited response to name

## 9-12 months

- Emerging repetitive behaviours
- Unusual play



# EARLY WARNING SIGNS — CPS, 2019

## 12-18 months

- No single words
- Absence of compensatory gestures (pointing)
- Lack of pretend play
- Limited joint attention

## 15-24 months

- Decreased or no meaningful two-word phrases



# EARLY WARNING SIGNS — CPS, 2019

- Any age:
  - Parent is concerned about ASD
  - Developmental regression
  - Reduced frequency or loss of social behaviours and communication skills



# EARLY DEVELOPMENTAL SURVEILLANCE IS RECOMMENDED!

- Developmental Surveillance at every scheduled visit and if parent has concerns (CPS, 2019)
- Increased diligence if there are risk factors:
  - Genetic
    - Known Genetic syndrome
    - Male
    - First degree relative with ASD
  - Prenatal
    - Older parental age (over 35 years)
    - Maternal obesity, diabetes or hypertension
    - In utero exposure to Valproic Acid, pesticides or traffic-related air pollution



# RISK FACTORS CONTINUED...

- Prenatal
  - Maternal infection (Rubella)
  - Close spacing of pregnancies (less than 12 months)
- Postnatal
  - Low birth weight
  - Prematurity



# ASSESSMENT TOOLS

- General Developmental Assessments
  - Ages and Stages (cost)
  - Nipissing (no cost in Ontario)
- ASD Specific Assessment
  - Parental Questionnaire
    - M-CHAT (16-30 months) (no cost)
    - Social Communication Questionnaire (SCQ) (over 4 years) (cost)
  - Interactive Clinical Tool
    - Rapid Interactive Screening Test for Autism in Toddlers (RITA-T)



# AT RISK CHILDREN NEED A FOCUSED EVALUATION

- Diagnostic assessment by a pediatrician or specialized team
- Refer to early intervention
  - Infant Development
  - Speech Pathology
  - Occupational Therapy
  - Targeted Preschool Support
- Audiology
- Vision



# WHAT THE REFERRAL TEAM NEEDS (CPS, 2019)

- Parental or health professional reports of signs and symptoms of ASD or other developmental concerns (include any previous assessments)
- Your own clinical observations
- Antenatal and prenatal history
- Developmental milestones achieved
- Specific risk factors for ASD
- Medical history and investigations (speech assessments)
- Explain to family what to expect in next steps of assessment





# AUTISM ASSESSMENT

- Clinical practice guidelines recommend a team based approach
- Emerging evidence trained sole practitioner can diagnose less complex cases of ASD
- Office based assessments based on clinical judgement and DSM-5 criteria
- Team based approach




# COMMONLY USED DIAGNOSTIC TOOLS (CPS, 2019)

- Behavioural Observation
  - Autism Diagnostic Observation Tool (ADOS)
    - 45-60 minutes to complete
    - Sensitivity – 92-100% and Specificity – 61-65 %
  - Childhood Autism Rating Scale (CARS-2)
    - 20-30 minutes to complete
    - Sensitivity 89-94 % and Specificity – 61-100 %
- Parent / Caregiver Interview
  - Autism Diagnostic Interview – revised (ADI-R)
    - 1.5 – 3 hours to complete
    - Sensitivity – 53-90 % and Specificity – 67-94 %



# ADOS

- Direct observation under controlled circumstances using standardized scenarios
  - Assesses communication, social interaction and imaginative use of materials
  - Play based activities
  - 5 modules (toddler to adult)
  - Takes 30-60 minutes
- 
- A small, partially visible image of a spiral-bound manual with 'ADOS-2' printed on the cover, resting on a wooden surface.



# MANAGEMENT AND FOLLOW-UP CARE

- Family needs to apply of Ontario Autism Program (OAP) funding ASAP!
- Access OAP (google OAP funding or AccessOAP)



# ONTARIO AUTISM PROGRAM

- Foundational Family Services
  - Aim is to build family's capacity to support child
  - Family and peer mentoring, workshops on various topics, brief targeted consultations, transition support, family resource clinic days
- Caregiver-mediated early years programs
  - Teach parents therapeutic strategies
  - Jasper, PRT, ProjectImPACT
- Entry to school program
  - Need to be starting school for the first time
  - Need an invitation to attend
  - Not eligible if receiving core services



# ONTARIO AUTISM PROGRAM

- Entry to School Program (2 parts)
  - 6 month ½ day group session
  - Focus on school readiness in the areas of communication, play, social interaction, functional routines, behavioural self management and pre-academics
  - Delivered by multi-disciplinary team
  - Individual transition support
- Urgent Response
  - Help stabilize situation and prevent crisis
  - Reduce risk of self harm, harm to others or property
  - Aggression, property destruction, harm to animals, flight risk, self injury
  - Up to 12 weeks of support
  - Family can contact the lead organization (CCR, Firefly) in community or be referred



# ONTARIO AUTISM PROGRAM

- Core Clinical Services

- Based on the sequential order they registered for OAP
- Applied Behavioural Analysis (ABA)
- Speech pathology
- Occupational Therapy
- Mental Health Services
- Technology, program materials and/or therapy at the recommendation of a board certified behavioural analyst
- Amount of funding is based on assessment of need and age
- Yearly supports vary from \$6,600 – \$65,000



