Poverty and Child Health in the United States: Strategies to Lessen the Stress

James Duffee, MD, MPH, FAAP
Clinical Associate Professor of Pediatrics
Wright State University Boonshoft School of Medicine
Dayton, Ohio
Disclaimer

- Statements and opinions expressed are those of the authors and not necessarily those of the American Academy of Pediatrics.

- Mead Johnson sponsors programs such as this to give healthcare professionals access to scientific and educational information provided by experts. The presenter has complete and independent control over the planning and content of the presentation, and is not receiving any compensation from Mead Johnson for this presentation. The presenter’s comments and opinions are not necessarily those of Mead Johnson. In the event that the presentation contains statements about uses of drugs that are not within the drugs' approved indications, Mead Johnson does not promote the use of any drug for indications outside the FDA-approved product label.
Learning Objectives

1. Describe the epidemiology of child poverty in the United States and the trends in health disparities among racial and ethnic groups.

2. Understand the connection between early childhood adversity and lifelong health.

3. Apply elements of family-centered, trauma-informed care to pediatric practice in low-income communities.

4. Know how to screen for social determinants of health in primary care.

5. Identify possible strategies to enhance both prevention and early intervention, including partnering with community agencies in order to ameliorate the lifelong effects of family poverty during early childhood.
What are the basic determinants of child health?

- **Fundamental**
  - Relationships
  - Family income
  - Nutrition
  - Education
  - Environment
  - Other social forces

- **Proximate**
  - Behavior
  - Lifestyle choice
  - Access to healthcare

- **Disease**
  - Physiology
  - Genes
  - Microbes
Poverty Measures

- Federal poverty level (FPL) based on food budget hasn’t changed since the 1960s.
  - In the 50s, food budget was 1/3 of total family budget.
  - Based on family size and composition
  - If the same methodology would be used today, the FPL would be about three times higher.

- Supplemental poverty measure takes into account some cash subsidies and regional variation.
Levels of Poverty

- Extreme or deep poverty—less than 50% of FPL
- Poverty—less than 100% of FPL
- Near poverty—100 to 149% of FPL
- Low income—149 to 199% of FPL
Prevalence of Child Poverty

- Approximately 74 million children in US
- In 2014, 21.1% lived at or below the FPL
  - 23% of all children under 5 years of age
  - 39% of African American vs 11% white
- 42.9% of US children live at or below 200% of the FPL
- 9% live under 50% of the FPL
- Since the recession, poverty rates have increased in suburban areas faster than others
Trends Before the Recession

Figure 1: Percentage of Children\(^1\) Living Below Selected Poverty Thresholds, Selected Years, 1975-2010

Trends Since the Recession

**Fewer Americans are poor**

A more comprehensive measure than the official estimate shows a decline in the share of Americans living in poverty.

<table>
<thead>
<tr>
<th>Supplemental rate</th>
<th>Official rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>19.0%</td>
</tr>
<tr>
<td>15</td>
<td>14.2%</td>
</tr>
<tr>
<td>14.8%</td>
<td>15.3%</td>
</tr>
</tbody>
</table>


The Census recently revised the questions on its survey, resulting in figures for 2013 and 2014 that could be modestly elevated relative to previous years.

Source: Census, NBER
Child Poverty Since the Recession

![Graph showing child poverty rate from 2007 to 2014.](Image)

**Child Poverty Rate Using the Official Poverty Measure and the Supplemental Poverty Measure: 2007-2014**

- **Percent**
  - 2007: 18*
  - 2008: 19*
  - 2009: 21.2*
  - 2010: 22.5*
  - 2011: 22.2
  - 2012: 22.3
  - 2013: 21.5 R
  - 2014: 21.1

- **The Great Recession**
  - December 2007-June 2009


*Significant change from the previous year.

