



# ***Southeast Regional Consortium and AUCD Presents:***

## **Managing Dental Care for Patients with Autism Spectrum Disorder (ASD)**

**May 3, 2012**



# Speakers



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# MANAGING DENTAL CARE FOR PATIENTS WITH ASD

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# Patient Histories

- An essential aspect of patient care relates to securing adequate and comprehensive patient histories. As dental health professionals we acquire three histories for use in developing patient treatment. For our ASD patients this is very important because of the diverse range of patient diagnoses along the autism spectrum and the customization of planned dental care.

# Patient Histories



- Social History
- Medical History
- Dental History

# Social History

- Patient Name, age , DOB
- Patient demographics
- Names of parents/responsible parties/ legal guardians/ caregivers
- Contact information for parents/ responsible parties/ legal guardians/ caregivers

# Social History

- The components of the Social History include:
  - Family : parents, siblings, grandparents, extended family
  - Education/ School: Home school, public / private school, no school
  - Social Activities: sports, dance, music, games, TV. etc.
  - Caregivers/Teachers; parents, relatives, others

# Medical History

- Components of the medical history include:
  - Chief Complaint--
    - Reason for today's visit
  - Past medical history --
    - Illnesses/diseases/ treatment ,  
medications
  - History of present illness--
    - Chief complaint/Symptoms, duration,  
any medications taken for the chief complaint.



# Medical History

- Name of primary physician/ pediatrician
- Date of last visit and reason for visit
- Date of last physical
- History of immunizations
- Allergies
- History of hospitalizations /emergency room visits
- Seizures
- Bleeding problems/ blood transfusions

# Medical History

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- Birth or congenital defects
- Mental or Developmental delays
- Behavior or learning problems
- Infections
- Review of Systems
- Other age appropriate questions

# Medical History

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- Diagnosis: ASD, other co-morbidities
- Medications: List the medications with dosages and frequency of administration.

# Dental History

- Components of the dental history include:

Chief Complaint—

Past dental history –

History of present illness—

# Dental History

- Chief Complaint—
  - - Reason for today's visit
  
- Past dental history —
  - - Treatment , Behavior experience/ Medications
  
- History of present illness—
  - - Symptoms, duration, medications

# Dental History

- Dental history should include:
- Behavior based on dental experience
- Oral hygiene regimen- home and office
- Fluoride exposure
- Diet and nutrition
- Radiographic history
- Trauma history
- Oral habits/ habits

# Patient Histories Summary

From assessing the patient's histories we learn information used to plan and perform dental treatment :

- How the patient communicates
- Their behavioral expressions
- Medical precautions/medications
- Dental experience/ level of cooperation
- Current oral hygiene regimen
- Parent and caregiver roles in the patient's life

# Patient History: Predicting Behavior

- 5 questions to ask parents and care workers:
  - ability to read;
  - age;
  - toilet training;
  - expressive language; and
  - concurrent diagnosis
- Child participation with tooth brushing was significantly predictive of cooperation
- Response to different stimuli:
  - Sensitivity to light, noise, smell, taste, or texture



# Predicting Autistic Behavior

- Questions to ask the parents:
- Parents accurately predicted:
  - Exam
  - Radiographs
  - However, overstated their willingness to cooperate
- Parents predicted less accurately:
  - Prophylaxis
  - Fluoride application

# Patient Histories: Predicting Uncooperative Behavior

- Appointment Type:
  - emergency: 100% uncooperative
  - initial examination: 68% uncooperative
  - recall examination: 62% uncooperative
  - operative examination: 33% uncooperative
- Co-morbidities:
  - mental retardation, cerebral palsy, self injurious behavior, or pica had a 100% increase in the likelihood of being uncooperative compared

# Current Dental Behavior MGMT

- Typically:
  - Positive Verbal Reinforcement (PVR)
  - Tell-Show-Do (TSD)
  - Mouth prop
  - Rewards
- Advanced:
  - Sedation
  - Papoose board
  - General Anesthesia

