The Well Child Exam

Keeping Kids at the Top of Their Game!

Presented by:
Jared Papa, MPAS, PA-C
Pediatric PA
Treasure Valley Pediatrics
Ontario, Oregon
E-mail: papajare@isu.edu
Phone: 208-373-1754

Bright Futures™
prevention and health promotion for infants, children, adolescents, and their families™

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

I hope you leave with:

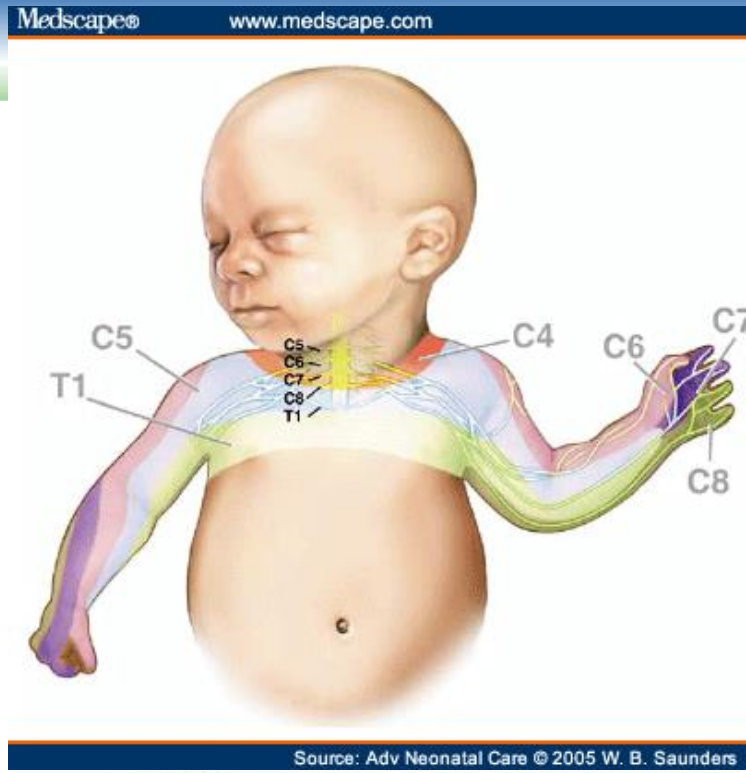
- A Vision of the value of the Well Child Exam (WCE)
- Discovery of a some of the many conditions the WCE can catch early
- A desire to encourage families to follow the American Academy of Pediatricians (AAP) guidelines for WCEs

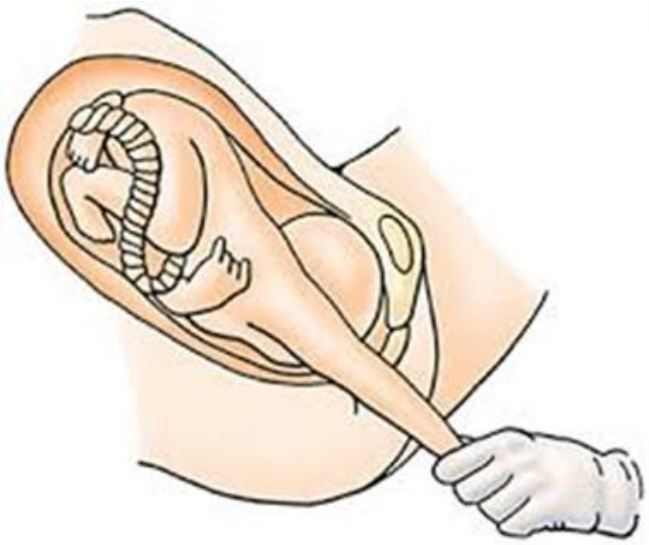
1 month old: “Claw Hand”

Klumpke's Palsy

- Injury to C8 and T1 nerve roots
  - Often due to traction on an abducted arm
- Paralysis of forearm and hand
  - Presents as a "claw" hand
- Most symptoms resolve with PT
- Some treated surgically
- Few result in permanent impairment

- Can catch and monitor at WCE





Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

The Well Child Exam – The Why

- Estimated 16% of children have developmental and/or behavioral disorders
- 70% of these children **not** identified until **after** entering school

1- Maximize child's potential

- Monitor normal and abnormal development
- The Individuals with Disabilities Education Act (IDEA) mandates early identification and intervention for developmental disabilities

2- Early disease detection

3- Promote disease prevention

4- Provide "Anticipatory Guidance"

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Well Child Exam – The What

- History
- Surveillance
- Physical examination
- Screening
- Immunizations
- Anticipatory guidance

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Well Child Exam – The When

The American Academy of Pediatrics (AAP) Recommends:

Routine Surveillance at:

- Prenatal
- Newborn
- 3 to 5 days
- By one month (2 weeks)
- 2 months
- 4 months
- 6 months
- 9 months
- 12 months
- 15 months
- 18 months
- 24 months
- 30 months
- Then yearly (3, 4, 5, etc)

Formal Screening tools:

- When surveillance indicates risk
- Developmental Screening tool at:
  - 9 month WCE
  - 18 month WCE
  - 30 month WCE (or 24 month)

Other tools:

- Completed at specific ages:
  - Hearing – Newborn and 4 years
  - Lead – 12 months
  - Cholesterol – 9-11 and 17 to 21 years
  - Tobacco/Drug/Alcohol – 11 – 21 years
  - Depression – 12 to 21 years

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Recommendations for Preventive Pediatric Health Care

Bright Futures/American Academy of Pediatrics

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Bright Futures
prevention and health promotion for infants, children, adolescents, and their families™

Each child and family is unique; therefore, these Recommendations for Preventive Pediatric Health Care are designed for the care of children who are receiving competent parenting, have no manifestations of any important health problems, and are growing and developing in a satisfactory fashion. Developmental, psychosocial, and chronic disease issues for children and adolescents may require frequent counseling and treatment visits separate from preventive care visits. Additional visits also may become necessary if circumstances suggest variations from normal.

These recommendations represent a consensus by the American Academy of Pediatrics (AAP) and Bright Futures. The AAP continues to emphasize the great importance of continuity of care in comprehensive health supervision and the need to avoid fragmentation of care.

Refer to the specific guidance by age as listed in the *Bright Futures Guidelines* (Hagan JF, Shaw JS, Duncan PM, eds. *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents*. 4th ed. Elk Grove Village, IL: American Academy of Pediatrics; 2017).

	INFANCY								EARLY CHILDHOOD							MIDDLE CHILDHOOD						ADOLESCENCE										
AGE[1]	Prenatal[2]	Newborn[3]	3-5 d[4]	By 1 mo	2 mo	4 mo	6 mo	9 mo	12 mo	15 mo	18 mo	24 mo	30 mo	3 y	4 y	5 y	6 y	7 y	8 y	9 y	10 y	11 y	12 y	13 y	14 y	15 y	16 y	17 y	18 y	19 y	20 y	21 y
HISTORY Initial/Interval	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
MEASUREMENTS																																
Length/Height and Weight		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Head Circumference		•	•	•	•	•	•	•	•	•	•	•																				
Weight for Length		•	•	•	•	•	•	•	•	•	•																					
Body Mass Index[5]												•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Blood Pressure[6]		★	★	★	★	★	★	★	★	★	★	★	★	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
SENSORY SCREENING																																
Vision[7]		★	★	★	★	★	★	★	★	★	★	★	★	•	•	•	•	★	•	★	•	★	•	★	★	•	★	★	★	★	★	★
Hearing		•[8]	•[8] ←	→	★	★	★	★	★	★	★	★	★	•	•	•	•	★	•	★	•	←			• →	←	• →	←		• →		
DEVELOPMENTAL/BEHAVIORAL HEALTH																																
Developmental Screening[9]								•			•		•																			
Autism Spectrum Disorder Screening[10]											•	•																				
Developmental Surveillance		•	•	•	•	•	•		•	•		•		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Psychosocial/Behavioral Assessment[11]		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Tobacco, Alcohol, or Drug Use Assessment[12]																						★	★	★	★	★	★	★	★	★	★	★
Depression Screening[13]																		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Maternal Depression Screening[14]				•	•	•	•																									
PHYSICAL EXAMINATION[15]		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
PROCEDURES[16]																																
Newborn Blood		•[17]	•[18] →																													
Newborn Bilirubin[19]		•																														
Critical Congenital Heart Defects[20]		•																														
Immunization[21]		•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Anemia[22]						★			•	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Lead[23]							★	★	•[24] or ★[24]		★	•[24] or ★[24]		★	★	★	★																
Tuberculosis[25]				★			★		★			★		★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★
Dyslipidemia[26]												★			★		★		★	←	• →	★	★	★	★	★	←		• →			
Sexually Transmitted Infections[27]																						★	★	★	★	★	★	★	★	★	★	★
HIV[28]																						★	★	★	★	←	• →	★	★	★	★	★
Cervical Dysplasia[29]																																•
ORAL HEALTH[30]							•[31]	•[31]	★		★	★	★	★	★	★	★															
Fluoride Varnish[32]							←				•				→																	
Fluoride Supplementation[33]							★	★	★		★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★	★				
ANTICIPATORY GUIDANCE	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

1. If a child comes under care for the first time at any point on the schedule, or if any items are not accomplished at the suggested age, the schedule should be brought up-to-date at the earliest possible time.
2. A prenatal visit is recommended for parents who are at high risk, for first-time parents, and for those who request a conference. The prenatal visit should include anticipatory guidance, pertinent medical history, and a discussion of benefits of breastfeeding and planned method of feeding, per "The Prenatal Visit" (http://pediatrics.aappublications.org/content/124/4/1227.full).
3. Newborns should have an evaluation after birth, and breastfeeding should be encouraged (and instruction and support should be offered).
4. Newborns should have an evaluation within 3 to 5 days of birth and within 48 to 72 hours after discharge from the hospital to include evaluation for feeding and jaundice. Breastfeeding newborns should receive formal breastfeeding evaluation, and their mothers should receive encouragement and instruction, as recommended in "Breastfeeding and the Use of Human Milk" (http://pediatrics.aappublications.org/content/129/3/e827.full). Newborns discharged less than 48 hours after delivery must be examined within 48 hours of discharge, per "Hospital Stay for Healthy Term Newborns" (http://pediatrics.aappublications.org/content/125/2/405.full).
5. Screen, per "Expert Committee Recommendations Regarding the Prevention, Assessment, and Treatment of Child and Adolescent Overweight and Obesity: Summary Report" (http://pediatrics.aappublications.org/content/120/Supplement_4/S164.full).
6. Blood pressure measurement in infants and children with specific risk conditions should be performed at visits before age 3 years.
7. A visual acuity screen is recommended at ages 4 and 5 years, as well as in cooperative 3-year-olds. Instrument-based screening may be used to assess risk at ages 12 and 24 months, in addition to the well visits at 3 through 5 years of age. See "Visual System Assessment in Infants, Children, and Young Adults by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/e20153596) and "Procedures for the Evaluation of the Visual System by Pediatricians" (http://pediatrics.aappublications.org/content/137/1/e20152507).
8. Confirm initial screen was completed, verify results, and follow up, as appropriate. Newborns should be screened, per "Year 2007 Position Statement: Principles and Guidelines for Early Hearing Detection and Intervention Programs" (http://pediatrics.aappublications.org/content/120/4/898.full).
9. Verify results as soon as possible, and follow up, as appropriate.
10. Screen with audiometry including 6,000 and 8,000 Hz high frequencies once between 11 and 14 years, once between 15 and 17 years, and once between 18 and 21 years. See "The Sensitivity of Adolescent Hearing Screens Significantly Improves by Adding High Frequencies" (http://www.jahonline.org/article/S1054-139X(16)00045-3/fulltext).
11. See "Identifying Infants and Young Children With Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening" (http://pediatrics.aappublications.org/content/118/1/405.full).
12. Screening should occur per "Identification and Evaluation of Children With Autism Spectrum Disorders" (http://pediatrics.aappublications.org/content/120/5/1183.full).
13. This assessment should be family centered and may include an assessment of child social-emotional health, caregiver depression, and social determinants of health. See "Promoting Optimal Development: Screening for Behavioral and Emotional Problems" (http://pediatrics.aappublications.org/content/135/2/384) and "Poverty and Child Health in the United States" (http://pediatrics.aappublications.org/content/137/4/e20160339).
14. A recommended assessment tool is available at http://www.cesar-boston.org/CHATT/index.php.
15. Recommended screening using the Patient Health Questionnaire (PHQ)-2 or other tools available in the GLAD-PC toolkit and at http://www.aap.org/en-us/advocacy-and-policy/aap-health-initiatives/Mental-Health/Documents/MH_ScreeningChart.pdf.
16. Screening should occur per "Incorporating Recognition and Management of Perinatal and Postpartum Depression Into Pediatric Practice" (http://pediatrics.aappublications.org/content/126/5/1032).
17. At each visit, age-appropriate physical examination is essential, with infant totally unclothed and older children undressed and suitably draped. See "Use of Chaperones During the Physical Examination of the Pediatric Patient" (http://pediatrics.aappublications.org/content/127/5/991.full).
18. These may be modified, depending on entry point into schedule and individual need.

(continued)

KEY: • = to be performed ★ = risk assessment to be performed with appropriate action to follow, if positive ← • → = range during which a service may be provided

https://www.aap.org/en-us/documents/periodicity_schedule.pdf

Bright Futures
prevention and health promotion for infants, children, adolescents, and their families™

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

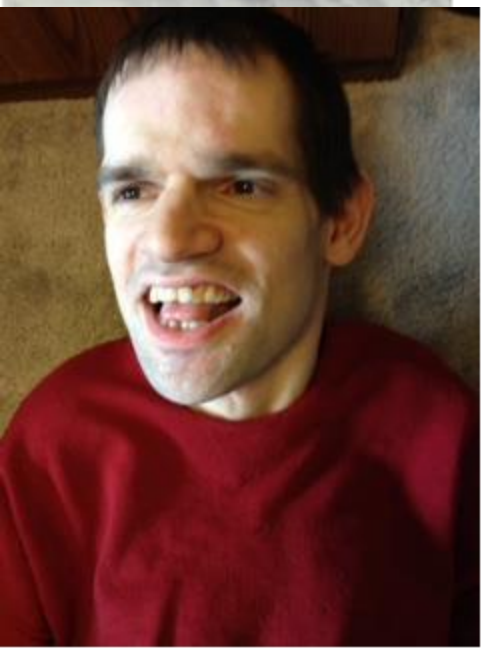
Meet Miguel – Newborn WCE

The Newborn Visit

- AAP Recommends all babies have:
  - Comprehensive physical exam within 12 to 18 hours of delivery
  - Primary care provider (PCP) follow-up within 3 to 5 days of life and 48 to 72 hours from hospital discharge

- **Jaundice one of many things looked for at initial WCEs**
  - Elevated bilirubin (Hyperbilirubinemia) causes yellow discoloration of skin and/or eyes
  - Total Bilirubin (TB) Screening:
    - Completed in hospital soon after birth
    - May be repeated by PCP at the 3 to 5 day visit

Newborn Jaundice - Dangers



Kernicterus:

- Severely high newborn bilirubin: TB >25 mg/dL
  - Risk for bilirubin-induced neurologic dysfunction (BIND)
- Bilirubin crosses blood-brain barrier and binds to brain tissue
  - Kernicterus is the chronic and permanent result of BIND
    - Cerebral palsy, hearing loss, gaze abnormality

Hyperbilirubinemia Treatment

- Phototherapy – The Blue Light
  - Most common intervention to treat & prevent severe hyperbilirubinemia
  - Infant's skin exposed to blue light
    - Blue light breaks down bilirubin so easier to eliminate in stool and urine
  - Done inpatient or at home for healthy term infants (>38 weeks GA)
  - In intermediate risk infants, phototherapy can be achieved by placing baby in indirect (filtered) sunlight 15 minutes 3 times daily

- Exchange transfusion
  - Emergency procedure to reduce bilirubin
  - Used if severe hyperbilirubinemia, high risk factors, or poor response to phototherapy

Bilirubin risk calculator: http://bilitool.org/

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Hyperbilirubinemia Prevention

- Keep Feeding!
- Breast milk preferred, formula also good
  - Promotes elimination of bilirubin through stool and urine
- Adequate feeding:
  - Infant eating every 2 to 3 hours
  - Infant having at least six wet diapers per day
  - Color of stool should change from dark green to yellow
  - Infant should seem satisfied after feeding

Miguel at 2 Weeks

2 Week Old WCE – The PKU Test

- Checking for “Inborn errors of metabolism”
  - PKU (Phenylketonuria) is one of many
    - Deficiency of enzyme phenylalanine hydroxylase
    - Results in accumulation of phenylalanine and intellectual disability
- If not caught early can lead to irreversible organ injury or death
- If diagnosed and corrected before organ/brain damage child may have normal life
- All 50 states have mandatory newborn screening

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Washington State Newborn Screening

Disorders Detected by Newborn Blood Spot Screening

Washington State Department of Health
DOH 951-145 Apr 2015

The Washington State Newborn Screening Program tests all infants born in the state for a set of rare but serious health disorders that can be treated if caught early in life. Washington State screens for 28 disorders.