R = redesigned measure

Supported, in part, by Mead Johnson Nutrition

American Academy of Pediatrics
Place Matters: Poverty of Opportunity

- Concentrations of substandard housing
- Toxic industry
- No safe place to play
- Lack of commercial investment
- Spatial racism, the legacy of redlining
- Opportunity mapping
  - Kirwan Institute for the Study of Race and Ethnicity
  - kirwaninstitute.osu.edu
Place Matters

**Overall Opportunity & White Population**  Dayton, Ohio


Poverty by Region

**Figure 9:** Percentage of children under 6 years old in low-income families by region, 2014

Race Matters

Figure 6: Percentage of children under 6 years old in low-income and poor families by race/ethnicity, 2014

Non-Hispanic White Births Now the Minority

- Black, Hispanic, Asian, and mixed race births made up 50.4% in the year ending July 2011.
- 37% in 1990
- Four states—Hawaii, California, New Mexico, and Texas—as well as the District of Columbia, have minority populations that exceed 50 percent.
Family Wealth Gap since Recession

- The Great Recession began in December 2007 and technically ended in June 2009.
- Median household wealth in 2009 was $113,149 for whites compared to $6,325 for Hispanics and $5,677 for blacks.
- In 1995, the wealth disparity was 7:1 for both groups.
- In 2009, the disparity was 20:1 for blacks and 18:1 for Hispanics.

Holdings of Family Wealth

Home Economics

- Declines in home equity and increases in non-mortgage debt were among the factors contributing to the decline in average wealth (for families in the lowest quartile).

- At the beginning of school year 2013-14 there were 1.4 million students who were homeless, twice as many as in school year 2004-05

- Expanded access to housing vouchers for low-income households with children...the most effective individual policy, reducing poverty by 21 percent.
The Myth of Social Mobility

- Children from low-income families have only a 1% chance of reaching the top 5% of income.
- Children born in the middle quintile ($42–54K) have about the same chance of moving down as moving up a quintile.
- African American children from the bottom quartile are nearly twice as likely to remain there than white children whose parents have the same income.
- The US has a low level of intergenerational mobility, which is less than most developed countries.

Center for American Progress 2006.
Poverty as Toxic Stress

Early childhood poverty, as a form of prolonged deprivation, can alter the biologic response to stress, compromising the child’s ability to cope with adversity. The biologic changes are similar if not identical with the changes that are typical of post-traumatic stress disorder (PTSD).
Effects of Exposure to Chronic Stress

- Alterations in brain architecture
- Changes in gene expression (epigenetics)
- Endocrine and immune imbalance
- Decreased executive function and affect regulation
- **Interference with relational health**
- Behavioral allostasis
- Chronic illness
- Health disparities, decreased quality and length of life
Toxic Stress Impacts Lifelong Health

Adverse Childhood Experiences (ACEs)
- Social, Emotional, and Cognitive Impairment
- Adoption of Health-Risk Behaviors
- Disease & Disability
- Early Death

Modified from Vincent J. Felitti, MD.
ACE Study Conclusion

Maltreatment and other ACEs may thus be among the basic factors that underlie health risks, illness, and death, and could be identified by routine screening of all patients.
ACEs Increase Risk Over Life Course

- Alcoholism and alcohol abuse
- Liver disease
- Smoking
- Chronic obstructive pulmonary disease
- Illicit drug use
- Ischemic heart disease
- Depression
- Suicide attempts
- Intimate partner violence
- Early initiation of sexual activity
- Multiple sexual partners
- Sexually transmitted diseases
- Unintended pregnancies
- Prematurity, small for gestational age
- Fetal death
Changing the Trajectory, General Principles

- Maximize what is known to work at federal and state levels.
- Invest in early childhood programs to reap the greatest return on investment.
- Redesign primary care to promote secure relationships and offer opportunities to build resilience.
- Include multiple generations in order to interrupt intergenerational cycle.
National and State Policies

- Tax policies to support jobs and family income
  - Earned Income Tax Credit, Child Tax Credit, Dependent Care Tax Credit
  - Minimum wage

- Comprehensive healthcare
  - Medicaid, Comprehensive Health Insurance Plan
  - Federally Qualified Health Centers

- Early childhood education

- Nutritional support

- Affordable Care Act (ACA) home visiting

- Healthcare finance reform to support multidisciplinary teams and care coordination
Two-Generation Pathway

Help parents as workers

Help parents as parents

Improve child development

Both generations escape poverty

CLASP (2014)
What Works at the Practice Level

- **Build a medical home for children in poverty.**
- Apply two-generational interventions.
- Redesign primary care anticipatory guidance to emphasize relationships.
- Promote early childhood literacy/parental health literacy.
- Integrate behavioral health services.
- Engage community partners.
Build a Medical Home for Children in Poverty