# Treatment of Patients with ASD

- AAPD Handbook:
  - Desensitization (work from least anxiety-producing to most)
  - Positive reinforcement
  - Physical restraint
  - Couple with desensitization and get informed consent
  - Sedation (psychotropic agents could have unusual side effects)
  - General anesthesia (when all else fails)

# Treatment of Patients with ASD

- Routine is important for people with autism, it provides stability and helps them to cope.
- Slowly introduce to office:
  - 1-2 visits to the office prior to the exam.
- Alter interfering stimuli:
  - Light, sound, taste, texture, smell, etc.
- Accommodate need for consistency:
  - Same staff, appointment time, and exam room
- Keep sentences short and simple

# Treatment of Patients with ASD

- Know the child's developmental age
- The parent can be asked to review a picture book with the child regarding the upcoming visit. This can be done daily for at least a week prior to the actual visit
- Ask the parent/therapist to rehearse procedure at home/school prior to office visit

# Treatment of Patients with ASD

- Procedure rehearsal at home:
  - Putting their hands on their stomach
  - Putting their feet out straight
  - Opening wide
  - Holding their mouth open
  - Counting their teeth
  - Cleaning with a power brush
  - Taking x-rays
  - Spitting into the sink

# Treatment of Patients with ASD

- One of the core deficits of an ASD is impaired language comprehension and processing verbal information. Visual processing skills are intact, however, and information received **visually is comprehended quickly** and retained longer than information received verbally
- Some people with autism have no, or fairly limited, speech. They will still usually understand what has been said to them, but may prefer to use **alternative means of communication, such as sign language or visual symbols** – with Makaton sign language and the Picture Exchange Communication System



# Visual Schedule

- Visual Supports and Schedules
  - Visual schedules break down large tasks into separate steps,
  - allowing the child to perform each task before going on to the next,
  - Can teach specific tooth-brushing steps.
- Reinforce with verbal praise
  - After each step or multiple steps are completed
- Dentist should send social story or visual schedule to family before visit for familiarization

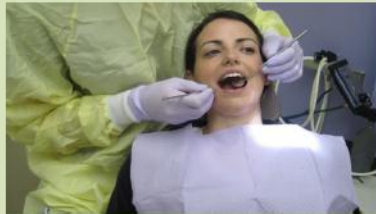
## Visual Schedule



1. Hands on stomach,  
feet out straight



2. Open mouth wide



3. Count teeth



4. Brush teeth



5. Spit in straw



6. Floss teeth



7. Take Pictures



8. Get prize

# Dental Social Stories

- Compile a social story book of photos or pictures for use at home, show the stages of visiting the dentist.
- It may start with leaving home and getting in the car, and should cover all the different steps so the person learns what is coming next so that there are no surprises. The NAS recommends including a reward picture at the end (such as a favorite activity) so the patient knows there is something to look forward to

I am going to Birmingham today to visit the dentist.



Birmingham is a big city with lots of cars and tall buildings.

There will be other people and patients sitting nicely in the waiting room.



I can sit nice and quiet like the other patients who are waiting for their turn with the dentist.



The first time I go to the dentist, the doctor will talk to me and my grownup.



I will sit still and be quiet while the dentist and my grown up talk.

I will sit in the chair with my hands on my stomach and with my legs out straight.



Next, the dentist will clean my teeth. The toothbrush is different than my toothbrush at home.



This toothbrush makes a buzzing noise and tickles my teeth while they are being brushed. The toothpaste the dentist uses taste good and feels gritty.



The dentist is my friend.



Having my teeth cleaned is easy and fun!