Galactosemia
1 in 40,000 births

Babies with galactosemia cannot digest galactose, a sugar present in milk. When babies drink milk (including breast milk), galactose builds up in the body and can cause blindness, mental disability, or death. A lifelong diet without milk products can prevent these complications.

Congenital Hypothyroidism
1 in 1,600 births

Babies with congenital hypothyroidism do not produce enough thyroid hormone to grow and develop normally. Early treatment with thyroid medication can prevent developmental disability and ensure normal growth and development.

Cystic Fibrosis
1 in 5,000 births

Babies with cystic fibrosis develop poor lung function and struggle with malnutrition. This leads to serious health problems and a shortened lifespan. Early treatment can improve growth and development, and decrease the risk of infections and other complications.

Biotinidase Deficiency
1 in 60,000 births

Babies with biotinidase deficiency cannot efficiently use a vitamin called biotin. If untreated, this can cause rashes, hearing loss, seizures and developmental delay. Lifelong treatment with biotin supplements can prevent these problems.

Congenital Adrenal Hyperplasia
1 in 16,000 births

Babies with congenital adrenal hyperplasia have adrenal glands that cannot make enough of the hormones needed for healthy body function. These infants can have life-threatening episodes of dehydration and coma. Baby girls may have abnormal genitalia. Early treatment to replace the needed hormones can restore healthy body function.

Severe Combined Immunodeficiency
1 in 45,000 births

Babies with severe combined immunodeficiency are born without a working immune system. They cannot fight germs that cause disease and even the most common infections can be life-threatening. A bone-marrow transplant early in life cures the baby by giving them a working immune system to prevent and fight infections.

Sickle Cell & Hemoglobinopathies
1 in 10,000 births

Babies with sickle cell disease or other hemoglobinopathies have abnormal red blood cells that are unable to carry oxygen efficiently throughout the body. These disorders can cause frequent infection, severe pain, anemia and other complications. Early treatment and proper lifelong management can prevent serious health problems. Note: Some babies have a hemoglobin trait; this is not a disease and will not affect their health.

Fatty Acid Oxidation Disorders (5)
1 in 13,000 births

Babies with fatty acid oxidation disorders cannot use fats in the body for energy. If these babies do not eat often, severe damage to the heart, liver and other organs can occur. If untreated, this will result in serious health problems and sometimes death. A special lifelong diet, eating frequently, and medications can help prevent these problems.

Organic Acid Disorders (9)
1 in 25,000 births

Babies with organic acid disorders cannot digest certain parts of proteins found in food. If untreated, harmful substances build up in their blood and urine, which can have serious effects on their health, growth, and learning and can result in death. This can be prevented by early treatment with a special lifelong diet, close monitoring, and medications.

Amino Acid Disorders (6)
1 in 10,000 births

Babies with amino acid disorders cannot process foods containing protein. If untreated, amino acids (the building blocks of protein) and other toxic substances build up in the body and have serious effects on health, growth and learning and can result in death. A special lifelong diet and supplements can help prevent these problems. An example of an amino acid disorder is phenylketonuria (PKU).

Miguel – 2 Months Old

2 Month Old WCE – Safe Sleep

- Sudden Infant Death Syndrome (SIDS)
  - Definition: A sudden unexpected death of an infant before age 1 that occurs in their sleep for an unknown reason
  - Sleeping on back reduces chances of SIDS
    - 1.5 SIDS deaths per 1,000 live births in 1980
    - 0.5 SIDS deaths per 1,000 live births in 2010
  - Side sleeping unsafe – 5x greater risk compared to back sleeping

Safe vs Unsafe

Bright Futures.

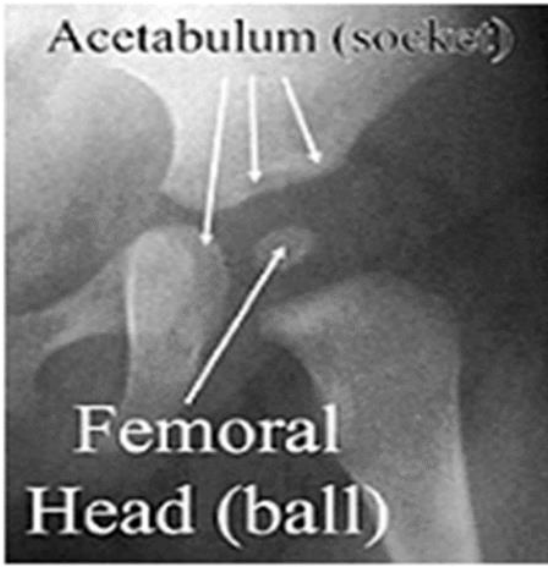
American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

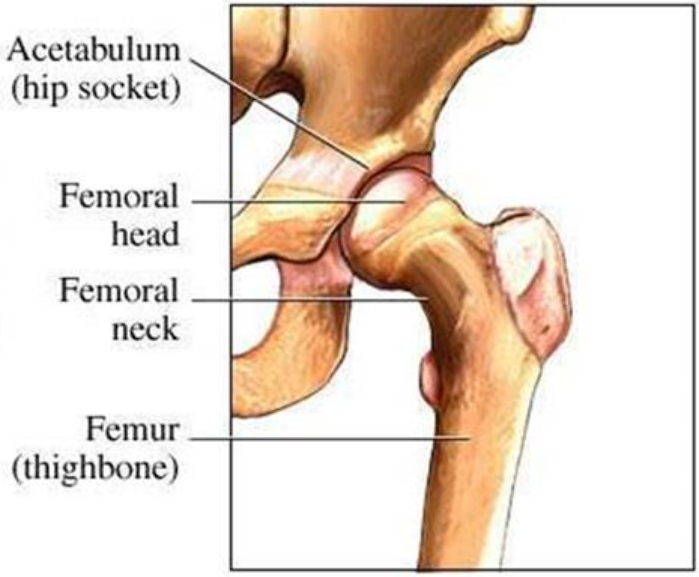
Miguel's now 4 Months old

- This is what you see:

Miguel's 4 Month Old WCE –

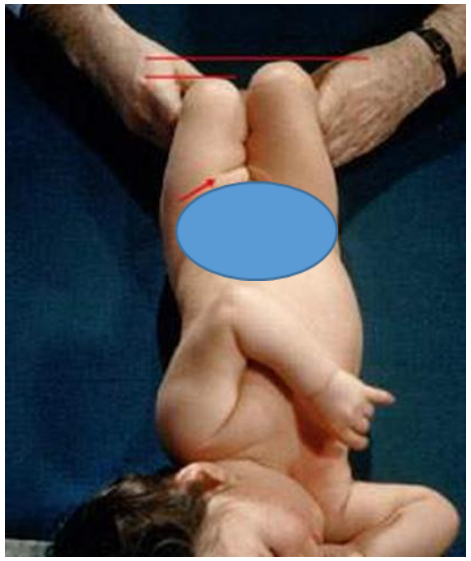
- AAP recommends screening for Developmental Dysplasia of the Hip (DDH)
  - Newborn, 2 wks, 2 mos, 4 mos, 6 mos, 9 mos and 1 yr of age
- DDH - Spectrum of conditions involving Abnormal relationship b/t the femoral head and acetabulum
  - Hip instability found in 1/1000 live births

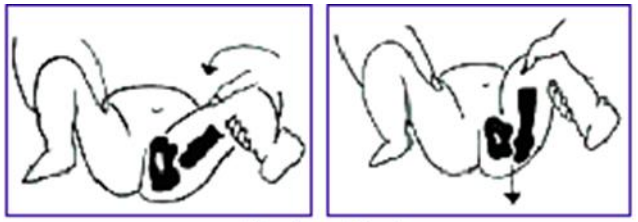




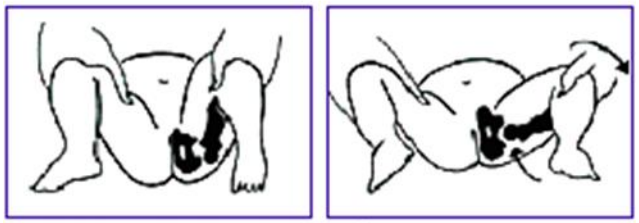
Developmental Dysplasia of the Hip (DDH)

