

# