CALIFORNIA SOCIETY OF PEDIATRIC DENTISTRY

ANNUAL MEETING

• APRIL 22 – 24, 2016
• NAPA, CA
AN HISTORICAL PERSPECTIVE ON BEHAVIOR MANAGEMENT

• GERALD Z. WRIGHT
• PROFESSOR EMERITUS
• WESTERN UNIVERSITY
• LONDON, CANADA
OBJECTIVES OF PRESENTATION

TO TRACE THE DEVELOPMENT OF BEHAVIOR MANAGEMENT IN PEDIATRIC DENTISTRY

TO IDENTIFY MAJOR CHANGES IN BEHAVIOR MANAGEMENT IN THE LAST 40 YEARS AND HOW THESE CHANGES IMPACT ON PRACTICE
I found 12 articles about child behavior between 1875 and 1900. Three of importance were:

Raymond (1875)  
McElroy (1895)  
Belcher (1898)
20\textsuperscript{th} century – 1\textsuperscript{st} QUARTER

The number of articles on behavior management increased. They stressed
• 1. management techniques, and
• 2. the need for knowledge of psychological principles and their application.
20th CENTURY – 2nd QUARTER

During this period, there were 27 articles related to child behavior. None were studies. They were opinion or anecdotal. These writings formed some of the bases for child management today.
3rd QUARTER 20thC. STUDIES WITH DATA BEGAN TO APPEAR IN THE 60’S

- Frankl et al (1962) – Should the parent remain in the operatory with the child?
- Johnson and Baldwin (1968) – related children’s behavior to maternal anxiety
- Wright and Alpern (1970) – Variables influencing child behavior at the first dental visit.
PRESENCE/ABSENCE OF PARENT IN THE OPERATORY – A MAJOR CHANGE

1898 – Belcher
1962 - Frankl et al
1972 – APD survey
1975 - Starkey
2012 – AAPD position
DO WE USE BEHAVIOR MANAGEMENT OR BEHAVIOR GUIDANCE?

**BEHAVIOR MANAGEMENT** is the means by which the dental health team effectively and efficiently performs treatment for a child patient and at the same time instills a positive dental attitude.

**BEHAVIOR GUIDANCE** goals are to establish communication, alleviate fear and anxiety, deliver quality dental care, build a trusting relationship between dentist and child, and promote the child’s positive attitude toward oral/dental health and oral health care.
• Informed Consent first appeared in U.S. court documents in 1957. (Read the Immortal Life of Henrietta Lacks by Rebecca Skloot). In the late 70’s and early 80’s it became a big issue in dental practice.
CHILDREN, PARENTS AND OUR CHANGING SOCIETY

The purpose of this paper was to discuss how parenting has changed in recent decades. Topics Include:

(1) increased focus on the changing nature of parenting in today’s culture;
(2) perception of pediat dents regarding parenting changes;
(3) importance of parenting in children’s development;
(4) family/parenting trends;
(5) the role of stress
Have Parenting Styles Changed Since You Began Practice?

6. Do you think parenting styles have changed since you’ve been practicing pediatric dentistry?

- absolutely
- probably
- not sure
- probably not
- no
How Can I Best Help My Child?

Tips for Parents of Dental Patients

Feelings shape our actions. Your child looks to you when deciding how to feel about a dental appointment. The advice included here is the result of more than 25 years of research on how parents can best help children cooperate for medical and dental treatments.

Some of these ideas may surprise you. Thank you for your help in creating a great dental experience for your child. (Sheller, 2015)
Parent actions and comments that promote cooperative behavior (Sheller, 2015)

• 1. Calm, upbeat parent attitude, body language. Happy facial expressions.
• 2. Positive stories or comments about your own dental experiences.
• 3. Parent stays silent when dentist and staff talk to the child allowing their child to answer questions from the dentist.
• 4. Bring small item that your child would like to hold (stuffed toy, music).
• 5. Bring a joke or silly riddle to tell the dentist. Laughing relaxes everyone.
• 6. Take a photo of smiling child after appointment and send to the grandparents.
Parent actions or comments that upset children and interfere with cooperation