- Symptoms
  - Newborns will be asymptomatic
- What to look for
  - How infant holds the hips
    - Skin folds asymmetric
    - Hip abduction asymmetric
  - Positive Galleazzi sign
    - Shortening of one thigh
  - Provoking maneuvers
    - Barlow
    - Ortolani





Barlow Test



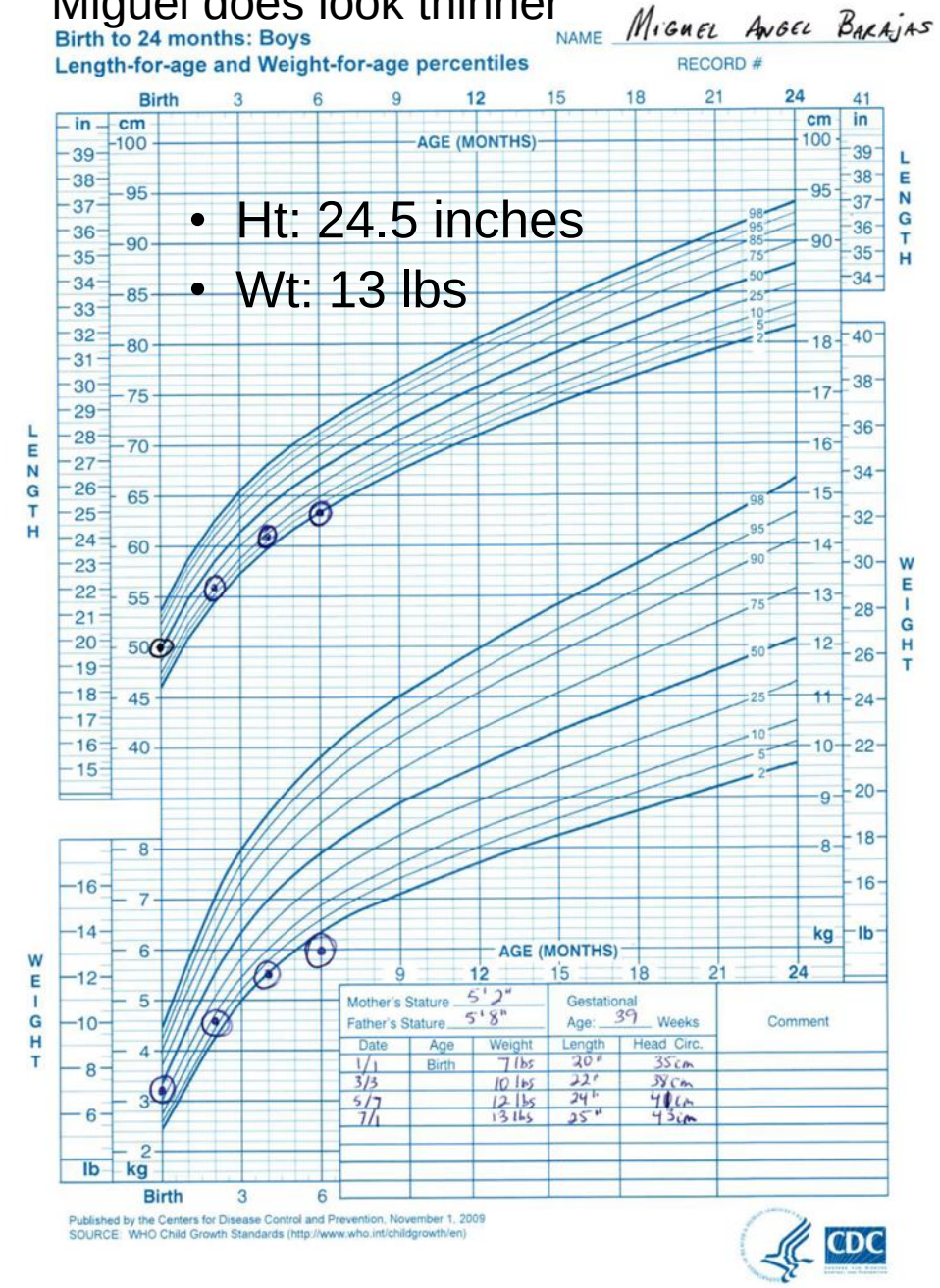
Ortolani Test

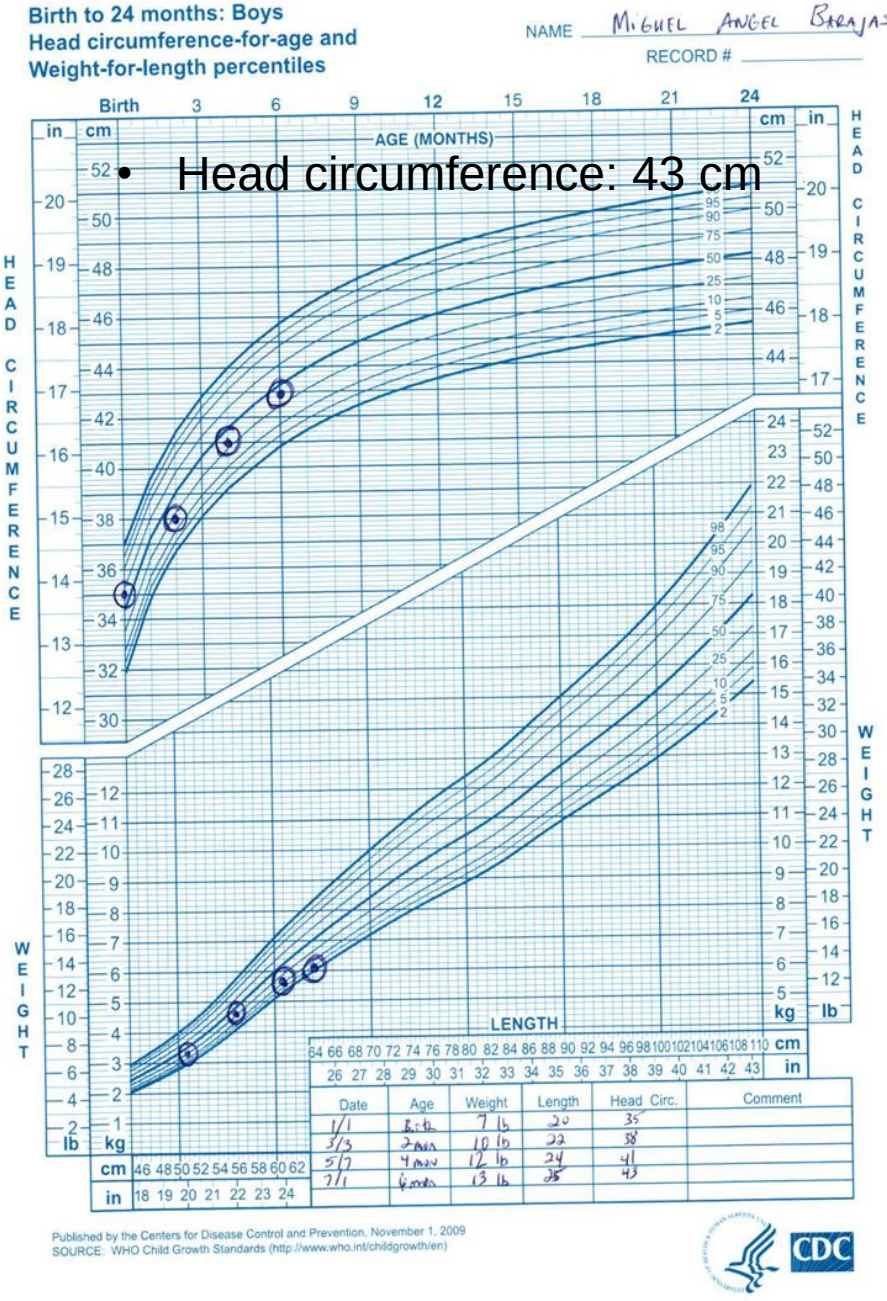
DDH

- Treatment
  - Brace
    - < 10 mos. of age = Pavlik harness
    - > 10 mos. of age = Hip abduction brace
  - If not diagnosed before 2 years of age often require surgical treatment

