

Transformative Team-based Dental Care for Vulnerable Children

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Introduction:

great progress over
the last two decades

BUT

persistent challenges
and disparities



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Pediatric dentists are highly trained dentists that focus intensely in restorative care of various pediatric dental pathologies

High technical competency level

Routine practice of ambulatory behavioral and pharmacological management of patients to achieve desirable goal of restoring health

Full mouth rehabilitation of dental health under general anesthesia in the hospital

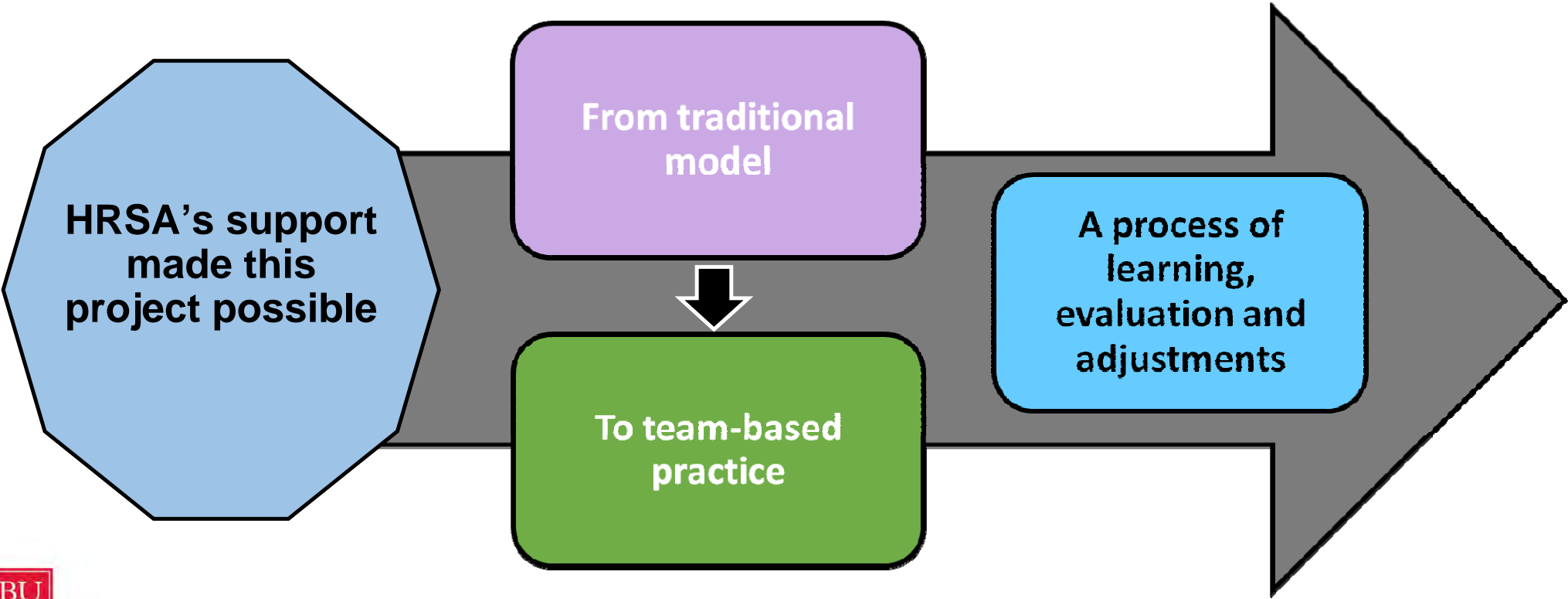
HOWEVER

barriers and disincentives exist to practice prevention & risk management

The current model



Transition



The new model

Addresses root causes of disease, including social determinants & cultural competency

Collaborative, with open communication channels

Depends on teams that are highly functional

Allows each member of the team to practice their specialty at the fullest

Requires inter-professional education & open mindedness

It is family-centered



Program goals

Focus

GOAL 1. Creation of a new transformative, inter-professional, team-based dental care delivery model;

GOAL 2. along with an integrated training program in Pediatric Dentistry and Dental Public Health.



GOAL 1

Objective 1: Assemble, train, and deploy an inter-professional team to provide oral health care by collaborating with our primary care partner, Boston Medical Center Department of Pediatrics (primary care medicine for children) and other key partners across the Boston University campuses

Objective 2: Develop clinical and didactic curricula to support activities of the BPOHC

Objective 3. Evaluate the dental care delivery model and specialty training center

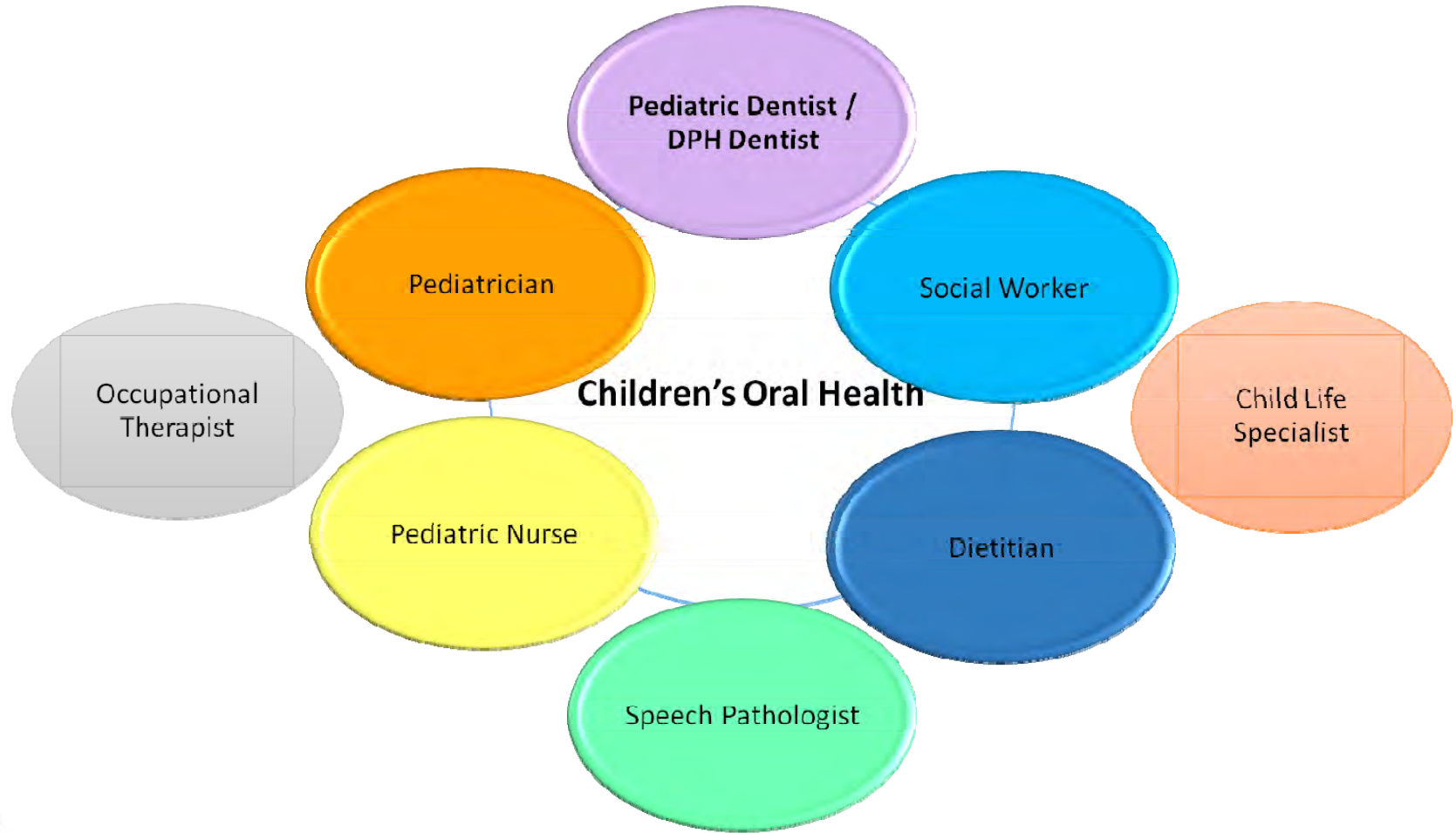


B.U Pediatric Oral HealthCare Center

- The Pediatric Oral Health Center was inaugurated in September 2016
- Since its opening the Pediatric Oral Health Center has provided comprehensive holistic care to children from all backgrounds, especially the underserved (97% Medicaid insured)