- Family-centered, trauma-informed care
- Complex care management strategies
  - Apply care coordination
  - Screen for signs of trauma, also for family strengths
  - Maintain resource for linking to services
- Multidisciplinary (multiagency) team
- Strengthening Families Framework
Basic Principles of Family-Centered Care

- Respecting each child and family, and honoring racial, ethnic, cultural, and socioeconomic background and experiences
- Ensuring flexibility in policies, procedures, and practices in order to adapt services to the needs, beliefs, and cultural values
- Sharing complete, unbiased information
- Providing formal and informal support
- Collaborating with patients and families at all levels
- Building on family strengths, empowering decisions

– American Academy of Pediatrics (AAP) Committee on Hospital Care and Institute for Patient- and Family-Centered Care (2012)
Trauma-Informed Care

- Understands the proximal and distal effects of adverse childhood experiences
- Recognizes the signs and symptoms of trauma
- Integrates knowledge of trauma into policies and procedures, and practice management
- Resists re-traumatization

www.samhsa.gov/nctic/trauma-interventions
Trauma-Informed Pediatrics–DEF Model

- **Reduce Distress**
  - Provide child as much control as possible
  - Provide information, repeat back

- **Promote Emotional Support**
  - Listen, empower
  - Respect experience and expertise

- **Remember the Family**
  - Encourage self-care
  - Respect cultural and religious traditions
Screen for Social Determinants of Health

- IHELLLP
  - Income
  - Housing
  - Education
  - Legal status
  - Literacy
  - Personal safety

- National Center for Medical-Legal Partnerships and AAP Section on Medical Students, Residents, and Fellowship Trainees
  - www2.aap.org/sections/ypn/r/advocacy/facepoverty.html
Screen for Social Determinants of Health

- **WE CARE** — Well child care visit, Evaluation, Community Resources, Advocacy, Referral, Education
  - 10-item self report
  - Family resource book with tear out referral sheets

- **SEEK** — Safe Environment for Every Kid
  - 15-question parent survey

- **SWYC** — Survey of Well-being of Young Children
  - Sections on family risk factors and developmental milestones

- Do you have difficulty making ends meet at the end of the month?
Hunger Vital Signs

- Within the past 12 months we worried whether our food would run out before we got money to buy more.
- Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.
- Sensitivity 97%, specificity 83%
Compiled Questions

In the past 12 months:

▪ We moved two or more times.

▪ For financial reasons, we lived with another family or in a living space where there were more than two people per bedroom.

▪ We have been behind on rent at any point.

▪ We have been homeless.
  

▪ We worried whether our food would run out before we got money to buy more.

▪ The food we bought just didn't last and we didn't have money to get more.
  

▪ Did you ever have difficulty making ends meet at the end of the month?
  
You Might Consider

- Parental ACEs (may ask for the number)
- Intimate partner violence
  - Parent Screening Questionnaire
    - Have you been in a relationship in which you were physically hurt or threatened by a partner?
    - In the past year, have you been afraid of a partner?
    - In the past year, have you considered getting a court order for protection?
  - Do you feel safe at home?
Connect to Resources

- Resource directory

- Assigned staff
  - May be a designated care coordinator, or
  - Staff member with natural empathy and knowledge of local resources

- Health leads

- AAP Poverty & Child Health resource page
Practice Management Concerns

- Confront implicit bias.
  - Bridges Out of Poverty Workshop
  - Implicit Bias
    - Harvard University Project Implicit
    - implicit.harvard.edu/implicit/takeatest.html

- Establish a referral/tracking mechanism.
  - Develop a registry and recording system.
  - Consider a parent support telephone line.
Medical Leadership Strategies

- Management strategy for improvement
  - Join
    - Open-ended questions
    - Non-verbals
  - Establish common mission
  - Influence, reframe
  - Plan, Do, Study, Act (PDSA)

- Early morning huddle

- Weekly multidisciplinary conference
  - Team function
  - Clinical discussion
Relational Care Coordination

- Manage communication, warm welcome, and warm handoff.
- Link to community resources.
- Facilitate visits (reduce barriers to access).
- Develop care plans with families.
- Provide administrative support (eligibility).
- Coach families (positive parenting).
- Track and collate records (medical, educational, therapeutic).
- Provide care coordination visits and cross-agency meetings.
What Works at the Practice Level

