

IS IT AUTISM ? what why and how

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Overview of approach to autism

- WHAT ? the Essential nature of autism
- EXTRA specific disability within communication disorders
 - Spectrum between and within individuals & context
- WHY? Early recognition and intervention
- Emphasis on communication and rituals
 - Implication of diagnosis other disorders
 - expectation outcome eligibility
- HOW? Pathways to management
- Assessment Diagnosis investigation intervention
 - Medical developmental educational
 - Guidelines Policies and Current initiatives

Common difficulties with communication, social engagement and "odd" behaviour

- difficult relationships not affectionate
- poor understanding poor listening
- says little (or too much) poor imagination
- intrusive disruptive
- does the same thing
- strong interests mechanical facts
- reading / number recognition

Communication Disorders:

- language is the world in which we live
 - like functioning in a " foreign" language
 - risks : genetic FH environment culture
 - behave / play / socialise at level of language especially comprehension
 - subtle disorders are overlooked (pragmatics)
 - impact in adolescence
 - nonverbal strengths / idiosyncracies
 - predictable effect on social skills
- does language disorder explain the social and behaviour problems?
- intrinsic impairment of social empathy
- IS IT AUTISM ?

NATURE OF DISORDERS - QUALITY IS THE KEY

LANGUAGE IMPAIRMENT

- content context **DEFICITS/ DYSLEXIA**
- complexity

ADHD

DISORGANISATION

- fine tuning fluency feedback
- speed capacity **EXECUTIVE FUNCTION**
- adaptability flexibility

DYSPRAXIA / DCD

PLANNING SEQUENCING

- restricted repertoire inflexible repetition speed

AUTISTIC SPECTRUM DISTANCE/ DISINTEREST

- failure of social symbols
- fail to generalise / organise hierarchy of knowledge

CORE NATURE OF AUTISM

failure to process social symbols
not learn and apply principle in hierarchy of learning

- Poor quality of social interest and reciprocity
 - Disordered language : quality content level
 - Restricted stereotyped behaviour / Idiosyncratic interests rituals mannerisms
- Impaired QUALITY of communication is SPECIFIC DISABILITY
- TRIAD: DSM -IV TR and ICD-10
- Differences of degree and combination
Vary with age and ability individual evolving
- Aloof -- passive / amiable -- active and odd (Wing)*
(AD / ASD) (IH / ASD) (HFA / Asp / PDD-NOS)

Models of autism

THEORY of MIND attribute beliefs, feelings to others and know they are different from your own

CENTRAL COHERENCE see part not integrate components to whole e.g parts of objects, pictures

EXECUTIVE DYSFUNCTION poor goal direction , plan, generalise new idea to new demand action

- "sensory extremes"; rituals; copying; rigidity
- Developmental changes and thresholds - typical and atypical (i.e. spectrum, variability and evolution)
- *imbalance synapse proliferation and pruning (big head 2-5 y)*
- *mirror neurons fire on acting or observing others act*
- *frontal lobe amygdala cerebellum serotonin differences*

Communication Disorders

Prevalence per 1000

● Language dysfunction	200	● Dyspraxia/DCD	?
● Learning difficulty	150	● Semantic pragmatic	?
● Language disorder	30	● Asperger Syndrome/	
● Comprehension disorder	10	Autism spectrum	7.5
● Global intellectual	30		
● ADHD	50		
● Conduct disorders	30	● Selective mutism	1.2
● Gifted	10	● Tourette	1.2

Concept of Autism Spectrum Disorder rather than categorical diagnosis DSM-IVTR & ICD-10
Pervasive Developmental Disorder

- Autistic Disorder
- Asperger - resemble autism stronger cognitive and language abilities
- Atypical Autism
- PDD-NOS
- Retts
- Childhood disintegrative

AUTISTIC DISORDER

- Onset before 3 years More than 6 items
- Qualitative Social Impairment (>2/4)
nonverbal peers not seek involvement
lack social or emotional reciprocity
- Qualitative impaired communication(>1/4)
lack/ delay speech no gesture
not converse stereotyped language
- Restricted / Stereotyped Behaviour (>1/4)
abnormal intensity or focus rituals
motor mannerisms fixed on parts of objects