Inter-professional Collaboration at the BUPOHC



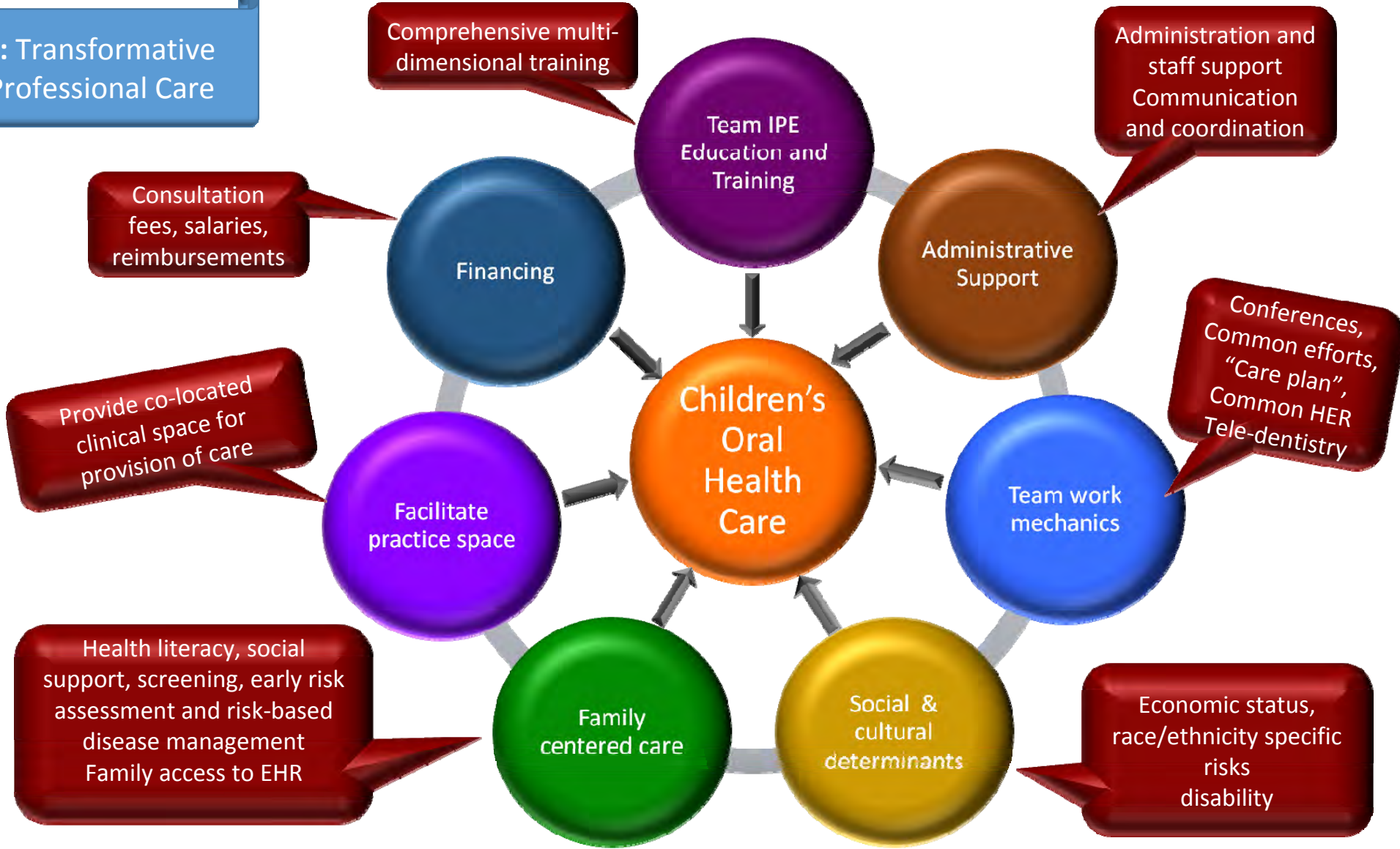
Team Work in the Pediatric Dental Clinic

- Pediatrician and nurse practitioner facilitate interactions between MDs and DDS, refer and review specific cases and assist in medical clearance. Facilitate Urban Pediatrics Rotation.
- Speech language pathologist present in the clinic on Thursdays. Screen and evaluate children as needed.
- Social Work interns present in the Pediatric dental clinic 1-2 days a week. Conduct “needs assessments” and address issues that impact health and access to services (food insecurity, transportation etc.). Intervene clinically for: child abuse/neglect, maternal depression, domestic violence etc. Contribute a social perspective for “case conferences”
- Just hired a registered dietician and an occupational therapist to provide screenings and consultations in the pediatric dental clinic.