- Build a medical home for children in poverty.
- **Apply two-generational interventions.**
- Redesign primary care to anticipatory guidance to emphasize relationships.
- Promote early childhood literacy/parental health literacy.
- Integrate behavioral health services.
- Engage community partners.
Apply Two-Generational Interventions

- There is no such thing as a baby.
- Without maternal care, one would find no infant.
  - D.W. Winnicott (1960)

Foundation of two-generational care

Thoughts: Thoughts on psychoanalysis. thinkingthoughtsdotorg.wordpress.com
Poverty and Maternal Depression

- Risk factors include previous depression, social isolation, financial hardship, and other social determinants of health.
- 55% of those living at or below the FPL compared to 41% overall.
- Up to 25% of poor or near poor have post-partum depression.
- 11% in poverty experience severe depression compared to 7% overall.
- Low income mothers are less likely to seek treatment, less than 1/3 with major depressive disorder.
Maternal Depression and Parenting

- Disturbs attachment
  - Reduces responsiveness
  - Decreases warmth, nurture

- Increases difficulties with consistent limits, routines, discipline

- Reduces likelihood
  - Following “Back to Sleep”
  - Using car seats
  - Well child care
  - Immunizations

Library of Congress, Prints & Photographs Division, FSA/OWI Collection, [LC-USF34-9058-C].
Poverty and Depression

- Bidirectional effect
  - Food insecurity and substandard housing may contribute to chronic stress and depression.
  - Depression makes coping more difficult.

- Poverty, substance abuse, and family violence are all associated with social isolation.

- 80% improve with treatment but only about 15% seek and receive care.
Treatment

- Treating mother alone helps mother.
  - Psychotherapy
  - Medications
  - Support groups
- But limited impact on cognitive function and behavior of children
Opportunities for Two-Generational Care

- Combine depression treatment with home visiting and/or quality child care.
  - Moving Beyond Depression
    - In-Home Cognitive Behavioral Therapy
  - Every Child Succeeds
    - Trained home visitors assigned to first-time at-risk mothers
    - Nurse Family Partnership and Healthy Families America models

- Dyadic therapies (most attachment-based)
  - Parent-child interaction therapy
  - Child-parent psychotherapy
  - Toddler-parent psychotherapy
What Works at the Practice Level

- Build a medical home for children in poverty.
- Apply two-generational interventions.
- Redesign primary care anticipatory guidance to emphasize relationships.
- Promote early childhood literacy/parental health literacy.
- Integrate behavioral health services.
- Engage community partners.
Promote Relational Health in Well Child Care

- Protective Factors Framework
- Relational anticipatory guidance (trauma-informed)
- Promote resilience
- Three-generational perspective
  - Resilience in parent, child, and youth
  - Interrupt intergenerational transfer
Strengthening Families: Protective Factors Framework

- Promote parental resilience.
- Improve knowledge of parenting and child development.
- Encourage social connections.
- Provide concrete support in times of need.
- Help understand the importance of attachment and socioemotional development.
Promote Caretaker Resilience

- Identify strengths and protective factors in the family, nurture parental self-esteem.
- Encourage social connectedness.
- Remember that being connected means giving help in addition to receiving help.
- Provide guidance and mentoring to improve self-efficacy.
- “Put the oxygen mask on yourself first.”
- Encourage self-reflection in parent, child, and mutual activities; keep child in mind.
Improve Knowledge of Child Development

- Promote positive parenting.
- Provide safe, stable, nurturing relationships and environments.
- Engage, serve, and return.
- Recognize temperament variations.
- Understand response to stress and trauma.
Understand the Importance of Attachment

Overview of Attachment

- John Bowlby 1907–1990

- Emotional bonds are basic for survival

- Interactive systems to maintain proximity or ready access

- Working models of self and other in mind

- Care seeking/care giving are complementary

Total History: totallyhistory.com/john-bowlby
Relational Anticipatory Guidance

- Relational context of child development

- Working with families
  - Join
    - Open-ended questions
    - Express empathy (verbally and non-verbally)
  - Establish common mission
  - Reframe, influence (motivational interviewing, theory of change)
  - Plan

- Promotion of
  - Resilience: child, parent, family
  - First relationships

- Mealtime, special play time

- Reflective parenting
Anticipatory Guidance

Kids who have lived with toxic stress may have:

- “Hair trigger” emotional response
- Difficulty regulating their arousal
- Reluctance to turn to others for help (trust)
- Inability to discuss their emotional feelings
- Insecurity over food, safety, or relationships
Anticipatory Guidance II

- Learn to notice and avoid emotional “triggers.”
- Keep to a routine, give choices.
- Don’t take behaviors personally.
- Remain as calm, patient, and logical as possible.
- Acknowledge (and respect) the child’s feelings.
- Don’t expect quick results!
Resilience

- The ability to avoid physiologic and behavioral damage from exposure to chronic stress
- The process of adapting well in the face of adversity
- The result of using protective factors to manage multiple stressful circumstances without toxic effects
- Transforms toxic stress to tolerable stress
Foundation of Resilience

- At least one stable, caring, and supportive relationship
- A sense of self-efficacy or mastery over life circumstances
- Strong executive function and self-regulation
- Solid grounding in faith or cultural traditions
Other Personality Characteristics

- Sense of humor
- Ability to form attachments
- Inner psychological space that protects
  - Inner locus of control
  - Tendency to grow when presented with adversity
- Three you can’t do without
  - Flexibility, ability to improvise
  - Acceptance of reality
  - Strong faith that life has meaning
How Does Resilience Develop?

- Combination of innate, intrinsic, and extrinsic factors
- Also, combination of supportive relationships, skill-building, and positive experiences
- Resilience is the result of multiple interactions between environmental protective factors and highly responsive biologic systems.

— AAP Committee on Hospital Care and Institute for Patient- and Family-Centered Care (2012)
Resilience Can Be Learned

- Important relationships vary over the life course
  - Parents, grandparents, siblings, peers, intimate partners
  - Grounded in early experiences

- Self-regulation and other executive functions stimulated in early childhood
  - May include skills to support cognitive flexibility, problem-solving, and impulse control
  - May be strengthened at any age

- Non-cognitive skills (empathy) can be taught as late as adolescence

- Ability to reflect modeled by parent—theory of mind develops late in second year
What Works at the Practice Level

- Build a medical home for children in poverty.
- Apply two-generational interventions.
- Redesign primary care to anticipatory guidance to emphasize relationships.
- *Promote early childhood literacy/parental health literacy.*
- Integrate behavioral health services.
- Engage community partners.
Early Childhood Literacy

Reach Out and Read. www.reachoutandreadnyc.org/programs

Reach Out and Read. www.reachoutandreadwa.org/programs
Early Childhood Literacy: Reach Out and Read

- Parents up to four times as likely to read to their children
- Parents more likely to spend time with their children
- Children improve both receptive and expressive language resulting in a six-month developmental advance over peers
- Children scored higher on school readiness assessments

Advance in Language (months) in 2-5 yr-olds

- Receptive: 6
- Expressive: 3

What Works at the Practice Level

- Build a medical home for children in poverty.
- Apply two-generational interventions.
- Redesign primary care to anticipatory guidance to emphasize relationships.
- Promote early childhood literacy/parental health literacy.
- **Integrate behavioral health services.**
- Engage community partners.
Integrate Behavioral Health Services

- Screen for strengths and risks.
- Prepare for facilitated referral.
- Consider collocation.
- Explore integrated models.
  - Improve access.
  - Reduce stigma.
  - Improve utilization of both medical and mental healthcare services.
Social-Emotional Screen: Young Children

- Ages & Stages Questionnaires: Social-Emotional, 2nd edition (ASQ-SE2)
- Modified Checklist for Autism in Toddlers, Revised (M-Chat-R)
- Preschool Pediatric Symptom Checklist
- Strengths and Difficulties Questionnaire
Social-Emotional Screen: School Age through Adolescence

- Strength and Difficulties Questionnaire
- Pediatric Symptom Checklist
- Attention-deficit/hyperactivity disorder: Vanderbilt
- Screen for Child Anxiety Related Disorders (SCARED)
- Primary Care PTSD Screen (PC-PTSD)
- Substance abuse: Car, Relax, Alone, Forget, Friends, Trouble (CRAFFT) (preferred) or CAGE-AID
- ACE questionnaire (adolescents)
Social-Emotional Screen: Adolescent Depression