ASPERGER' S DESCRIPTION

- autistischen Psychopathen
(Asperger 1944)
- highly intelligent children with interesting peculiarities yet nevertheless with behaviours so difficult they were almost impossible to keep in the family and school. The disturbance in the lack of ability to form a group is not so much intellectual but lay in the child's relationships with other human beings -the lack of *contact*
(Asperger 1987)

ASPERGER SYNDROME (DSM IV)

- Qualitative Social Impairment
nonverbal peers not seek involvement
lack social or emotional reciprocity
- Restricted / Stereotyped Behaviour
abnormal intensity or focus rituals
motor mannerisms fixed on parts of objects
- significant impairment
- no general language delay
- no cognitive , self-help, curiosity delay

Spectrum of communication disorder

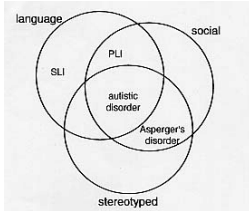


Figure 2. Pragmatic language impairment (PLI) in relation to SLI and autistic disorder. The full triad of impairments in language, social interaction, and stereotyped behaviour is seen in autistic disorder, but there may be dissociation between these areas of impairment.

From Bishop DVM J Child Psychol. Psychiatry (1998) 39 pp.879-891

(Semantic) Pragmatic v. Asperger Syndrome

Language disorder mixed early	subtle	social
Over literal	immature	inflexible
Stilted	flat factual	pedantic bizarre
Rote content	“filler”	“blocker”
Pragmatics	simple	odd
Hypervisual	strengths	minutiae
Imagination	immature	not generalise
Interests	factual	idiosyncratic
Empathy/ emotion	language level	aloof odd ? late
Motor	planning	mixed odd

IMPORTANCE OF EARLY RECOGNITION - WHY?

Unique Quality of disability CNS plasticity Scarce resources
To help parents help their child with a complex disability

- Individual triad in spectrum describes needs
 - Autism- specific intervention for social engagement not only for developmental delay
 - Diminish self-isolating behaviours
 - Increase communication decrease rituals
 - Make expectations visible; depend less on verbal
 - Avoid secondary disorders e.g anxiety
 - Detect specific causes + risk e.g. genetic
 - Early intervention improves outcome
- IQ increase 10-20 pts and language improves*

WHY: Diagnosis and Eligibility for supports

Early Intervention Aspect DADHC
School Satellite Class INCLUSION FUNDS
Post school Programs Aspect DADHC
Carer Allowance Autistic Disorder Asperger
2008 Helping Autism Package: PDD including autism
● Allied Health sessions : Diagnostic 4 Intervention 20
● Autism-specific Advisors Educate teachers & carers
● EIV Playgroups 150 Long Day Care Centres 6
CONTACT WITH SUPPORT GROUPS

WHY: Autism and School

must support student with or without ASD diagnosis
in language learning behaviour insight and interaction

- Most students with autism are in mainstream classes
 - School challenges social difficulty and restricted interests or abilities with or without autism
 - Communication disorders can present as more “autistic” at school than in clinical view or at home
 - Language Disorder has no specific funding
 - Complex demands + increasing ability with maturation +/- intervention = increased need
 - Long-term language disorder impacts on social + attention
 - Diagnosis AD / ASD / PDD = funding = support = success
- ◆ Shattock 2004 Skellern 2005

WHY: aetiology & associations

- FH + risk ASD and language e.g. pragmatic
- “broad autism phenotype” 10% other cognitive or social
- Many cases are sporadic (modern prevalence 1/150)
- Genes + risk: MZ twins 60 % AD 90% ASD SIBS ~10%
Fragile X (3-25% of ASD) & premutation 22q11 deletion
15q11-13 duplication (1% ASD) MECP2 (Retts)
- High resolution microarray (5% of ASD)
- ADHD severe dyspraxia in preschooler
- Severe Intellectual Disability
- Hearing Loss
- Visual loss Retinal blindness and mannerisms

WHY: aetiology & associations

- CNS disorders e.g. tuberose sclerosis
- TS 17-60% w AD; AD 0.4 -3 % w TS; 8-14% TS+EP
- Seizures in ASD 10% child 30% adults (v low IQ) LKS
- Frontal lesions affecting insight
- Tourette Nonverbal Learning disorder
- SOCIAL WITHDRAWAL anxiety selective mutism
- DEPRIVATION and abuse
- Impact of other illness or treatment