# MANAGEMENT AND FOLLOW-UP CARE (CPS, 2019)

- Testing for associated medical conditions
  - Hearing
  - Vision
  - Dentist
  - Genetic and metabolic testing if indicated
- Assessment and Management of co-morbid conditions
  - GI conditions
    - Multi-factorial
      - Constipation
      - Unusual feeding behaviours
      - Restrictive diets
      - Challenges with toilet training





# MANAGEMENT AND FOLLOW-UP CARE

- Assessment and Management of Co-Morbid conditions
  - Nutrition
    - Often have very restricted diets that can lead to nutritional deficiencies (e.g. iron)
      - Referral to dietician
      - Feeding team
  - Sleep
    - Affects 50-80 % of children with ASD
    - Can have a negative impact on daytime behaviours
    - Sleep hygiene
    - Melatonin
  - Anxiety
    - Up to 50 % of children



# MANAGEMENT AND FOLLOW-UP CARE

- Anxiety
  - Can contribute to aggressive and self-injurious behaviour
  - If verbal and cognitive level greater than 8 years of age may benefit from CBT
- ADHD
  - 30-53%



# REFER FOR APPROPRIATE THERAPIES TO ADDRESS ASD ASSOCIATED FUNCTIONAL CHALLENGES

- Speech Pathology (CTC, Word Play, Private)
- Psychoeducational Assessment (Private, School board)
- Occupational Therapy (CTC, Private)
- Physical Therapy (CTC, Private)
- Educational supports



# EDUCATIONAL SUPPORT

- Identification, Placement, Review Committee (IPRC)
- Individual Education Plan (IEP)
- Educational Assistants
- ISP class



# BEHAVIOURAL AND DEVELOPMENTAL INTERVENTIONS FOR CORE AND ASSOCIATED FEATURES OF ASD (CPS)

- No universal approach
- Need to ensure appropriate training, close monitoring of progress and regular adjustment as needed
- Parents need to be actively involved
- Applied Behavioural Analysis (ABA)
  - Younger children (2-5 years)
- Social skills training
  - Higher functioning children between 7-12 years
- Cognitive Behavioural Therapy (CBT)
  - Treatment of anxiety
  - Older, verbal children



# MANAGEMENT OF CHALLENGING BEHAVIOURS (CPS)

- Factors to consider that increase challenging behaviours:
  - Communication deficits
  - Co-existing medical disorders that cause pain
  - Co-existing mental health disorders
  - Physical or social factors
  - Changes in daily routine or personal circumstances
  - Developmental changes such as puberty
  - Bullying or other forms of maltreatment



# MANAGEMENT OF CHALLENGING BEHAVIOURS (CPS)

- First line strategies
  - Education and counselling about behavioural strategies
  - Treat any medical conditions
  - Augmentative communication strategies
- Pharmacologic management
  - Irritability and aggression – Risperidone, Abilify
  - Anxiety – SSRI (Fluoxetine, Sertraline)
  - ADHD – Stimulants, Strattera, Clonidine, Intuniv
  - Depression – SSRI
  - Sleep - Melatonin



# COMPLIMENTARY AND ALTERNATIVE MEDICINE (CAM)

- Estimated 28-95 % of families use CAM
- 25 % of families have tried special diets
- Ask about it!
- Encourage families to only try one treatment at a time





# SAFE CAM THERAPIES

- Vitamin supplements – B6, C, D, Mg and Omega-3 fatty acids
- Dietary interventions – gluten or casein-free diets
- Message therapy
- Music and expressive therapy
- Therapeutic touch
- Therapeutic horse back riding and other types of pet therapy
- Yoga
- Energy therapies (healing touch, Reiki)
- Melatonin
- Physical exercise



# RISKY CAM THERAPIES

- Hyperbaric oxygen therapy
- Chelation
- Secretin
- Some herbal products
- Antibiotics and Antifungals
- Facilitated Communication
- CBD oil



# FAMILY AND OTHER SUPPORT INTERVENTIONS

- Provide parents with appropriate resources about ASD
- Community supports
- Respite
- Inquire about supports for family and siblings
- Disability Tax Credit
- Registered Disability Saving Plan
- Ongoing advocacy for local services and educational programs
- Communication with schools



# HOW CAN YOU MAKE OFFICE VISITS EASIER

- Schedule the child for the first or last appointment of the day when there are fewer people in the waiting room, to minimize wait time
- Schedule longer appointment if possible
- Suggest parents bring a couple of favourite toys or food to offer as a distraction or reward
- Consider what is in the examination room and may want to dim lights



# PROGNOSIS

- Difficult! (especially for children less than 3 years)
- Factors associated with positive outcomes:
  - Early identification
  - Timely access to behavioural interventions
  - Higher cognitive abilities



# REFERENCES

- Canadian Pediatric Society Position Statements on Autism
- Ontario Autism Website



**QUESTIONS?**