Goal 1: Inter-Professional Care.
REQUIREMENTS & ELEMENTS OF
SUCCESS



Goal 1: Transformative Inter-Professional Care



Re-tooling for success: practical examples of processes and procedures



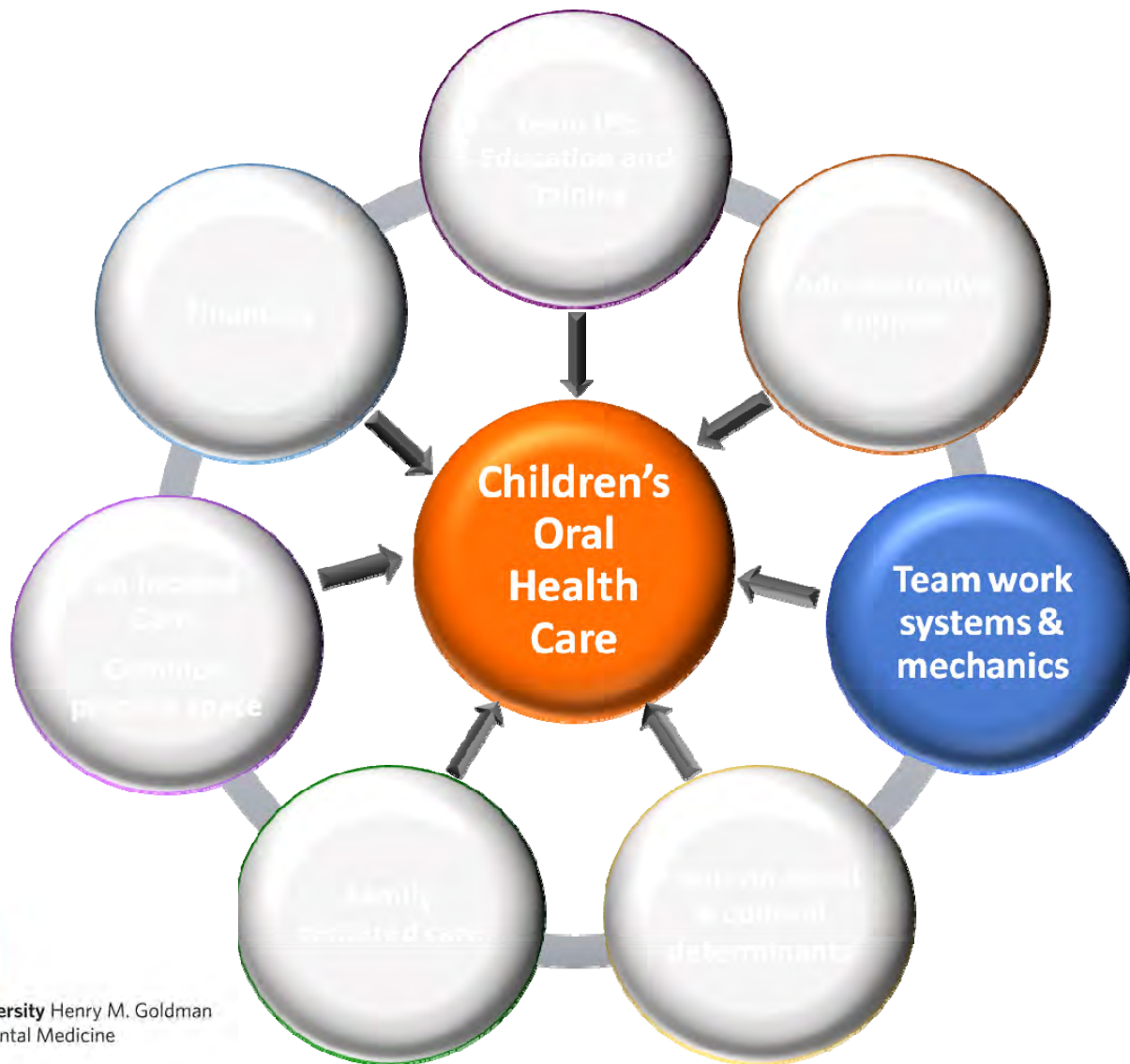
Administrative support

Team requires strong administrative support

- Continuous communication flow between team members
- Communication with families
- Coordination of meetings
- Follow up of clinical actions
- Follow up of clinical and business actions
- Staff support & scheduling coordination
- Billing
- Evaluation of performance

•Assign one administrator to be the “glue” that will bond the team together





Team Conferences and Care Plans

- The team meet regularly to discuss cases, especially children with complex needs
- EPIC HER has become the preferred mode of communication. The team has started to gain familiarity with the HER. Issues still persist because EPIC and SALUD do not cross-talk (require simultaneous access to both systems and duplication of work)
- “Care plan” concept to be pilot tested. CCP clinic at BMC has experience and will lead the effort



Care Plan Example

Comprehensive Care Plan

DISCLAIMER: This is a capsular summary and does not replace the patient's full medical record
For emergency updates, contact PCP – Melissa T Nass, MD Tel: 617-414-4841

Patient Name:	
DOB:	
MR#:	
Primary Language:	English
Primary Insurance:	Medicaid
Allergies:	Eggs, peanuts, soy milk, milk protein, rice, whey, peach, mango
CPR Status:	Full Code
Primary Diagnosis:	Autism, Global developmental delay
Secondary Diagnosis:	Multiple food allergies/food intolerance Obesity/Acquired acanthosis nigricans Cough/snoring Rash/eczema/Abscess

First Parent/Guardian

Name:
Street Address:
City, State, Zip:
Home telephone:
Mobile telephone:
Work telephone:

EMERGENCY MANAGEMENT GUIDELINES – CRISIS PLAN

Allergy

- Ensure Jenny's mother Catherine carries an EpiPen and that there is one at school
- Jenny has never had an anaphylactic reaction, but all providers should be aware of anaphylaxis symptoms
- Use EpiPen with any signs of severe reaction (difficulty breathing, swelling of the face, hives/itchiness or abdominal pain/vomiting)
- Call 911 or go to the emergency room IMMEDIATELY

Current Medications:

Medication	Dose	Route	Schedule
EpiPen Jr. 0.15mg/3ml (1:2000)			Use as directed for serious allergic reaction
Benadryl allergy childrens 12.5mg/5ml	1-2 tsp	PO	Every 6 hours as needed for allergy/itch
Hydrolatum ointment	--	Topically	Cover entire body twice a day everyday
Ibuprofen 100mg/5ml suspension	2 tsp	PO	Every 6 hours for pain or fever
Elacare Jr. vanilla	720kcal	PO	720 kcal/day
Miralax powder	1 capful	PO	1 capful in juice daily for treatment of constipation
Adult small pull ups; Chux			Mixed incontinence – dx autism
Gloves			For changing diapers

Emergency and Medical Contacts:

Name	Role	Contact Info
Melissa T Nass, MD	PCP Boston Medical Center	850 Harrison Avenue Yawkey Center, 5 th Floor Boston, MA 02118 Tel: 617-414-5946 Fax: 617-414-4541
Jodi Santosuosso, NP	Developmental/Behavioral Pediatrics Boston Medical Center	850 Harrison Avenue Yawkey Center, 5 th Floor Boston, MA 02118 Tel: 617-414-4841 Fax: 617-414-7915



Care Plan Example

My medical home neighborhood that helps me stay well:

Medical Information		
System	Diagnoses	Current Treatment
Developmental	Global Developmental Delay Autism	Separate class – autism focused 5 days/week IEP goals appropriate: ST/OT – 60 min a week; ABA – 5 hours a week Visual chart for home routines GET INFO FROM JFCS
Respiratory/Allergy	Multiple food allergies Wheeze/cough	Avoidance of known allergens -- Mom carries EpiPen; School nurse has EpiPen Consider obtaining order for Benadryl at school
Dermatology	Eczema Abscesses	Hydrolatum ointment twice a day, every day Call PCP with any signs of skin infection (redness, warmth, swelling or pus)
Endocrine	Obesity Acquired acanthosis nigricans	Continue weekly appointments with Franciscan's Feeding Team Follow-through with Feeding Plan at home and at school; School has updated plan Limit Elacare to three servings of 8 oz water + 3 scoops Elacare Dilute juice to ½ juice + ½ water with goal of transitioning to only water Continue to introduce new foods (carrots and apple sticks) and limit french fries Use picture exchange to have Jenny request more food

Transition Plans:	Parent's Will/Guardianship
Jenny attends the Curley School, very close to her home. However, mom has thought about having Jenny attend a different school.	Catherine is Jenny's guardian; father is not involved Consider discussing guardianship when Jenny is 14 years old

Involved Agencies and Community Services:		
Provider	Contact Name & Info	Reason for Involvement
Department of Developmental Services	Berta Couto Tel: 617-777-9698	DDS First Team Case Worker
Jewish Family and Children's Service	Natalie Stepanick Tel: 781-697-0044	In-home Behavior Therapy Ensure in-take clinician will be the clinician going to home

Important Family Information and Preferences:
Jenny lives with her mother in her apartment. The home is neat and tidy and Jenny has a small table where she eats her meals. Jenny and her mother share a bed to sleep in. There is a park nearby that Jenny goes to when the weather is nice. Catherine also takes Jenny swimming at a local pool or go for walks in the mall often. Catherine has access to her own car. Alrene receives SSI for Jenny. With the increased absences in school, Catherine wishes for medical appointments to be scheduled in the afternoon if possible.

Description of Child:
Jenny likes to play in water. She likes music and playing with her mother's phone. She enjoys play-doh. She also likes to paint, but will usually just put the paint on her own body. She does not mind touching the paint or having that paint on her skin. Jenny enjoys school and will smile and greet staff every morning.