# The Initial Visit

- Each patient checks in at the front desk and is escorted to a private, non-threatening and non-stimulating room with a desk and chair
- This allows the dentist and caregiver the ability to talk without distraction and helps gauge the patient's comfort level in an unfamiliar environment

# The Initial Visit

- Completion of the medical and dental history forms by parent, nurse/care giver, or legal guardian
- These forms are reviewed by the SPARKS dental residents and attending faculty dentists
- Special attention is given to medical diagnoses, past dental experiences, behavior trends, current and past medications and levels of anxiety and sensory dysfunction

**SPARKS CENTER DENTAL CLINIC**

Patient's Name		Nickname		Date of Birth
Sex:(circle) Male Female	Race:(circle) Caucasian African American Hispanic Asian	Other (specify) _____		
Address:		Dental insurance/ Medicaid#: _____		
Contact number:	(Home phone)	(Work phone)	(Cell phone)	
Parent or Guardian:	Name (please print)	(Phone number)		
Group Home:	Name (please print)	(Phone number)		
Contact / Responsible Person:	Name (please print)	(Phone number)		
Primary physician:	(Name)	(Office name)	(Phone number)	
Other specialists seen:	(Name)	(Office name)	(Phone number)	
	(Name)	(Office name)	(Phone number)	

**MEDICAL HISTORY**

	Yes	No	Please comment on any "Yes" answer
Is patient currently under physician's care?			Reason _____ When was patient's last physical examination? _____
Is patient taking any medications or supplements? (Including vitamins, herbs, birth control pills, etc.)			Please list _____ or <input type="checkbox"/> See attached list provided
Is patient allergic to any medication or substances?			Please list _____
Does patient have history of serious illnesses?			
Does patient have history of hospital admissions?			
Does patient have history of operation?			
Does patient have history of blood transfusions?			
Does patient have history of pregnancies?			
Does patient require premedication prior to dental tx?			

Has the patient had problems with any of the following systems or categories?								
	Yes	No		Yes	No		Yes	No
Genetic/Congenital Syndrome			Leukemia			Inflammatory diseases such as arthritis or rheumatism		
Cancer/ Tumors			Anemia			Artificial joint/ prosthesis		
Cancer treatment			Prolong bleeding			Reflux problem (GERD)		
Congenital heart defect			Diabetes			Liver disease/ Hepatitis		
Angina pectoris			Epilepsy/seizure			Kidney disease/infections		
Congestive heart failure			Spinal cord injury			Venereal disease		
Myocardial infarction (heart attack)			Asthma			Alcohol/Tobacco use		
Pacemaker/ artificial heart valve implant			Tuberculosis			Eye problems		
High blood pressure			Psychiatric/ Emotional			Hearing loss		
			Self-inflicted					
			Muscular/skeletal problem					
			HIV positive/ AIDS					

**DENTAL HISTORY**

Purpose of this dental visit:			
Previous dental visit:	Dentist/Office name (please print)	phone number	Last dental visit (When?)
How well does the patient communicate :	<input type="checkbox"/> Verbal <input type="checkbox"/> non-verbal <input type="checkbox"/> sign language <input type="checkbox"/> lip reading <input type="checkbox"/> Other (explain) _____		

**Is there anything else you consider important to patient's history (medical, dental, social, etc.)**

\_\_\_\_\_

**Please list MEDICAL or BEHAVIORAL DIAGNOSIS**

1.) _____	2.) _____	3.) _____
4.) _____	5.) _____	6.) _____

<b>SIGNATURE</b>	_____	_____	<input type="checkbox"/> Additional comment on next page
	Patient/Parent/ Guardian	Date	
	_____	_____	
	Dentist	Date	

# Consents

- Consent is obtained for the taking of radiographs and photographs as needed for educational purposes and to keep appropriate records
- Consent is obtained for the use of a Mouthprop and Passive Medical Immobilization (PMI) for the safety of patient and staff and for the delivery of dental care as needed

# Clinical Introduction

- Each patient is introduced to the dental clinic with caregiver/parent to allow a gradual desensitization to the sights, sounds, and unfamiliar faces
- A Social Story has been developed to be used while in the waiting room and for patients prior to their appointment
- Again, this introduction will allow the assessment of anxiety and behavior and thus the need for more advanced behavior management or sedation

# The Examination

- A complete Head and Neck evaluation is performed in a dental chair or other chair if the patient will not cooperate for a dental chair
- Radiographs are taken based on AAPD guidelines and need
- A dental prophylaxis is completed
- Past dental treatment and current dental needs are recorded
- Appointments are kept short with an emphasis on distraction from the dental procedure(s)

NAME.....DOB.....							<i>Tx.plan in red, Tx. done in blue</i>									
HARD TISSUE FINDINGS																
Mobility																
Recession(mm)																
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Recession(mm)																
Date.....				A	B	C	D	E	F	G	H	I	J			
Resident.....				lingual												
				T	S	R	Q	P	O	N	M	L	K			
Recession(mm)																
	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17
Recession(mm)																
Mobility																

*Tx. done in blue, Tx.plan in red:* amalgam filling, tooth colored filling, crown, extraction

Date	Examination	Preventive treatment
	<input type="checkbox"/> Comprehensive examination <input type="checkbox"/> Periodic examination (3m, 6m, ..... ) <input type="checkbox"/> Emergency/Limited examination	<input type="checkbox"/> Ultrasonic scaling <input type="checkbox"/> Hand scaling <input type="checkbox"/> Rubber cup prophylaxis <input type="checkbox"/> Toothbrush prophylaxis <input type="checkbox"/> Floss <input type="checkbox"/> Fluoride varnish (Voco VOCO Profluorid® Varnish)
	Treatment performed by	( )
	faculty	( )





# Caries Assessment

- The ADA and AAPD place all patients with mental and physical disabilities in a **HIGH RISK** category
- The extent of tooth damage done by the carious process is evaluated
- This is combined with the level of cooperation/behavior to determine the best course of action for the treatment of the dental disease
  - In-office with behavior management (mouthprop, PMI)
  - In-office with the use of oral sedatives
  - Full Mouth Dental Rehabilitation with General Anesthesia

# AAPD Caries-Risk Assessment Tool (CAT)\*

Caries-risk Indicators	Low Risk	Moderate Risk	High Risk
Clinical conditions	■ No carious teeth in past 24 mos.	■ Carious teeth in past 24 mos.	■ Carious teeth in past 12 mos.
	■ No enamel demineralization	■ 1 area of enamel demineralization	■ More than 1 area enamel demineralization (enamel caries "white-spot lesion")
	■ No visible plaque; no gingivitis	■ Gingivitis	■ Visible plaque on anterior (front) teeth
			■ Radiographic enamel caries
Environmental characteristics	■ Optimal systemic and topical fluoride exposure	■ Suboptimal systemic fluoride exposure with optimal topical exposure	■ Suboptimal topical fluoride exposure
	■ Consumption of simple sugars or foods strongly associated with caries initiation primarily at meal times.	■ Occasional (i.e., 1-2) between-meal exposures to simple sugars or foods strongly associated with caries	■ Frequent (i.e., 3 or more) between meal exposures to simple sugars or foods strongly associated with caries.
	■ High caregiver socioeconomic status	■ Midlevel caregiver socioeconomic status (i.e. eligible for school lunch program or SCHIP)	■ Low-level caregiver socioeconomic status (i.e., eligible for Medicaid)
	■ Regular use of dental care in an established dental home	■ Irregular use of dental services	■ No usual source of dental care
General health conditions			■ Active caries present in the mother
			■ Children with special health care needs
			■ Conditions impairing saliva composition / flow

## Risk Category

■ **High Risk:** The presence of a single risk indicator in any area of the "high-risk" category is sufficient to classify a child as being at "high risk".

■ **Moderate Risk:** The presence of at least 1 "moderate risk" indicator and no "high risk" indicators present results in a "moderate risk" classification.