- **Preferred**
  - Patient Health Questionnaire (PHQ)
    - PHQ-2
    - PHQ-9
    - PHQ-A
  - Ask Suicide Screening Questions (ASQ)

- **Alternate**
  - Beck Depression Inventory

- **When**
  - Each year from 12 to 18s
Social-Emotional Screen: Maternal Depression

- Preferred
  - PHQ-2
  - PHQ-9

- Alternate
  - Edinburgh
  - Center for Epidemiologic Studies Depression Scale, 12-item (CES-D)

- Screen at 1, 2, 4, and 6 months
- CPT code 99420
- May be billed under baby’s name
- May be billed multiple times as needed
Integrated Models

- Triple P – Positive Parenting Program
- The Incredible Years
- Video Interaction Project

Courtesy of James Duffee, MD, MPH, FAAP.
Upstream Factors

- Low income
- High debts to assets
- Negative financial events
- ACEs
- Ghosts/angels in nursery
- Social isolation

Family

- Unmet mental health concerns
- Housing, food, utilities insecurity
- Lack of child development & parenting information
- Legal needs
- Unemployment

Family Economic Pressure

- Parent emotional and behavior problems
- Non-nurturing and harsh parenting
- Inter-parental conflict and low warmth

Downstream Results

- Child problem behaviors
- Child abuse and neglect
School-Based Mindfulness Instruction: An RCT

- School-based randomized controlled trial (RCT)
- 5th–8th graders, Baltimore
- 99% eligible for free lunches
- Formal mindfulness-based stress reduction (MSBR)
- MBSR students had significantly lower levels of somatization, depression, negative affect, negative coping, rumination, self-hostility, and post-traumatic symptom severity (all Ps < .05) than control group.

What Works at the Practice Level

- Build a medical home for children in poverty.
- Apply two-generational interventions.
- Redesign primary care to anticipatory guidance to emphasize relationships.
- Promote early childhood literacy/parental health literacy.
- Integrate behavioral health services.
- Engage community partners.
Engage Community Partners

- Governmental
  - Public health
  - Medicaid (onsite eligibility)
  - ACA home visitors
  - Children’s services

- Non-governmental
  - Food pantries
  - Medical-legal partnership

- Education
  - Special education
  - School-based clinic

- Faith-based
  - Chaplaincy
  - Pastoral care

- Other
  - Women’s shelter
  - Mental health/substance abuse services
Home Visiting

- Effective in multiple domains
  - Maternal and child health
  - Perinatal health outcomes
  - Kindergarten readiness

- Promotes economic security in at least two ways
  - Improves positive parenting, relational health, and family functioning
  - Links families to resources and services, such as vocational training and adult education

- 19 models approved for funding by ACA
Take Home

- Lifelong health begins in early childhood.
- Poverty is the most common early childhood adverse experience.
- Pediatricians as leaders in an advanced medical home are in an ideal position to recognize, intervene, and change trajectories.
- Relational health is the most important protective factor able to buffer the effects of toxic stress.
Resilience and Relational Health

The most important and frequent commonality of children who succeed is that they have had at least one stable and committed relationship with a supportive parent, caregiver, or other adult.

- Harvard University Center on the Developing Child

Each of us is here only because somebody stood up for us.

- President Obama, 2016 State of the Union Address
Relational Home

Developmental trauma occurs when “emotional pain cannot find a relational home in which it can be held.”

- Robert Stolorow as quoted in *The Trauma of Everyday Life* by Mark Epstein, MD
Primary References


Online Resources: Resilience

- The Circle of Security Network – circleofsecuritynetwork.org
- Strengthening Families – www.cssp.org/reform/strengtheningfamilies
- Zero to Three – www.zerotothree.org
- Harvard Center on the Developing Child – developingchild.harvard.edu
- Devereux Center for Resilient Children – www.centerforresilientchildren.org
Visit Pediatric Care Online today for additional information on this and other topics.

http://pediatriccare.solutions.aap.org

Pediatric Care Online is a convenient electronic resource for immediate expert help with virtually every pediatric clinical information need with must-have resources that are included in a comprehensive reference library and time-saving clinical tools.

Don’t have a subscription to PCO?
Then take advantage of a free trial today!
Call Mead Johnson Nutrition at 888/363-2362 or, for more information, go to

http://pediatriccare.solutions.aap.org/SS/Free_Trial.aspx