Miguel’s 6 months

Miguel does look thinner





Failure to thrive

- Usually under 3 years of age
- Growth Chart Evidence:
  - Weight below 2nd percentile
  - Weight for height < 2nd percentile
    - Best identifier for under nutrition
- Treatment:
  - Breast feeding every 2 to 3 hours
    - High calorie formulas: Neosure
  - Older child:
    - 5 sit-down meals/day, cook foods in oil/butter
    - Pediasure
  - Consult a dietician
    - Calculate catch up calories

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Miguel is 9 months old

Developmental Milestones

- Generalized rules for neurodevelopmental maturation
- Used to form an anticipated developmental trajectory

Five main domains

1- Gross Motor

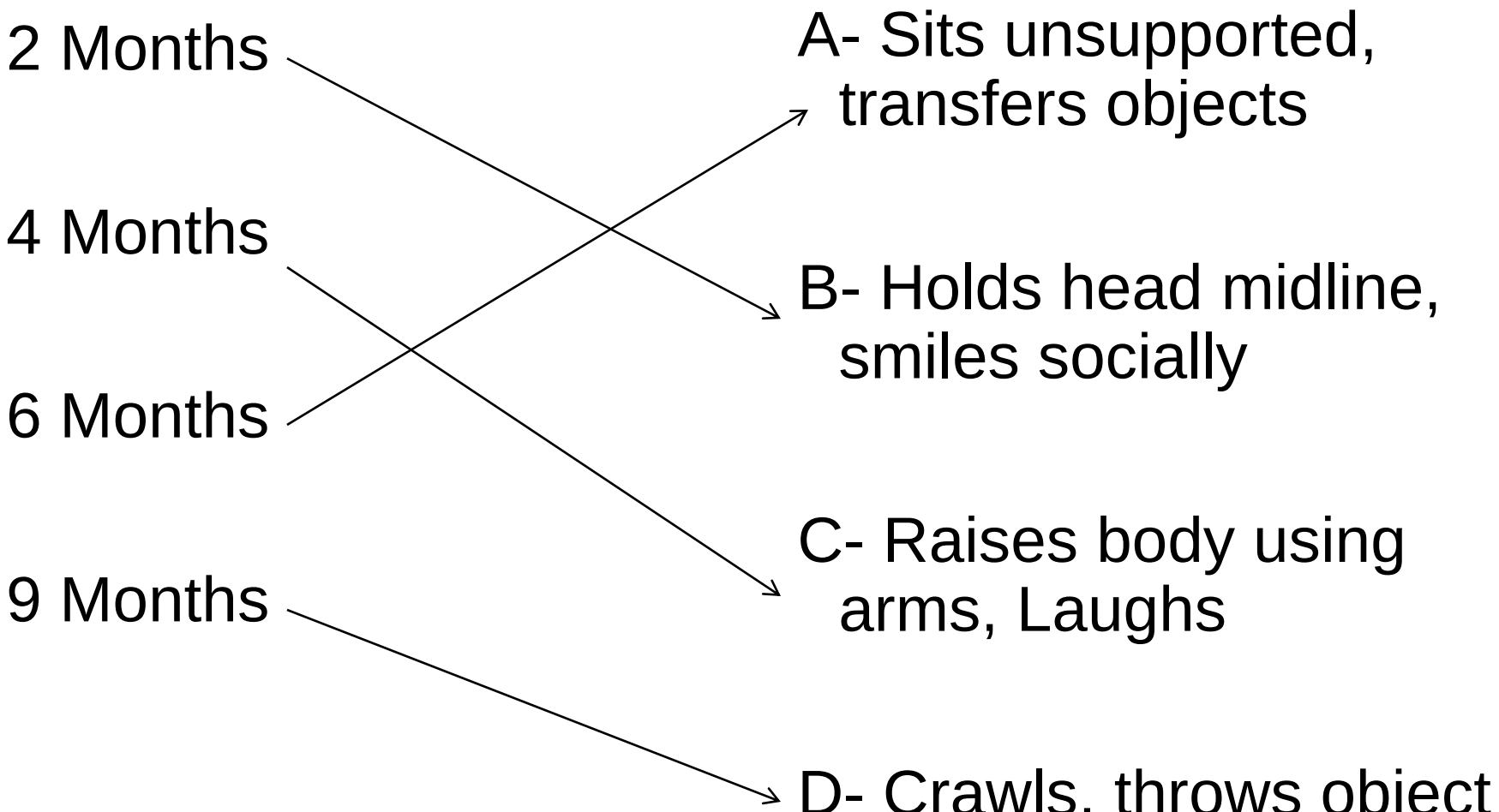
2- Visual-motor/Fine Motor

3- Language/Communication

4- Social-adaptive/Personal Social

5- Cognitive/Problem solving

WCE Pop Quiz – Gross Motor



Miguel's 9 Month Old ASQ-3

Ages and Stages Questionnaire (ASQ-3), birth to 5

ASQ-3

9 Month Questionnaire *page 3 of 6*

FINE MOTOR

		YES	SOMETIMES	NOT YET	
1.	Does your baby pick up a small toy with only one hand?	○	●	○	___
2.	Does your baby *successfully* pick up a small cube of bread by using her thumb and all of her fingers in a raking motion? (*If she already picks up a small cube of bread, mark "yes" for this item.*)	○	●	○	___
3.	Does your baby pick up a small toy with the *tips* of his thumb and fingers? (*You should see a space between the toy and his palm.*)	○	●	○	___
4.	After one or two tries, does your baby pick up a piece of string with her first finger and thumb? (*The string may be attached to a toy.*)	●	○	○	___
5.	Does your baby pick up a small cube of bread with the *tips* of his thumb and a finger? (He may rest his arm or hand on the table while doing it.)	○	○	●	___ *
6.	Does your baby put a small toy down, without dropping it, and then take her hand off the toy?	●	○	○	___

FINE MOTOR TOTAL 35

* If Fine Motor Item 5 is marked "yes" or "sometimes," mark Fine Motor Item 2 "yes."

BE Av. 1 1.15

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

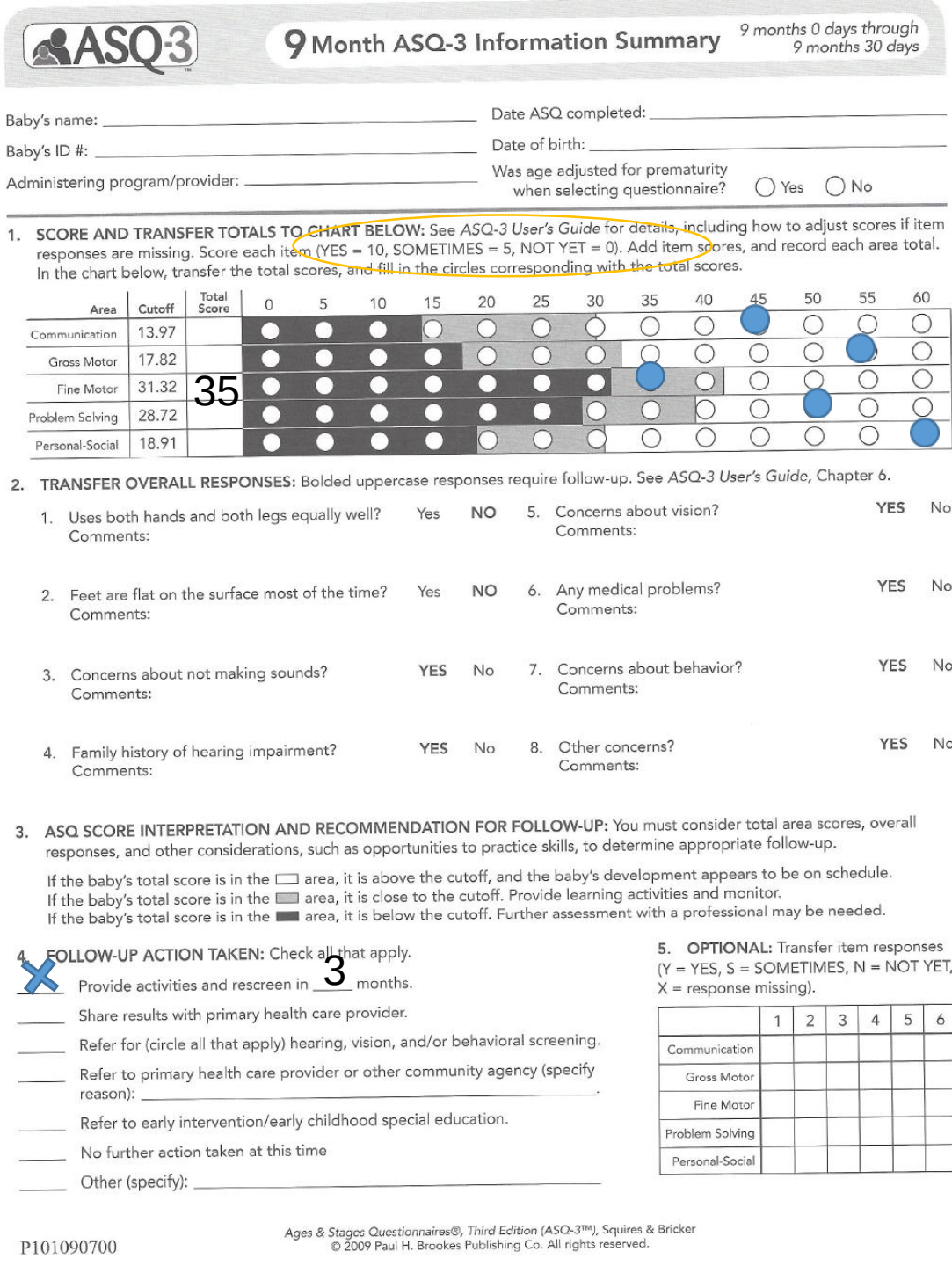
ASQ-3:
30 questions divided into 5 areas of development