- PECs – used in school; emphasized during mealtimes. Jenny is required to request more food using the PECs
- 4C team to assist obtaining PECs or visual routines for home use
- There is an iPad in the classroom, but Jenny uses it for leisure

Technology/Hardware:
Nutrition:
Jenny has a complex history of food allergies, sensitivities and aversion. She is currently prescribed 15 cans of Elacare Jr. Vanilla a month; Mom has a history for requesting more formula than prescribed. Current plan for Elacare is three servings of 8 oz. water + 3 scoops in a sippy cup (17 calories and ounce).
-Mom has trouble setting limits with formula and will give Jenny formula in a bottle
Jenny will drink juice from a sippy cup – goal is to dilute to ½ strength and to transition to full water
Feeding Therapy once a week at Franciscan's – working on food chaining (ie. eating slices of apples and carrots shaped like French fries)
Mom does buy French fries every day for Jenny, up to 2 servings a day; current goal is to decrease second serving to only one or two days a week
Recommend using pictures to request more food as Jenny does in school
Encourage Catherine to eat with Jenny and to turn TV off to prevent over-stimulation; Suggest letting Jenny have a toy or two at the table for meals

School/IEP: K0 - Curley School, Autism specific classroom. Teacher: Ms. Mitchell
Absenteeism is a great concern; Many missed days during the winter. Continued process is limited.
Jenny is in a separate full-day preschool class with 4 other students
IEP goals appropriate; at yearly review on 3/10/15 school staff noted that due to absences, Jenny has not made progress as expected
IEP dates 3/10/15 will have some goals



Care Plan Example

Comprehensive Care Plan

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Action Plan:

Action/Referral	Service/Provider	Phone/Fax	Date Referred	Person Responsible
Franciscan's Team made referral for IHBT	Jewish Family and Children's Services	Tel: 781-647-5327	3/2/15	Feeding Team
Call teacher to better understand school functioning	Kristen Mitchell KMitchell@BostonPublicSchools.org	Tel: 617-635-8176	2/27/15	KH
Call school nurse to better understand medical concerns	Marilyn Reagan MReagan@BostonPublicSchools.org	Tel: 617-635-8176	2/26/15	KO
Observe feeding at school	Curley School	Tel: 617-635-8176	3/5/15	KT
Multidisciplinary phone conference with providers	BMC, Franciscan's, and Curley School providers	NA	2/23/15 3/2/15	KO, KT, DR, PCP
At mother's request – attend IEP meeting	Curley School	NA	3/10/15	KO, LB
Home visits to observe and emphasize feeding plan	Patient's Home	NA	3/18/15 4/1/15	KT, LB
Reach out to DDS to determine role	Berta Couto Department of Developmental Services	Tel: 617-777-9698	3/15/15	DR
Talk with Pediatric AIR clinic to discuss consumption of soybean oil	Lois Doerr, FNP Boston Medical Center	Tel: 617-414-4841 Fax: 617-414-5741	3/12/15	KO
Investigate counseling options for Mom	Pending	Pending		LB
Follow up with IHBT clinician and coordinate evaluations and recommendations	Jewish Family and Children's Services	Tel: 781-647-5327		LB, KH
Consult school staff about attendances	Curley School	Tel: 617-635-8176		KO
Schedule 4C follow up – give mom options to come on Wed (full team) or Tue (part of team) so Berta can attend	4C Program Boston Medical Center	Tel: 617-414-2222	3/26/15	CM
Assist with Scheduling Endocrine follow-up appointment	Angelina Bernier, MD Pediatric Endocrinology	Tel: 617-414-4841 Fax: 617-414-5741		CM
Assist with Scheduling DBP follow-up appointment	Jodi Santosuosso, NP Developmental/Behavioral Pediatrics	Tel: 617-414-4841 Fax: 617-414-5741		CM
Assist with scheduling Allergy follow-up in June	Lois Doerr, FNP Pediatric Asthma/Allergy	Tel: 617-414-4841 Fax: 617-414-5741		CM
Assist with scheduling Ophthalmology follow-up in July	Gi Yoon-Huang, MD Ophthalmologist	Tel: 617-414-4020 Fax: 617-414-4028		CM



Cloud-Based Dental Record for Remote Family Access

Goals:

- Timely access to information for patients and their families, especially for people with disabilities who have limited transportation ability
- Inter-operability
- Facilitate timely communication between pediatric dental and other health professionals



Tele-medicine / Tele-dentistry

Goals:

- Cloud-based system that can be accessed from any video platform, including cell phone, ipad, etc.
- Timely access to patients who experience emergencies
- Communication and information sharing with other health professionals and team members
- Ability to record sessions

Social & Cultural Determinants

All trained to recognize Risk Factors

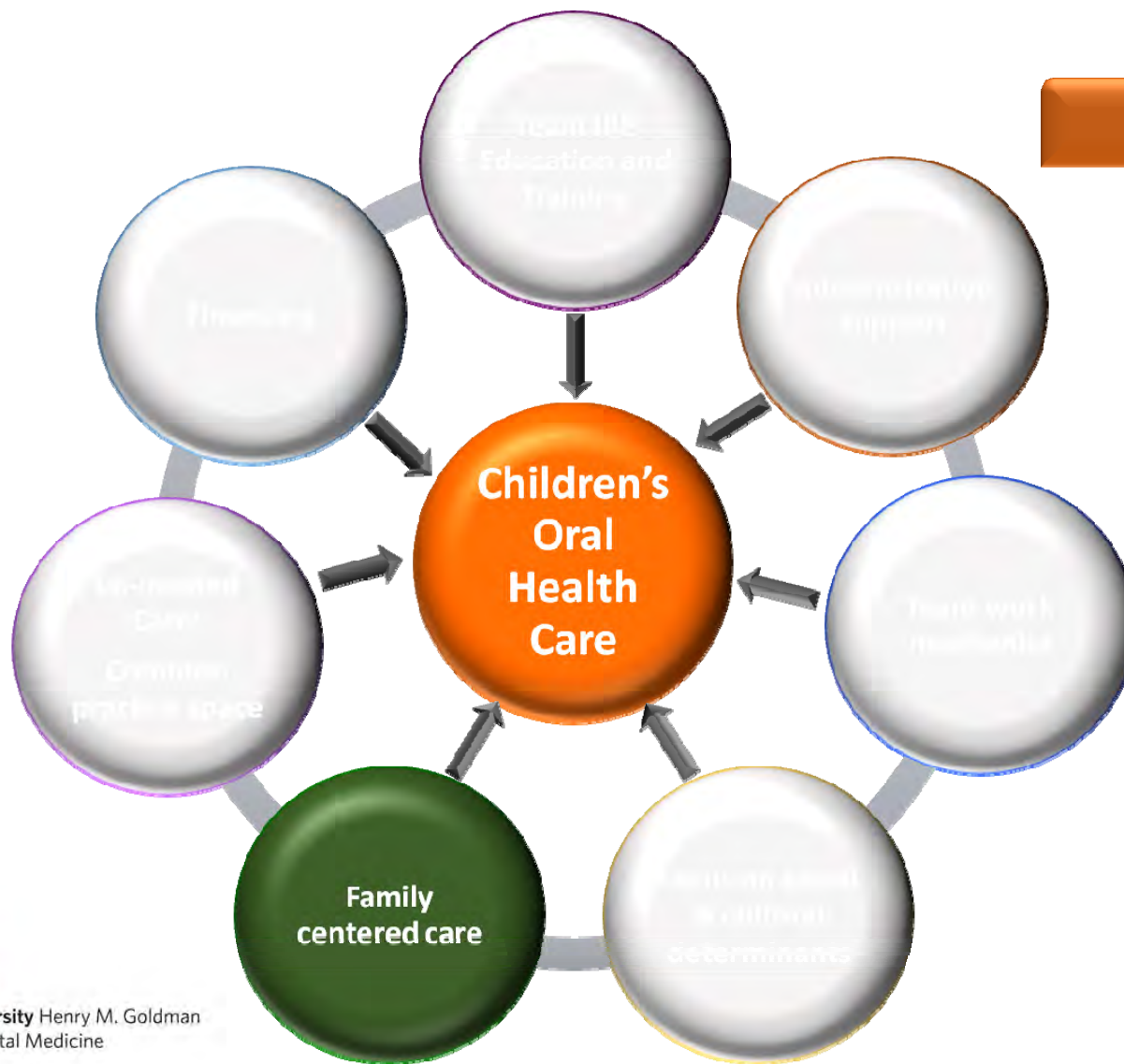
- Poverty
- Disability
- Lack of family structure & support
- Language barriers
- Cultural barriers
- Social isolation & lack of community support