■ **Low Risk:** The child does not have "moderate risk" or "high risk" indicators.

# Dentistry and Autism

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- Studies have shown patients with autism:
  - ▣ No higher caries rate
  - ▣ No higher incidence of trauma

# Case #1: In-Office Treatment (w/o Advanced Behavior Techniques)

- 14 year old African American Male
- Medical history:
  - ▣ Autism
  - ▣ Mild developmental delay
- No medications
- Dental History:
  - ▣ No Caries (cavities)
- Patient is treated every 6 months for preventative visits
- Patient is able to be treated in dental chair with hygienist or dental resident
- Behavior is guided using Positive Reinforcement and Tell-Show-Do

# Case #2: In-Office Treatment

## (Advanced Behavior Techniques)

- 16 year old African American Male
- Medical History:
  - Autism
  - Moderate developmental delay
- Medications:
  - Ritalin
- Dental History:
  - No Caries (cavities)
- Patient seen in office every 6 months for preventative visits
- Patient is placed in passive medical immobilization by parent/careworker
- Mouth prop is used to keep mouth open
- Sedation is given prior to appointment

# Advanced

**Passive Medical Immobilization  
(papoose board)**



**Molt Mouth Prop**



# Case #3: In-Office Treatment

## (Advanced Behavior Techniques)

- 19 year old African American Female
- Medical History:
  - ▣ Autism/Progressive Developmental Delay
  - ▣ Moderate developmental delay
- Medications:
  - ▣ Ritalin
- Dental History:
  - ▣ No Caries (cavities)
- Patient is seen in office every 3 months for preventative care
- Patient refuses to enter patient treatment area and is violent
- Patient is examined, teeth are brushed, and fluoride is placed in the patient consultation room



# Indications for General Anesthesia

- Patients with certain physical, mental, or medically compromising conditions
- The extremely uncooperative, fearful, anxious, physically resistant or uncommunicative child or adolescent with substantial dental needs and no expectation that the behavior will soon improve
- Patients with immediate comprehensive oral/dental needs who otherwise would not receive comprehensive dental care

# General Anesthesia

- If a patient meets the qualifications for general anesthesia, a complete work-up is done:
  - Family history and social background
  - Medical/Dental Insurance Coverage and pre-approval
  - Medical history, medications, and evaluation of need for medical consults
  - A completion of a History and Physical by the primary care provider
  - Scheduled with approved time with Children's of Alabama

# General Anesthesia

- Anesthesiologists may use a sedative the morning of the procedure
  - Versed is typically used
- Once the general anesthesia is in effect, a full mouth prophylaxis and full mouth radiographs are completed
- A treatment plan is created based on past caries history, the level of oral hygiene, restorability of the teeth present, general health needs, and the ability for maintenance
  - Treatment goal: greatest longevity & least maintenance

# Case #4

- 13 y/o white female
- Medical History
  - ▣ Autism
  - ▣ Developmental delay
  - ▣ Seizure disorder
- Medications:
  - ▣ Respiradal
  - ▣ Keppra
  - ▣ Miralax
- Dental History:
  - ▣ Generalized dental caries
- Patient seen in office for new patient examination
- Last dental exam >5 years ago
- Patient will not come into treatment area
- Limited exam and dental charting are completed in patient waiting area

# Post-General Anesthesia

- Patients are seen 2 weeks post visit:
  - ▣ Evaluate post surgical complications and healing
  - ▣ Reinforce proper diet and oral hygiene
- Patients are typically placed on a 3 month recall schedule for examination, prophylaxis, and fluoride treatment

# Anticipatory Guidance

- Ultimately, the preventive side of the carious process is strongly stressed
- Regular dental prophylaxis and fluoride application is encouraged
- Caregivers are instructed on the importance of a low carbohydrate diet, good at-home oral hygiene, the continued use of medical/dental services as needed, and the prevention of oro-facial trauma

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