- 1. Stressed or anxious parent attitude
- 2. Uninformative reassuring comments (Don’t worry)
- 3. Informative reassuring comments (You’re almost done)
- 4. Criticism (Why can’t you be like your sister?)
- 5. Suggestions to the dentist (He does better when he know what is going to happen)
- 6. Inappropriate comments (He is going to try and not hurt you)
- 7. Negative or scary stories about dentistry
FEARFUL PARENT

CONVEYS ATTITUDE

MATURATION AND PARENTHOOD

FEARFUL CHILD
## Parental Cooperation Scale

<table>
<thead>
<tr>
<th>Category</th>
<th>Clinical example of exhibited behavior</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Definitely negative</td>
<td>Refusal of treatment plan, suspicious of dentist, overprotective of child, distrustful of dentistry, repeats doubts of need for treatment, fearful, will not allow dentist or staff to be with child alone. Needs to know every detail of treatment. Repeatedly cancels appointments.</td>
</tr>
<tr>
<td>II. Negative</td>
<td>Reluctance to accept complete treatment plan, some evidence of negative attitude but not pronounced. Needs to see caries on radiograph. Frequently acts as liaison between patient and dentist.</td>
</tr>
<tr>
<td>III. Positive</td>
<td>Acceptance of treatment plan, cautious behavior at times, compliance with the dentist, at times with reservation, but follows the dentist’s directions cooperatively. Reluctantly, will allow child to be alone with dentist. May question dentist about treatment plan but not in a hostile manner.</td>
</tr>
<tr>
<td>IV. Definitely positive</td>
<td>Good rapport with the dentist, trustful, has full confidence in dentist’s decision. Allows patient to be alone with dental staff. Shows interest in the dental procedures, expresses satisfaction with dentist and staff, will share compliments with dentist.</td>
</tr>
</tbody>
</table>
NON PHARMACOLOGIC STRATEGIES

GETTING TO KNOW YOUR PATIENT
PRE-APPOINTMENT BEHAVIOR MODIFICATION
EFFECTIVE COMMUNICATION
NON-PHARMACOLOGIC STRATEGIES
RETRAINING PATIENTS
## Stages of Humor

<table>
<thead>
<tr>
<th>STAGES</th>
<th>EXAMPLE</th>
<th>DENTAL APPLICATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 0: First 6 months, Laughter without humor, the</td>
<td>Tickling</td>
<td>Smiling and making funny noises</td>
</tr>
<tr>
<td>pre-humor stage.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 1: 6 to 12-15 months, Laughter at the attachment</td>
<td>Peek-a-boo</td>
<td>Counting fingers and continuing to tickle the arm</td>
</tr>
<tr>
<td>figure</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 2: 12-15 months to 3 – 5 years</td>
<td>Using a bowl as a hat</td>
<td>Finger as a toothbrush</td>
</tr>
<tr>
<td>Treating an object as a different object</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 3: 2 - 4 years</td>
<td>Calling a cat a dog</td>
<td>Misnaming colors calling a blue mirror or chair red</td>
</tr>
<tr>
<td>Misnaming objects or actions</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 4: 3 – 5 years</td>
<td>“Daddy, Faddy, paddy”</td>
<td>While using the nasal mask tell patient to breathe through their nose and not through their toes</td>
</tr>
<tr>
<td>Playing with words</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing with word sounds, not meanings</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stage 5: 6-7 years to 10-11 years</td>
<td>Why did the boy tiptoe past the</td>
<td>Q. What flowers are the kissing flowers? A. Tulips</td>
</tr>
<tr>
<td>Riddles and jokes</td>
<td>medicine chest? He did not want</td>
<td></td>
</tr>
<tr>
<td></td>
<td>to wake the sleeping pills.</td>
<td>Q. Why did the tree come to the dentist? A. To get a root canal.</td>
</tr>
</tbody>
</table>
HOME: A NO-NO IN THE U.S.A.
They surveyed 2600 AAPD members purpose to determine alternative behavior management techniques that might be used in place of HOME after its elimination from the clinical guidelines of the AAPD.