HOW : Approach to Diagnosis

describe act hope evolve review refine

- Clarify triad: Social Language Stereotyped
- Comprehensive information: parent + others
- Atypical AND absence of typical behaviour + skills
- Observe: Home /preschool e.g. video + Discuss
- Clinic: brief, repeated v. longer ; preschool / school
- Effect of language disorder and development levels
- Cultural influences Social context
- Effect of stimulation and intervention

AUTISM ALERTS IN EARLY YEARS

aim to lower the age of recognition and intervention

- QUALITY of learning communication and behaviour
- ONSET of ATYPICAL DEVELOPMENT
- ABSENCE of TYPICAL DEVELOPMENT
- EARLY YEARS CONFUSING ACTION + TIME = ANSWER
Developmental level and scatter
- Signs may be subtle and partial (not "lack of ") e.g age 2y if later ASD do not respond to neutral speech or direct attention in ordinary context
Some with atypical gaze and movements (? home video in infancy)
- Can detect by 12 mths; Diagnose by 14 mths if more severe
most can be reliably Dx by 3 years, evolves further over 3 to 5 years
- 10 to 40 % toddlers with later ASD have striking atypical behaviours
- not respond to name @12 m + dev delay @24m many meet criteria for ASD
(Nadig et al , 2007)

AUTISM ALERTS IN EARLY YEARS QUALITY + "quantity" ONSET of ATYPICAL FAILURE of TYPICAL

- LOSS OF LANGUAGE
10-50 % by 19 months ?? "trigger"
- MANNERISMS
posture, hands, spin, flap
- RITUALS *objects, places, fears*
- SENSORY *lick, sniff, texture*
Visual: corner of eye fans 123 abc
- "SPLINTER" SKILL
match sort categorise mechanical
- SEPARATENESS "self-imposed"
avoid contact aloof passive
- Non-specific big tantrums
- SOCIAL ENGAGEMENT
Infrequent look at face
Fail to turn to name
Not initiate eye contact
no social smile
Not joint attention
Not pointing
- LANGUAGE and PLAY
Babble none / odd JARGON
No words by 2 yrs
No meaningful play
Phone, doll, cars, tea party
Not know words out of context
where's daddy? and look

HOW: Structured information - "Screening"

ALERT NOT CONFIRM DIAGNOSIS = REFER

- Toddlers: CHAT M-CHAT
- Lord C (2007) medscape.com/viewarticle/554190
- Landa RJ (2008) medscape.com/viewarticle/569549
- Sensitivity and specificity approx 30%
- Social Communication Questionnaire
- Social Reciprocity Scale
- Children's Communication Checklist
- Can be used for older children e.g. with special needs
- Charman et al. *Br J Psychiatry*.2007; 191: 554-559

Structured information

TEST	PARENT	CONSULT	Sensitive / Specific
PEDS / Ages & Stages	+++		
CHAT/ M-CHAT	+++	+	?0.3 (0.75)
Social Communication Q	+		0.86 / 0.78
Social Responsiveness Scale	+		0.78 / 0.67
Children Commun Checklist	++	+	0.93 / 0.46
Childhood Autism Rating Scale	+	+++	
ADI-R (2 to 3 hrs)	+		
ADOS (30 to 45 mins)		+++	

Helping Children with Autism Package: July 2008

www.health.gov.au/internet/main/publishing.nsf/Content/mental-autism

- to help address the considerable need for support and services for children with an autism spectrum disorder (ASD) and their families.
- FaHCSIA \$146M EIV 0 - 6 yrs autism advisors workshops +website
- 150 Playgroups for ASD or ASD-like and their siblings
 - 6 Autism specific CCC (SW Sydney Brisb Adel Melb Perth NW Tas)
 - fahcsia.gov.au or email asd@fahcsia.gov.au

DEEWR \$23.3M educate teachers + schools + workshop parents / carers
dest.gov.au/schools/autism or email autism@deewr.gov.au

DoHA \$27M new Medicare items for consultant physician / psychiatrist for children with autism or any other PDD

Speech pathology OT psychology multidisciplinary approach
Diagnosis < 13 years (4 sessions) treatment < 15 years (20 sessions)
For eligibility and processes contact
health.gov.au/autism phone 132150 (providers) 132011(patients)

The paediatrician's role in diagnosis and support HAP - a PDD/ ASD specific pathway + item numbers

- Referral by GP to paediatrician or psychiatrist
Multidisciplinary Diagnostic team is NOT essential;
public services e.g. Community Health/ / CMO not physicians not bill 135

- Stage 1 Identification of concerns (MBS 110)
- Stage 2 Discussion and intervention planning (116 or 119)

- Stage 3 Medical assessment for diagnosis (up to 13 yrs)
specific domains: speech pathologist , OT, Psychology assessments
4 assess items IN TOTAL chosen by referrer

- Stage 4 Confirm PDD/ASD and make treatment plan (135)
This diagnosis is given ONCE and enables HAP sessions

- Stage 5 Multidisciplinary treatment and review (116 or 119)
20 therapy sessions in total up to 15 yrs

Beyond HAP use the existing structures and services

- SALT OT Psychology Community Health
- Enhanced Primary Care Plan (GP not specialist)
- Carer Allowance AD and Asperger are 'recognised' = eligible developmental paed psychiatrist ; multidisciplinary team
- Better Access to Mental Health Scheme GP or consultant 12 sessions/ yr = psychology + OT (not SALT)
- Register for Family Medicare Safety Net
- Refer early for EIV - mid year on all agencies
- Inclusion Support Subsidy at LDC / preschool
- Education DEET CEO Private schools
- DADHC Therapy Casework Behaviour Services
- Autism Associations Dx Support School(?age)
- Support Groups

Autism : what ? why ? and how ?

- A utism-specific diagnosis and information and alternative associated disabilities
- U nderstand specific qualities and needs and utilise all information and supports
- T herapy early combined sustained refined target communication and isolating behaviours
- I nvestigate causes overlaps supports
- S trategies policies and the autism spectrum
- M oney - use allowances rebates systems

Guidelines and review articles-Australia

- RACP (2008) Consensus for pediatrician's role in diagnosis and assessment of ASD (refs to NZ Draft and UK & various other sources)
racp.edu.au/download.cfm?DownloadFile=72168A10-0DC8-5647-39D32208FE6D21AB
- Helping Children with Autism Package Federal Govt (2008)
www.health.gov.au/internet/main/publishing.nsf/Content/mental-autism
- Roberts J Prior M Review of Evidence for early intervention in ASD
www.health.gov.au/internet/main/publishing.nsf/Content/mental-child-autrev-toc
- Learning Outcomes for Students with Disabilities Report
dest.gov.au/sectors/school_education/publications_resources/profiles/documents/learning_outcomes_students_disabilities_report_pdf.htm
- Making Sense of Autism and Strategies that Succeed CHERI 2008
<http://www.cheri.com.au/presentations.html#HipSoc08>

Guidelines and review articles- others

- Johnson CP *et al.* (2007) Identification and evaluation of children with autism spectrum disorders. *Pediatrics* 120: 1183-1215
National Autism Plan for Children (2003) , National Autistic Soc UK
<http://www.autism.org.uk/nas/jsp/polopoly.jsp?d=368&a=2178>
Charman T *et al* (2007) Efficacy of 3 screening instruments for ASD Br J Psychiatry 191;555-559 (119 ;9-13 yr; SEN+/-ASD)
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Caronna EB *et al* (2008) Autism spectrum disorders: clinical and research frontiers. *Arch Dis Child*:93;518-213
Landa R (2008) Diagnosis of Autism Spectrum Disorders in the First 3 Years of Life. *Nat Clin Pract Neurol*:2008; 4(3)
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References for prevalence in school age

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- Fombonne E (2003). "The prevalence of autism". *JAMA* **289** (1): 87-9.
- Newschaffer CJ, Croen LA, Daniels J *et al.* (2007). "The epidemiology of autism spectrum disorders". *Annu Rev Public Health* **28**: 235-58
- Skellern C, Schluter P, McDowell M. From complexity to category: responding to diagnostic uncertainties of autistic spectrum disorders. *J Paediatr Child Health*. 2005;41 :407 :412
- **Detrimental Effects of Overestimating the Occurrence of Autism** Issn: 1934-9556 **Journal:** Intellectual and Developmental Disabilities **Volume:** 46 **Issue:** 3 **Pages:** 243-246 **Authors:** Holburn, Charles Steven **Article ID:** 10.1352/2008.46:243-246
- Williams K *et al.* (2008) Prevalence of autism on Australia .Can it be established from existing data *J Paediatr Child Health* 44(9) 504-510