Enabling Factors

- Family structure & support
- Social capital of family
- Access to community resources
- Acculturation



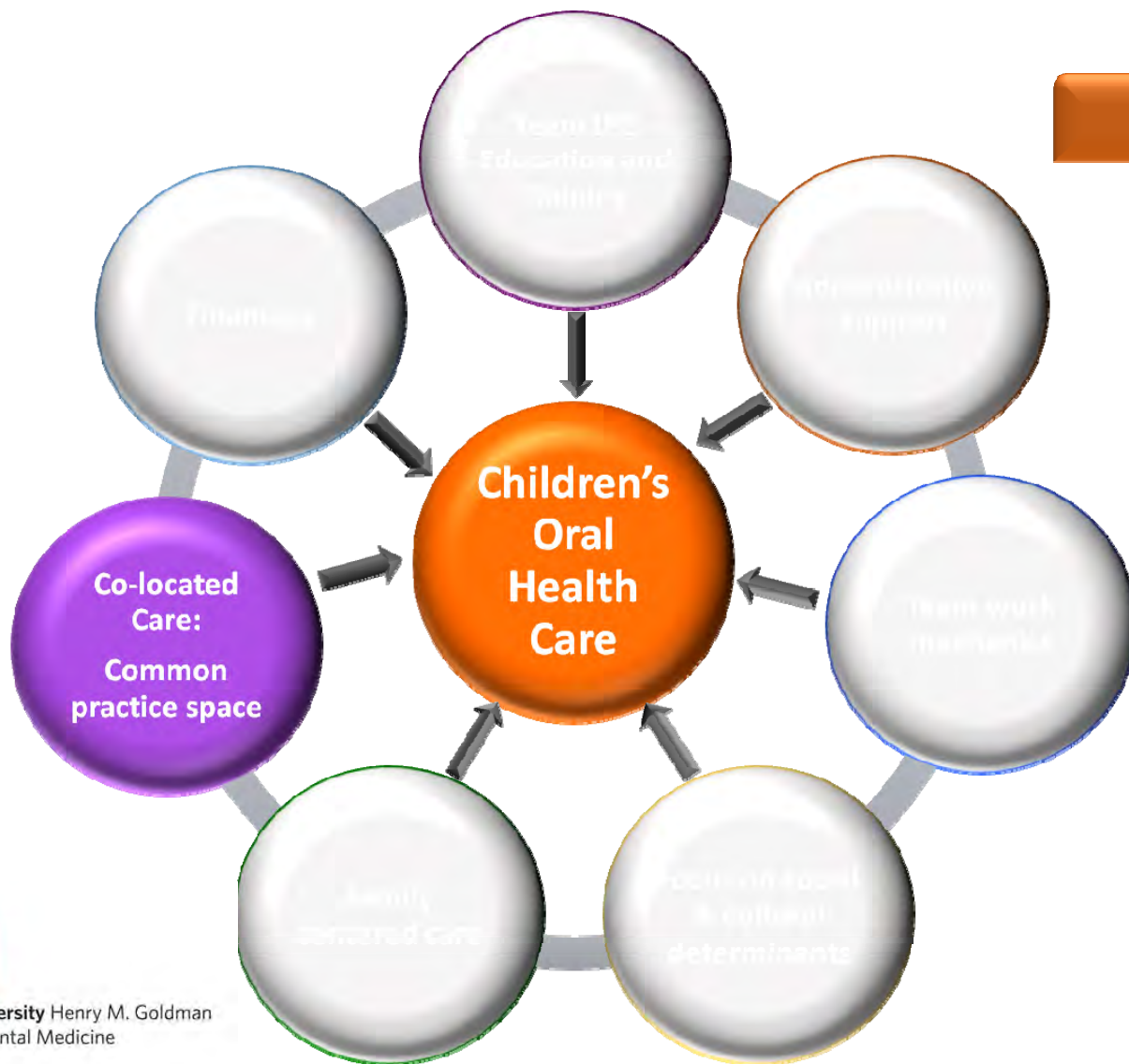
Patient-centered or Family-centered



How do you operationalize Family-centered practice?

- Provide for flexible work hours
- Payment plans
- Address information needs of parents & support their access to health information
- Anticipatory guidance
- Enable their understanding (health literacy)
- Use technology to set realistic and attainable goals at home for oral health and hygiene





Co-located care

Working in one location

- Working in one suite
- Working in same room as a team
- (seeing patients at the same time)
- Advantages related with continuity of care and family convenience



Financial sustainability

Requires long term evaluation

- Studying reimbursement of inter-professional team from medical insurance





Inter-Professional Education

- Inter-Professional Education (IPE):

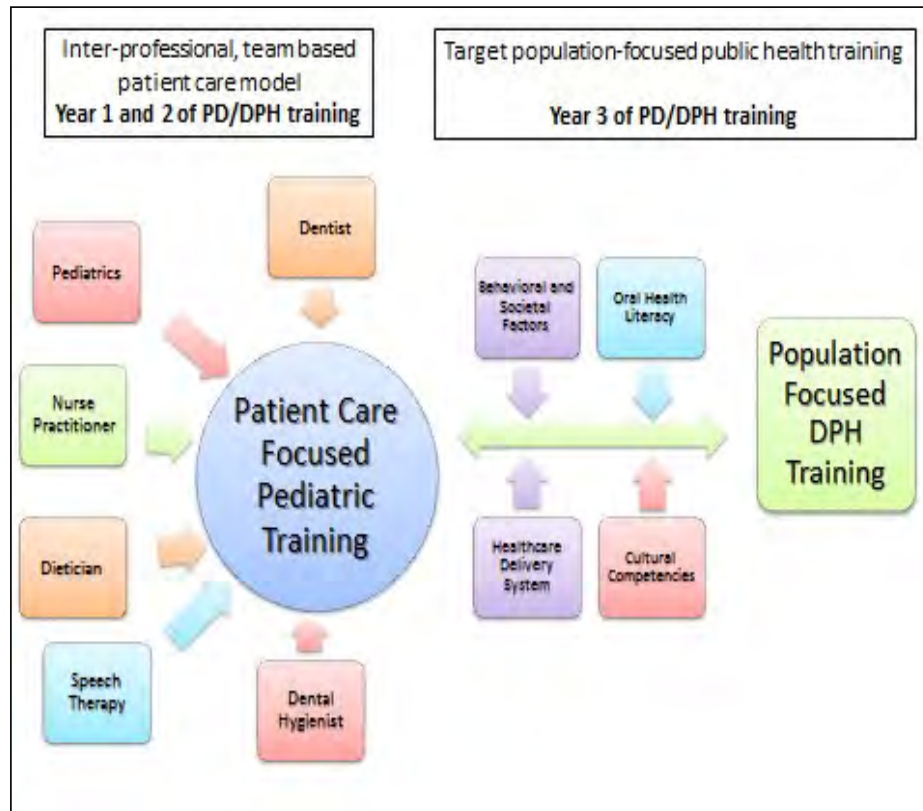
“Any teaching and learning activity that actively encourages collaborative practice”

Or

“Times when two or more professions learn with, from and about each other to improve collaboration and quality of care”



Educational framework of integrated training



**Goal 2: Integrated
Specialty Training**

BEFORE

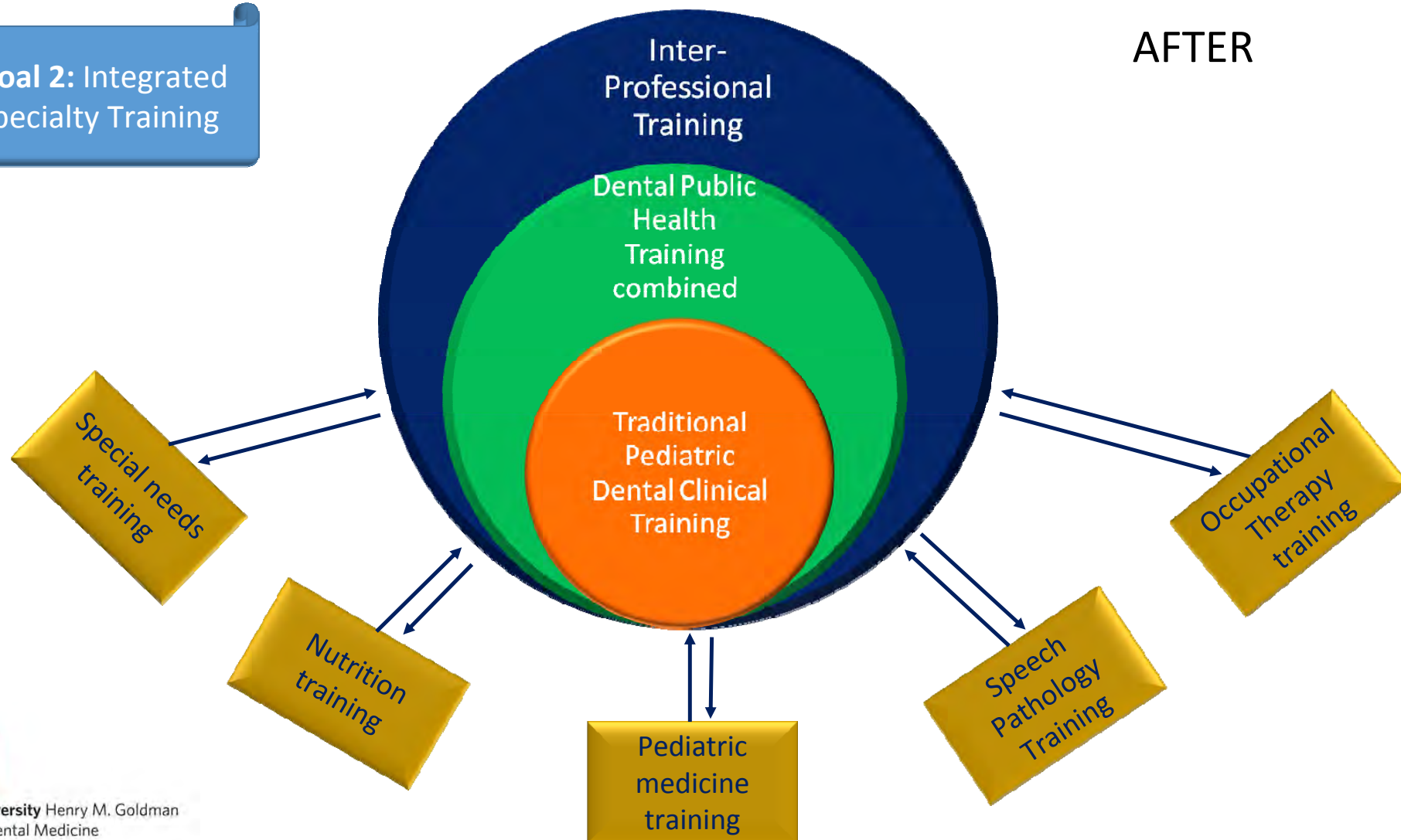


**Rigorous programs with standards and defined
outcomes governed by the Commission on Dental
Accreditation**



Goal 2: Integrated Specialty Training

AFTER



Training for Practice Integration:

- provider satisfaction
- improved quality of care



Educating our Colleagues

- A 'common core pediatric oral health curriculum' was pilot tested and disseminated through specialty specific educational lectures since Fall 2016
- Knowledge and attitudes were assessed prior to training sessions
- Educational training sessions on pediatric oral health care were provided
- Post-test questionnaires assessed any gains in knowledge and confidence

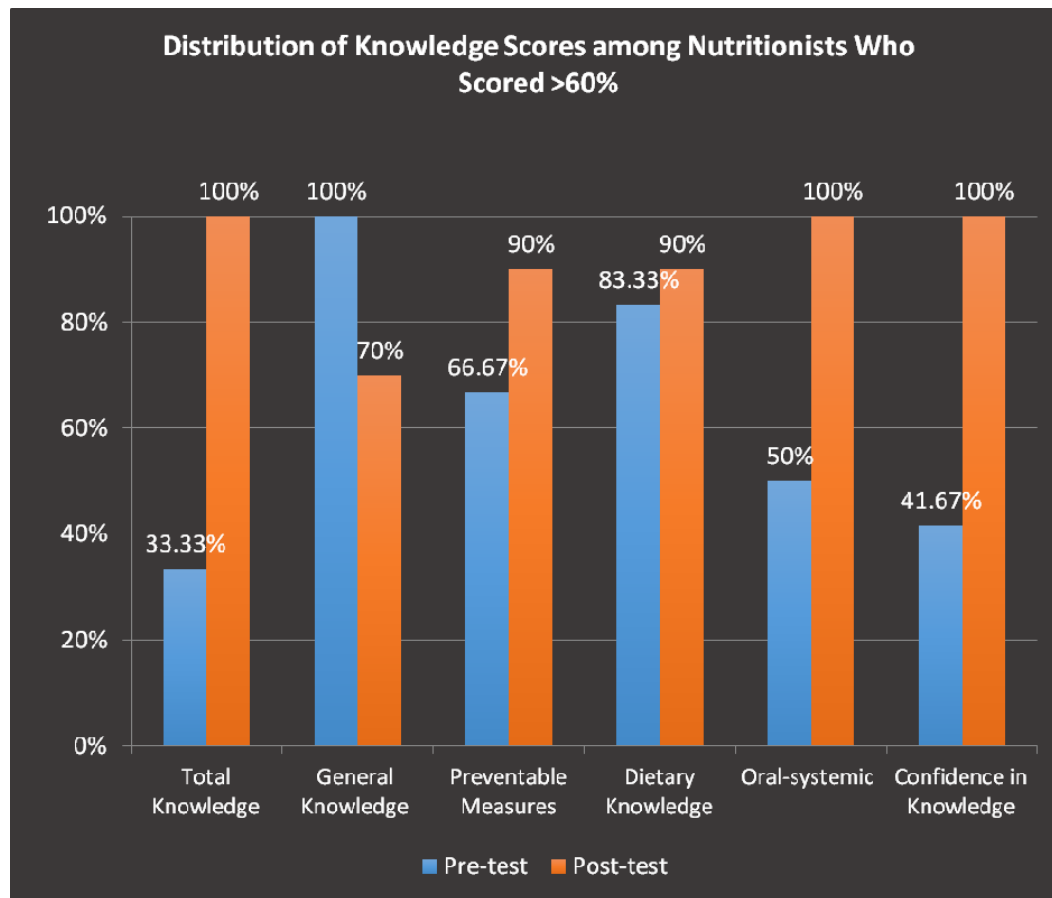


Our Colleagues Educating our Trainees

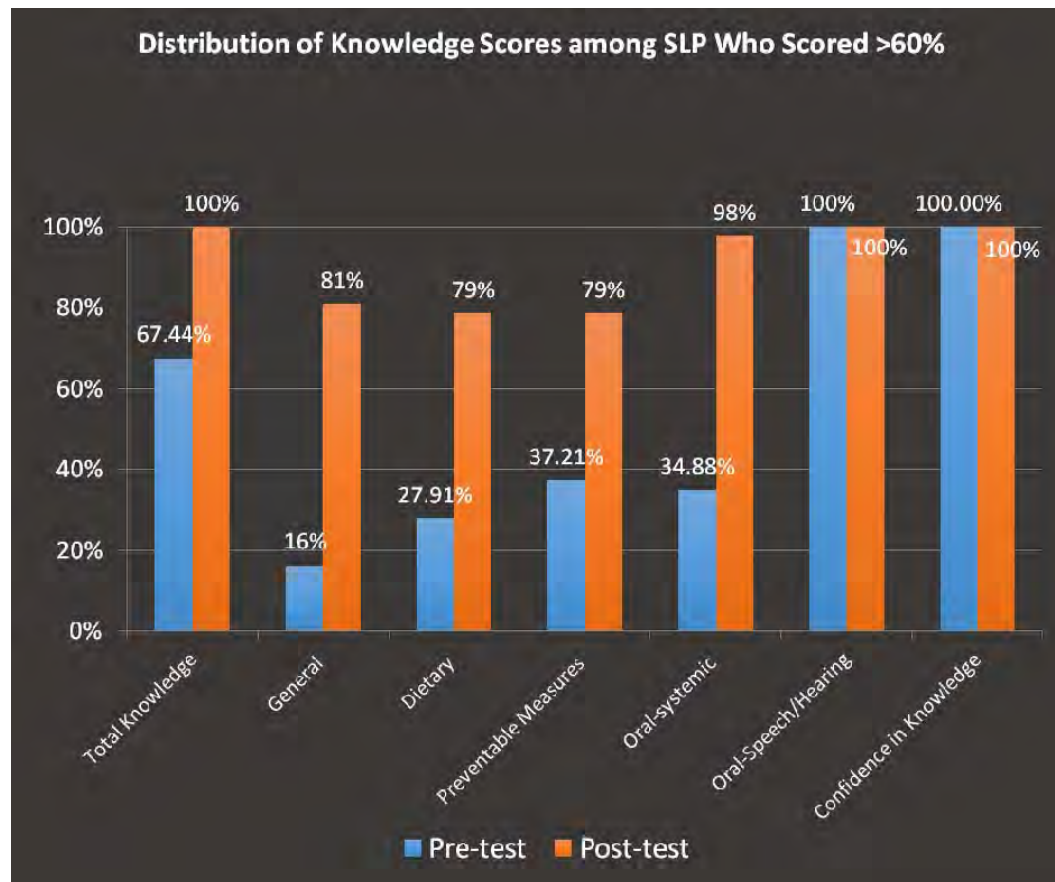
- New course in special needs patients, focusing on social and cultural aspects of disability, support systems, medical considerations and dental manifestations
- The primary goal is to familiarize the pediatric dental resident with all kinds of complex issues surrounding disabilities
- Revamping of the pediatrics rotation
- Educational sessions by nutritionists, speech pathologists, social workers, and child life specialists



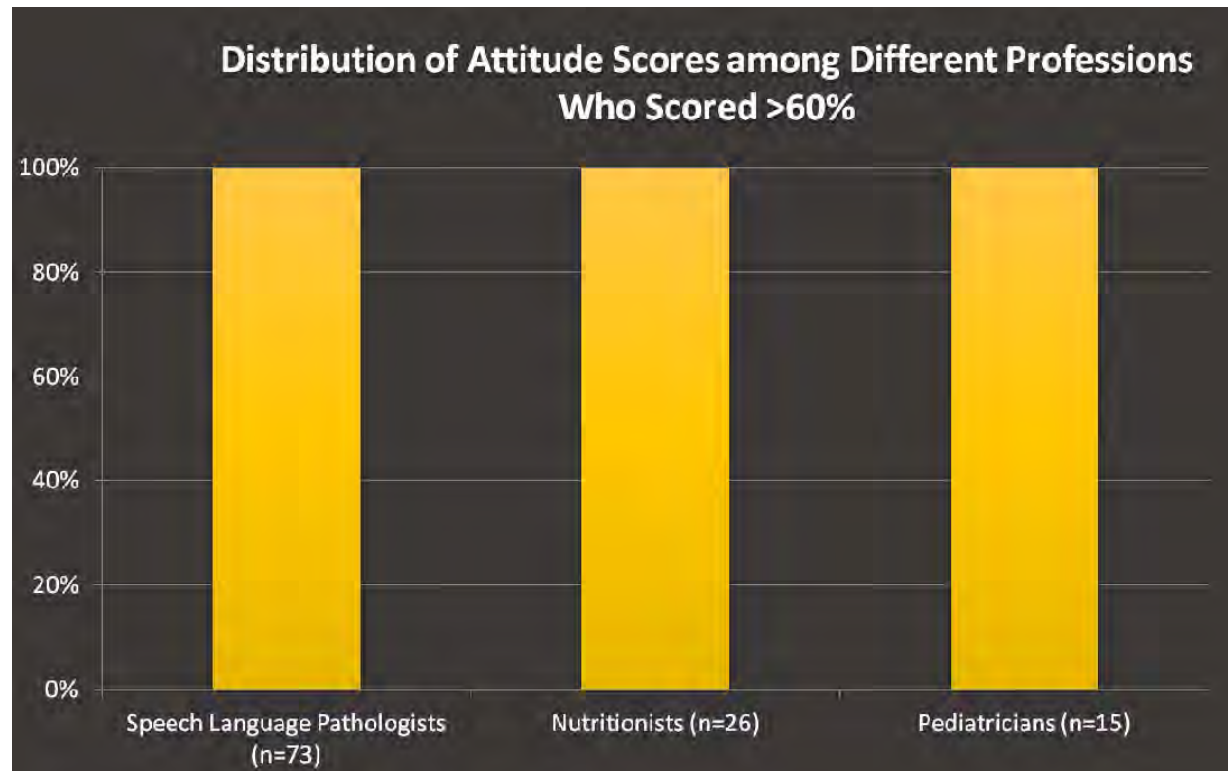
Evaluation of oral health knowledge among Nutritionists / Registered Dietiticians



Evaluation of oral health knowledge among Speech Language Pathologists (SLP)



Evaluation of the Attitude towards Inter-professional Education and Collaboration

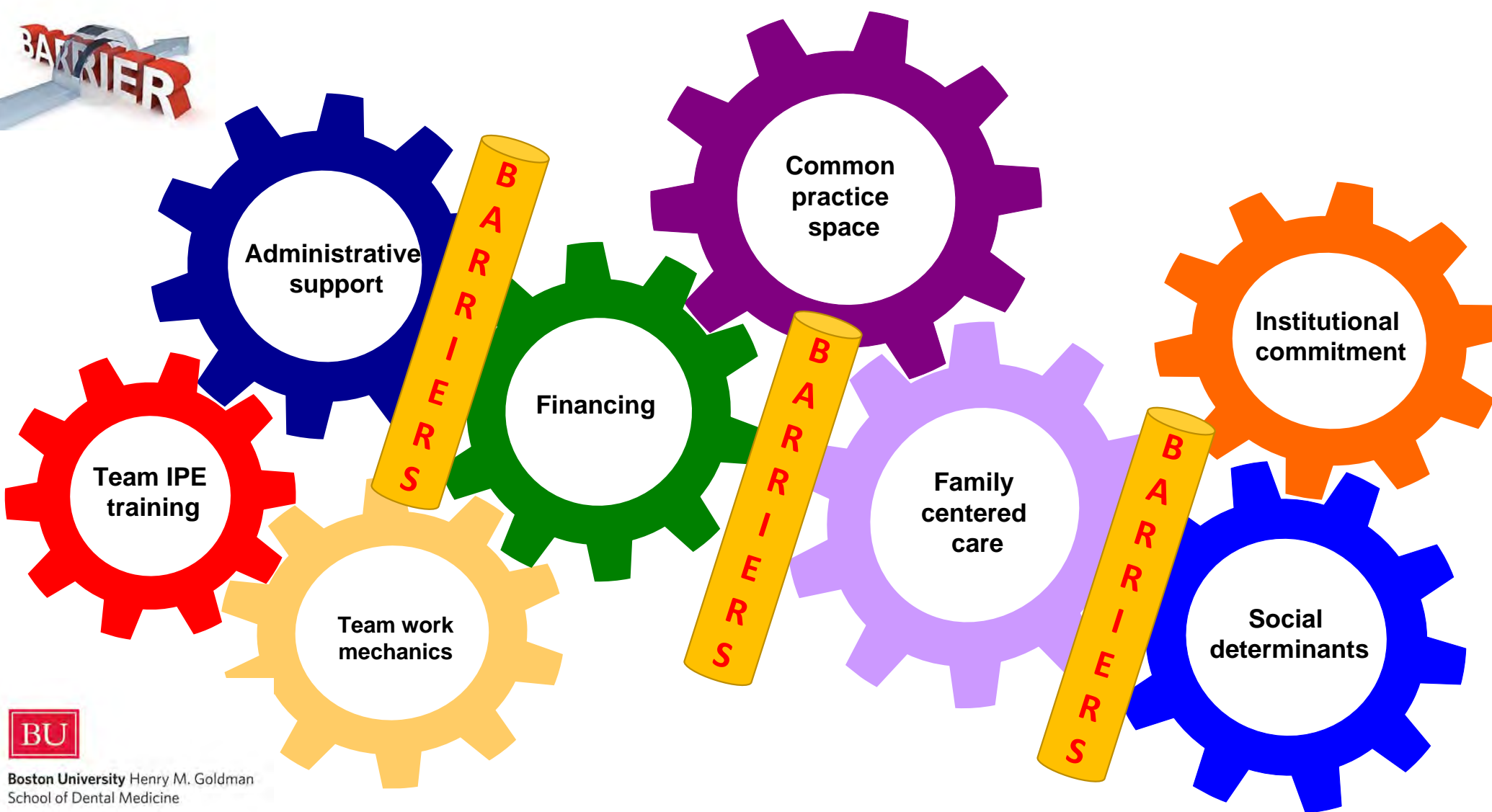


Special Needs Training of Pediatric Residents

- Twenty-three residents (96%) reported increase in confidence, knowledge and motivation to see more special needs patients.
- The Subjective, self-reported data (confidence, behaviors and skills) showed statistically significant improvement in post-test when compared to pre-test (p value < 0.001), as did the objective (knowledge) data (p value < 0.001).



BARRIER



Collaborative Case Example



Collaborative Case

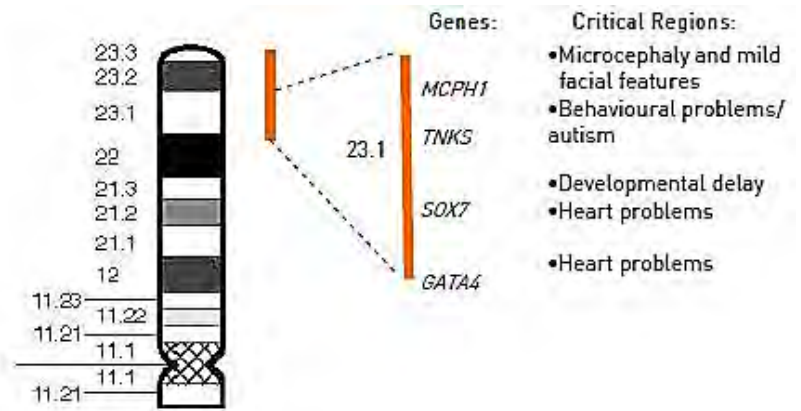


- 1 year old (16 months old) female
- Diagnosed with chromosome 8p23 deletion syndrome
- Microcephaly
- Atrial Septal Defect (ASD), will be operated on later (~3 years old)
- Developmental delay: Motor, Speech, Attention
- Sleep apnea



Collaborative Cases

8p23 deletion syndrome



- Heart conditions (especially when the deletion includes the GATA-4 heart gene located in proximal 8p23.1)
- Learning disability, will need individual support
- Behavioral issues: Hyperactivity and impulsiveness in particular



Collaborative Cases



- Finger sucking habit
- Difficulties with feeding due to tongue tie and lip tie
- Working with Speech Pathologist and a feeding specialist
- Several consults done with SLP, pediatrician, Cardiologist, ENT specialist, dentist
- ENT specialist would only do tongue tie correction with scissors



Collaborative Cases

Lip tie



Tongue tie



Collaborative Cases

Maxillary frenum before Laser frenectomy



Immediately after Laser frenectomy with
CO2 superpulsed laser at 1.2W



Collaborative Cases

Lingual Frenum before Laser frenectomy



Immediately after Laser frenectomy with
CO2 superpulsed laser at 1.2W



Collaborative Cases

Maxillary frenum before Laser frenectomy



1 week post-op Follow-up



6 weeks post-op Follow-up



Collaborative Cases

Mandibular frenum before Laser frenectomy



1 week post-op Follow-up



6 weeks post-op Follow-up



Collaborative Cases

Post-op Follow-up

- Mom reported much better suckling during breastfeeding immediately after laser frenectomy.
- Lip and tongue exercises continued for 4 weeks
- Mom noticed a significant difference in her feeding and sleeping patterns one week after & again 1 month after

Email quote – mom to Speech Pathology & Lactation consultant

“Just wanted to let you know Jenny's surgery went AWESOME. No bleeding!

She is already breastfeeding better than she ever has before. Wish I had gotten it done sooner”



Collaborative Cases

Quote from Speech Pathology / IBCLC Lactation Consultant

“Hello Dr. Zavras,

I just wanted to thank you again for making a very big improvement in this child’s life! This little girl was discharged from feeding therapy, eating all age level food textures. Even soft beef with side biting and tongue lateralization. She is growing and thriving.”



Future Projects

- MD/DDS Coordinated Care in the Operating Room for “Difficult to Examine” Patients
- Coordinated Dental Visits at Teen Parent Centering Groups
- Development of Child Life Platform in Pediatric Dental Clinic
- HPV Vaccination in Pediatric Dental Clinic