1- Communication
2- Gross Motor
3- Fine Motor
4- Problem Solving
5- Personal-Social

ASQ-3 Scoring

Scoring

- "Yes" = 10
- "Sometimes" = 5
- "Not yet" = 0



ASQ-3

9 Month ASQ-3 Information Summary

9 months 0 days through 9 months 30 days

Baby's name: _____ Date ASQ completed: _____

Baby's ID #: _____ Date of birth: _____

Administering program/provider: _____ Was age adjusted for prematurity when selecting questionnaire? ○ Yes ○ No

1. **SCORE AND TRANSFER TOTALS TO CHART BELOW:** See *ASQ-3 User's Guide* for details, including how to adjust scores if item responses are missing. Score each item (YES = 10, SOMETIMES = 5, NOT YET = 0). Add item scores, and record each area total. In the chart below, transfer the total scores, and fill in the circles corresponding with the total scores.

Area	Cutoff	Total Score
Communication	13.97	
Gross Motor	17.82	
Fine Motor	31.32	35
Problem Solving	28.72	
Personal-Social	18.91	

0 5 10 15 20 25 30 35 40 45 50 55 60

2. **TRANSFER OVERALL RESPONSES:** Bolded uppercase responses require follow-up. See *ASQ-3 User's Guide*, Chapter 6.

1. Uses both hands and both legs equally well? Yes **NO** Comments:
2. Feet are flat on the surface most of the time? Yes **NO** Comments:
3. Concerns about not making sounds? **YES** No Comments:
4. Family history of hearing impairment? **YES** No Comments:
5. Concerns about vision? **YES** No Comments:
6. Any medical problems? **YES** No Comments:
7. Concerns about behavior? **YES** No Comments:
8. Other concerns? **YES** No Comments:

3. **ASQ SCORE INTERPRETATION AND RECOMMENDATION FOR FOLLOW-UP:** You must consider total area scores, overall responses, and other considerations, such as opportunities to practice skills, to determine appropriate follow-up.

If the baby's total score is in the ▭ area, it is above the cutoff, and the baby's development appears to be on schedule.
If the baby's total score is in the ▭ area, it is close to the cutoff. Provide learning activities and monitor.
If the baby's total score is in the ▬ area, it is below the cutoff. Further assessment with a professional may be needed.

4. **FOLLOW-UP ACTION TAKEN:** Check all that apply.

- ☒ Provide activities and rescreen in 3 months.
- ☐ Share results with primary health care provider.
- ☐ Refer for (circle all that apply) hearing, vision, and/or behavioral screening.
- ☐ Refer to primary health care provider or other community agency (specify reason): _____.
- ☐ Refer to early intervention/early childhood special education.
- ☐ No further action taken at this time
- ☐ Other (specify): _____

5. **OPTIONAL:** Transfer item responses (Y = YES, S = SOMETIMES, N = NOT YET, X = response missing).

	1	2	3	4	5	6
Communication						
Gross Motor						
Fine Motor						
Problem Solving						
Personal-Social						

P101090700

Miguel at 12 months of age

WCE: 12 month old Miguel
Hemoglobin or Hematocrit

- Regular screening for anemia is done at 12 months
  - Can be done before or after based on risk assessment

Hematocrit Normal Levels:

Age	Hct
1 year to 6 years	30% to 40%

Miguel's Hematocrit: 28%

Bright Futures. prevention and health promotion for infants, children, adolescents, and their families™

American Academy of Pediatrics DEDICATED TO THE HEALTH OF ALL CHILDREN™

Miguel 12 month old WCE

Iron deficiency anemia treatment:

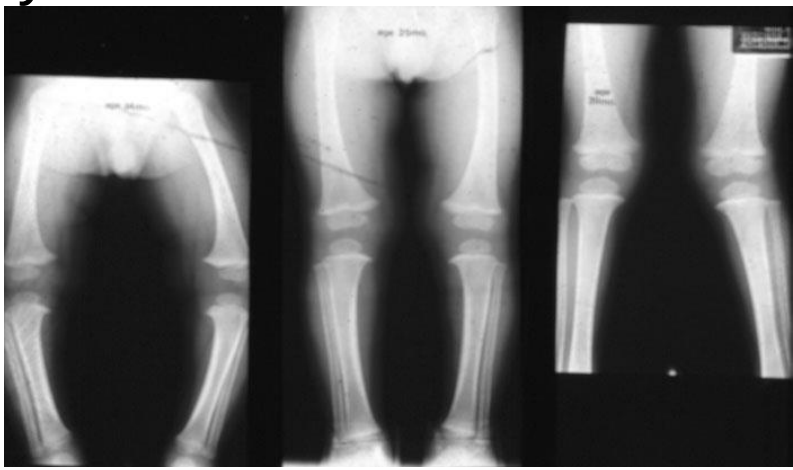
- Supplemental Iron:
  - Fer-in-Sol Drops 75mg (15mg Fe)/0.6ml
    - 3 mg/kg, usually 1 dropper once daily

- Recheck @ 15month old WCE
  - Iron stores generally replenished with 3 months of therapy

Miguel is 15 Months Old

Genu Varum (bowed legs)

- Majority physiologic and considered a variation of normal in toddlers
- Hallmark is symmetrical and painless bowing
- Almost always corrects spontaneously
  - Typically resolves by age 3
- Treatment – Observation
  - Parental education, correction with time



- Minority are pathologic - When to suspect pathologic cause?
  - Unilateral
  - Pain
  - Previous trauma/fracture

Miguel is 18 months old:

- What should his language level be at 18 months?
  - ❑A- Says only Mama and Dada
  - ❑B- Can use two word sentences
  - ❑C- Simply babbles and makes sounds
  - ❑D- Speaks 7 to 10 words

Miguel's 18 month old WCE:

- Language delay is the most common 1st sign of an Autism Spectrum Disorder (ASD)

- Autism screening: Recommended at 18 & 24 months
  - Modified Check list for Autism in toddlers - Revised(MCHAT-R)
  - Pervasive Developmental Disorders Screening test-II (PDDST-II)

M CHAT

www.m-chat.org

Child's name _____ Date _____

Age _____ Relationship to child _____

M-CHAT-R™ (*Modified Checklist for Autism in Toddlers Revised*)

Please answer these questions about your child. Keep in mind how your child usually behaves. If you have seen your child do the behavior a few times, but he or she does not usually do it, then please answer **no**. Please circle **yes** or **no** for every question. Thank you very much.

1. If you point at something across the room, does your child look at it? (**FOR EXAMPLE**, if you point at a toy or an animal, does your child look at the toy or animal?)	Yes	No
2. Have you ever wondered if your child might be deaf?	Yes	No
3. Does your child play pretend or make-believe? (**FOR EXAMPLE**, pretend to drink from an empty cup, pretend to talk on a phone, or pretend to feed a doll or stuffed animal?)	Yes	No
4. Does your child like climbing on things? (**FOR EXAMPLE**, furniture, playground equipment, or stairs)	Yes	No
5. Does your child make unusual finger movements near his or her eyes? (**FOR EXAMPLE**, does your child wiggle his or her fingers close to his or her eyes?)	Yes	No
6. Does your child point with one finger to ask for something or to get help? (**FOR EXAMPLE**, pointing to a snack or toy that is out of reach)	Yes	No
7. Does your child point with one finger to show you something interesting? (**FOR EXAMPLE**, pointing to an airplane in the sky or a big truck in the road)	Yes	No
8. Is your child interested in other children? (**FOR EXAMPLE**, does your child watch other children, smile at them, or go to them?)	Yes	No
9. Does your child show you things by bringing them to you or holding them up for you to see – not to get help, but just to share? (**FOR EXAMPLE**, showing you a flower, a stuffed animal, or a toy truck)	Yes	No
10. Does your child respond when you call his or her name? (**FOR EXAMPLE**, does he or she look up, talk or babble, or stop what he or she is doing when you call his or her name?)	Yes	No
11. When you smile at your child, does he or she smile back at you?	Yes	No
12. Does your child get upset by everyday noises? (**FOR EXAMPLE**, does your child scream or cry to noise such as a vacuum cleaner or loud music?)	Yes	No
13. Does your child walk?	Yes	No
14. Does your child look you in the eye when you are talking to him or her, playing with him or her, or dressing him or her?	Yes	No
15. Does your child try to copy what you do? (**FOR EXAMPLE**, wave bye-bye, clap, or make a funny noise when you do)	Yes	No
16. If you turn your head to look at something, does your child look around to see what you are looking at?	Yes	No
17. Does your child try to get you to watch him or her? (**FOR EXAMPLE**, does your child look at you for praise, or say "look" or "watch me"?)	Yes	No
18. Does your child understand when you tell him or her to do something? (**FOR EXAMPLE**, if you don't point, can your child understand "put the book on the chair" or "bring me the blanket"?)	Yes	No
19. If something new happens, does your child look at your face to see how you feel about it? (**FOR EXAMPLE**, if he or she hears a strange or funny noise, or sees a new toy, will he or she look at your face?)	Yes	No
20. Does your child like movement activities? (**FOR EXAMPLE**, being swung or bounced on your knee)	Yes	No

Scoring:

- 2,5,12 – If "Yes" = ASD risk
- All other questions if answered "No" = ASD risk

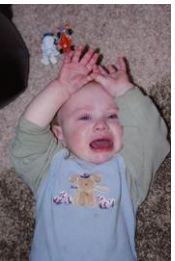
- Low Risk = 0-2
- Medium Risk = 3-7
- High Risk = 8-20

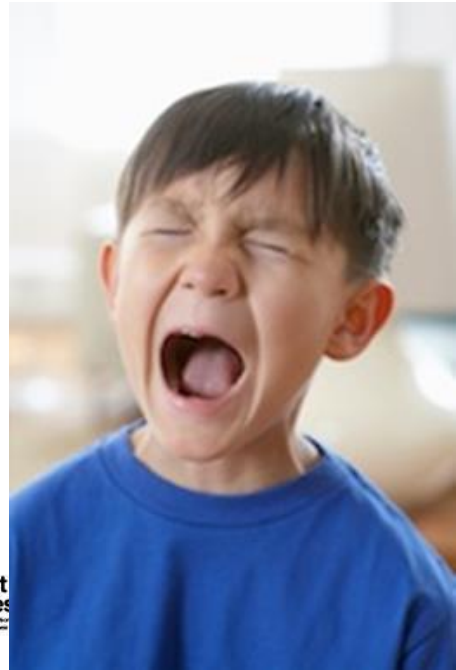
Miguel is 2, Wahoo! Or maybe not?

He has a new baby sister – HURRAY

Miguel at 2 – Temper Tantrums!

- 50%-80% of 2 to 3 year olds throw tantrums (Normal)
  - 20% on a daily basis
  - Most resolve by 4
- Remain calm, acknowledge child's feelings
  - Help learn self regulation
  - Give child choices
- Any correlations?
  - Hunger, Sleep, Change in family, Unmet needs
- Teach & praise desired behaviors
- Consistent expectations and restrictions
  - Avoid over punishing
  - Distraction, redirection
  - Time out, restrain if in danger





Miguel is 4 and ready to start preschool

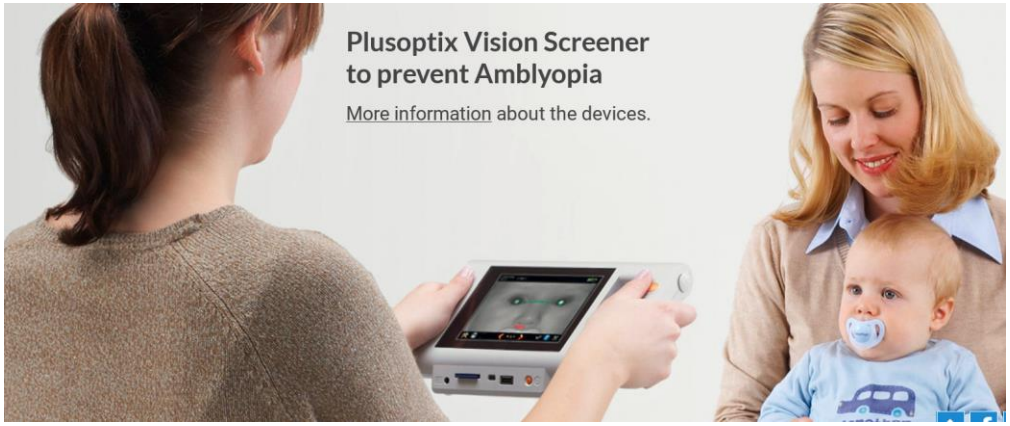
Miguel is 4 – Early Childhood

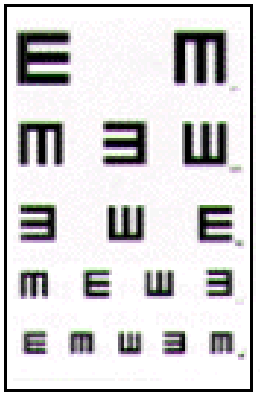
WCE 1 to 4 years old

- An exam of the eye is performed at every WCE
- Vision screening occurs at the Pediatrician's office at each WCE visit starting from age 3
  - Visual acuity chart and/or photo refraction device

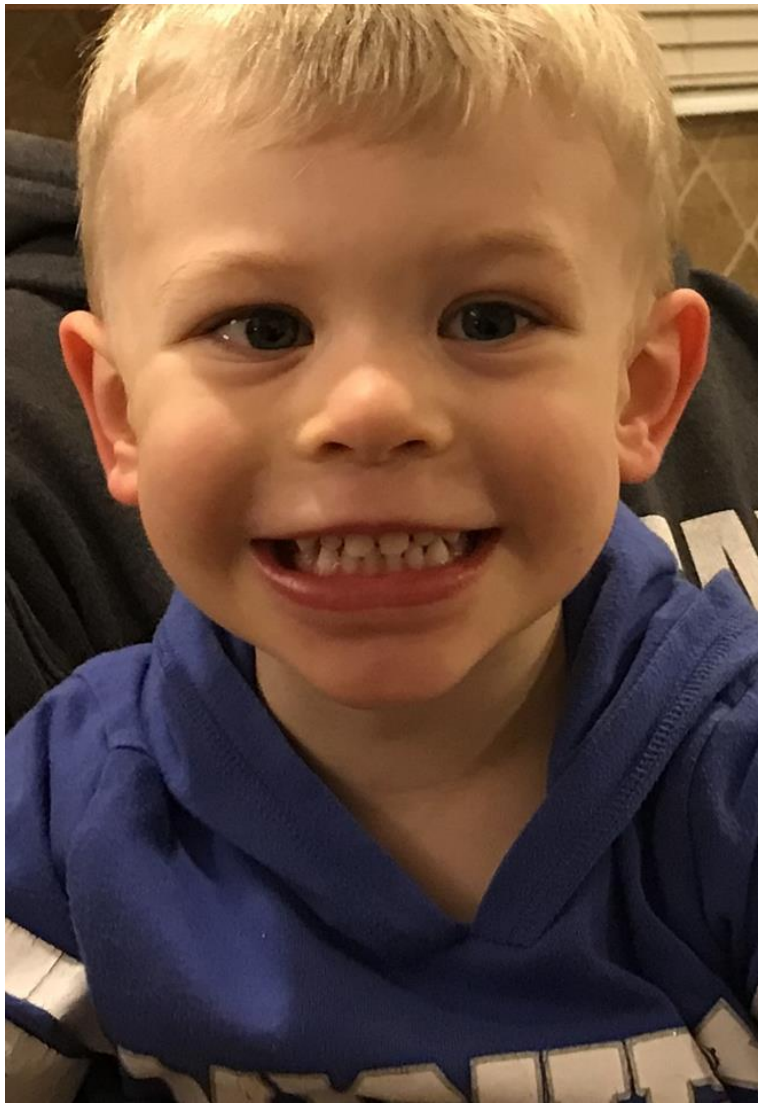
- Miguel's results:

OD: 20/50, OS: 20/70 & OU: 20/50





Strabismus – Meet Jack



Miguel is 10 and Starting Middle School

Bullying

- Asserting power over another through aggression or repeated targeting through emotional, social or physical means
- National Center for Education Statistics and Bureau of Justice Statistics reported about 21% of students ages 12-18 experienced bullying

Bullying

- Approaching the Victim:
  - Only 50% of victims confide in anyone
  - Show empathy
    - “I’m sorry, this must be really hard!”
  - Inquire
    - Do other children frequently bother you? How?
    - Have you seen other children being bullied?
    - What do you do during recess or lunch?
    - Do you frequently go to school nurse for physical complaints?
- Approaching the Bully:
  - Label behavior as bad, not the child as bad
  - Label behavior as harmful to victim and bully
  - Bullying is serious behavior with consequences
  - Ask about concerns at home and school

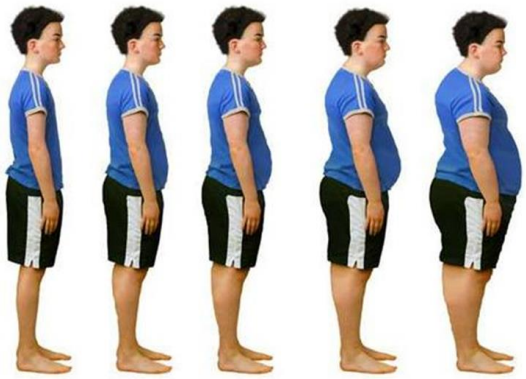
Bullying - Intervention

- Reassure victim that it will STOP!
- Whole-School approach
  - School wide rules, teacher and student training
  - Social worker counseling for victim and bully
  - Eliminate unsafe areas with adult supervision
- Bystander activation
  - Empowering and expecting intervention
- Parental involvement
  - Work with school
  - Limit glamorizing violence
  - Check devises for cyberbullying
- stopbullying.gov

Miguel is 12 – He's gained weight

Obesity – A Growing Problem

- 17% of children 2 to 19 years old (12.7 million)
  - CDC: Nutrition, Physical Activity and Obesity: Data, Trends and Maps
    - https://nccd.cdc.gov



- The Dangers:
  - Decreased physical capacity
  - Cholesterol, Heart Disease, Diabetes
  - Poor self image
- The cause:
  - Physical inactivity
    - TV, Video Games & Apps, Electronic devices = Sedentary
  - Foods that taste so good but bad for us
    - Hot Cheetos and Takis

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Obesity Treatment and Prevention: The 9-5-2-1-0 Rule

- 9- Nine hours of sleep per night
- 5- Eat 5 fruits & vegetables a day
- 2- Cut screen time to 2 hours or less a day
- 1- At least one hour of moderate to vigorous physical activity daily
- 0- Restrict soda and sugar-sweetened sports and fruit drinks
  - Drink water and 3-4 servings/day of fat-free/skim or 1% milk

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Miguel is 15 – The Adolescent WCE ages 11 to 21

Vaping – Among Adolescents

- 2013 to 2014 National Youth Tobacco Survey of Middle and High school students:
  - 2.4 million teenagers had tried e-cigarettes
  - Use tripled from 2013 to 2014

- Vaping is an e-cigarette, teens call it:
  - Hooka pen, E-hookas, Vape pipes/pens, Vapes, Mods
- Why teens vape?
  - Curiosity, Toy to blow smoke rings
  - Taste – Candy, Fruit, Soda, Alcohol
  - Less harm than cigarettes
  - Discrete, can hide in pocket and odorless

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Vaping – What's in there anyway?

- No regulation
  - We don't know what is in some
- Those we do know:
  - Nicotine
  - Propylene glycol/glycerol
  - Flavorings – 7,000 flavors
  - Metals (tin, lead, nickel, chromium)
  - Nitrosamines, carbonyl compounds, organic compounds, phenolic compounds - Carcinogenic???
  - Water
  - Cannabis oil

Vaping – Affect on Adolescents

- Vaping being viewed as normal social activity
- Bottom line:
  - Nicotine addictive no matter how ingested
  - Nicotine affects brain development
  - Vaping = More likely to use cigarettes and other substances
    - Trying an e-cigarette related to a 6 fold increase of being a regular smoker
- How to prevent:
  - Inform kids young that vaping is smoking and nicotine is addictive and harmful
  - Set the example! DON'T Vape!

The Adolescent WCE 11 to 21 – What do we say?

Developmental/Behavioral Assessment:

- HEADSS
- (H)ome- family dynamics, sleeping
- (E)ducation/Employment - School attendance/attitude, goals
- (A)ctivities – hobbies, exercise, fast and furious
- (D)rugs- tobacco, vaping alcohol, illicit drugs, prescription drugs
- (S)exuality- sexual feelings towards opposite or same sex
  - Intercourse/abstinence
  - STDs
  - Contraception
- (S)uicide/depression-
  - Suicidal thoughts
  - Feelings of sadness/anhedonia

Cohen, E, MacKenzie, R.G., Yates, G.L. (1991). HEADSS, a psychosocial risk assessment instrument: Implications for designing effective intervention programs for runaway youth. Journal of Adolescent Health 12 (7): 539-544.

The WCE
How we Keep Kids at the Top of Their Game!

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

Conclusion: WCE's – They Make a Difference

Bright Futures.

American Academy of Pediatrics
DEDICATED TO THE HEALTH OF ALL CHILDREN™

References:

- Kliegman, RM, Macdante, KJ. Nelson Essentials of Pediatrics. Seventh Edition, Copyright © 2015 by Saunders, an imprint of Elsevier Inc.
- Identifying Infants and Young Children With Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening. *Pediatrics*, July 2006, Volume 118/Issue 1;. http://pediatrics.aappublications.org/content/118/1/405.full. Accessed March 15, 2018.
- Duncan P, Pirretti A, Earls MF, Stratbucker W, Healy JA, Shaw JS, Kairys S. Improving delivery of Bright Futures preventive services at the 9- and 24-month well child visit. *Pediatrics*. 2015.
- Hagan JF, Shaw JS, Duncan PM, eds: 2008, *Bright Futures: Guidelines for Health Supervision of Infants, Children and Adolescents.* Third Edition. Elk Grove Village, IL: American Academy of Pediatrics.
- Howe ER. Pediatrics. In: Wilbur JK, Graber MA, Ray BE. eds. *Graber and Wilbur's Family Medicine Examination & Board Review, 4e* New York, NY: McGraw-Hill; . http://accessmedicine.mhmedical.com/content.aspx?bookid=2359&sectionid=185011948. Accessed March 15, 2018.
- Cunningham F, Leveno KJ, Bloom SL, Spong CY, Dashe JS, Hoffman BL, Casey BM, Sheffield JS. eds. *Williams Obstetrics, Twenty-Fourth Edition* New York, NY: McGraw-Hill; 2013. http://accessmedicine.mhmedical.com/content.aspx?bookid=1057&sectionid=59789106. Accessed March 15, 2018.
- Ward, SD. Safe Infant Sleep and Reducing the Risk of Sudden Infant Death Syndrome. Audiodigest © Copyright 1996-2017. Audio-Digest Foundation. Accessed February 23, 2018.
- Cohen, RT. Vaping 101: What the Pediatrician Needs to Know About E-Cigarettes. Audiodigest © Copyright 1996-2017. Audio-Digest Foundation. Accessed March 21, 2018.
- Vanderbilt, DL. Bullying and School Violence. Audiodigest © Copyright 1996-2017. Audio-Digest Foundation. Accessed February 28, 2018.

Hurray For Well Child Exams!