Methods: Seven hundred four respondents (30%) completed the survey. Voice control was the first alternative, and minimum/moderate sedation was the second most common.

Acceptability: Three hundred fifty respondents (50%) believed that HOME is an acceptable behavior management technique, and 290 (47%) believed it should be continued to be recognized by the AAPD.
Restraint should be administered for positive reasons
POSITIVE REINFORCEMENT SHOULD BE SPECIFIC

• Dr. A.: We are almost finished with the job. You are a good helper!

• A little while later.

• Dr. A.: Can you open your mouth wider? Oh, you’re a good helper!

• A little while later.

• Dr. A.: Can you open your mouth a little more? What a good helper!
The U.S. surgeon general’s recent concern about the low use of oral health services by children and the persistence of early childhood caries suggest that dentistry should consider taking a closer look at the potential benefits of an analogous concept of a “dental home.”
PHARMACOLOGICAL MANAGEMENT BEGAN IN THE 3rd QUARTER, 20th C

- LAMPSHIRE (1959) – Balanced medication
- ALBUM (1961) – Meperidene and hydroxyzine
- ROBBINS (1967) – Chloral hydrate + promethazine
- RATTRAY (1968) - Diazepam
- SPAMER (1973) – Nisentil and phenergan...APD mtg
Figure 1. Histogram of drug choices of pedodontists.
MEDICATIONS WERE CLASSIFIED IN TWO WAYS (Musselman & McLure)

PREVENTIVE MEDICATION is used when a child is stressed by the situation but communicative.

MANAGEMENT MEDICATION is used for children unable to control their behavior or lacking in cooperative ability.
Jill, age 4 is a healthy child requiring 4 quadrants of restorative dentistry. At the initial appointment the child seemed cooperative but the dentist recognized her nervousness. Her eyes followed every movement of the dental team and she laughed seemingly to camouflage her uneasiness.
• Despite these observations, the dentist treated Jill with TSD. Performing dentistry quadrant by quadrant, the dentist had good cooperation at appointments 1 & 2. At the 3\textsuperscript{rd} appointment, the child cried with the injection and then calmed down. At the 4\textsuperscript{th} appointment, Jill’s parent forcibly brought her to the office. She cried continuously and hysterically, refusing the injection.
COMMONLY USED SEDATION

1975
- HYDROXYZINE
- CHLORAL HYDRATE
- MEPERIDINE
- PROMETHAZINE
- ALPHAPRODINE
- DIAZEPAM

2015
- HYDROXYZINE
- CHLORAL HYDRATE
- MEPERIDINE
- PROMETHAZINE
- MIDAZOLAM
- DIAZEPAM
Figure 2. Histogram of popularity of methods of drug administration used by pedodontists.
The survey showed that 45% of those responding used nitrous oxide.

N2O was largely promoted by Langa (1968).

Simon and Vogelsberg advocated using N2O with children using the rapid titration technique (1975).
ALPAPRODINE (NISENTIL)
PRIMARILY USED WITH CHILDREN 3-6 YRS.

- Rapid action – peak effect 5-10 mins.
- Similar to Demerol but 2 ½ times potency.
- Side effects – respiratory depression, nausea and vomiting.
- Reversed, like Demerol, with a narcotic antagonist.
ALPHAPRODINE HCl (NISENTIL)

- THE DRUG WAS WITHDRAWN FROM THE MARKET IN 1981-82 BY THE MANUFACTURER HOFFMAN-LAROCHE
LOS ANGELES SYMPOSIUM (1)
Nisentil report on 7372 cases

Patients ranged from 2 -12 yrs of age
mean Nisentil dosage was 9.9 mg
Drug efficacy was between 2.8 and 2.9 with 3.0 being the maximum
Severe adverse reactions 8/7372
Based on 2911 questionnaires:
- Narcotic sedation was most popular
- Narcotic adverse risk reaction was 1:500 as compared to non narcotic sedation with a !:20,000-30,00
- Nisentil was safer than Demerol
OUTCOMES OF THE LOS ANGELES SYMPOSIUM (1982)

- Concluded that guidelines were needed to establish a basic standard of care for sedation usage.

- Better education was needed for practitioners choosing to use sedation.
“GUIDELINES FOR THE ELECTIVE USE OF CONSCIOUS SEDATION, DEEP SEDATION AND GENERAL ANESTHESIA”

Ped Dent 1985
Sedation describes a depressed level of consciousness which may vary from light to deep. At light levels, termed conscious sedation the patient retains the ability to independently maintain an airway and respond to verbal commands. The patient may have amnesia, but protective mechanisms are normal.
In deep sedation, some depression of protective reflexes occurs, and although more difficult, it is still possible to arouse the patient.
SEDATION MONITORING......(3)
NIH CONCENSUS - 1985

• Conscious Sedation – the chart should document heart rate, blood pressure, respiratory rate, pt. responsiveness at regular intervals.

• Deep Sedation – in addition, use of precordial stethoscope for monitoring cardiac function, an IV line, pulse oxymetry or electrocardiograph monitoring, temperature monitoring.
DAVIS ET AL (1988) SURVEYED DIPLOMATES OF THE ABPD

- 54% stated they now treated more difficult patients,
- 32% felt that economic pressures make it necessary to provide more efficient care,
- 12% felt that they were now better prepared conscious sedation,
- 59% found it more difficult to access hospitals
GUIDELINES AFFECT PRACTICE

- Who is to be trained to record?
- What should be on a data gathering form?
- When is it really necessary?
- What do the guidelines offer in providing information to such questions?
THE GUIDELINES ARE REVIEWED AND CHANGES ARE MADE ON A REGULAR BASIS.

EVEN TERMINOLOGY CHANGES

In 1998, the AAPD changed sedation terms
- Anxiolysis (minor sedation) = Minimal Sedation
- Conscious Sedation = Moderate Sedation
And later..............
Behavior Management became Behavior Guidance
A disturbing report of 17 malpractice cases revealed that, in all instances, guidelines were not observed. Nine cases resulted in death or permanent brain damage. Overdoses and instances of inadequate monitoring were found.
Most GA cases were performed in hospital.
Most GA cases were two-day admissions
There was concern about hospital preparation of the child patient.
There was concern about psychological trauma to the child patient.
GA was ranked by parents as the least acceptable technique (Lawrence et al, 1991).
There have been significant changes in the past few decades:

- Length of hospital admissions has changed as most are out-patient surgery.
- Acceptance of dental office general anesthesia working with a trained anesthetist.
- Things change. In 2005, GA was the 3rd most acceptable management technique (Eaton et al)
The use of dental anesthesiologists IN THE DENTAL OFFICE for administration of deep sedation and general anesthesia appears to be an emerging trend in pediatric dentistry. (Olabi et al, 2012)
ADVANTAGES OF DENTAL OFFICE GENERAL ANESTHESIA FOR ASA 1 PATIENTS

• There is a big price spread between dental office v.s. hospital anesthesia.
• Dentists lose productive office time.
• Hospitals can be inefficient.
• Parents often find hospitals intimidating.
• Hospital recovery time is usually longer.
• A burden bringing supplies to hospital.
THE DENTAL ENVIRONMENT

• Pediatric Dental offices are unique Doyle and Tait (1975).

• *Patients differ.*
• *Dentists differ.*
• *Offices Differ.*

• See Lee and Lee (2015)
Managing Behavior –
Is it THE problem practice today?

67% of pediatric dentists consider children a greater problem than in the past.

63% of pediatric dentists think that parenting styles absolutely have changed; 25% think they probably have changed.

Wilson and Cody (2005) searched 30 yrs of literature on behavior management, excluding sedation articles. In P.D. and J.D.C. only 168 behavior articles were published. Less than 1/3 were clinical studies, 38% were opinion papers, 32% were surveys or anecdotal.
DANKE

THANK YOU

GRACIAS

SPASIBA

OBREGADO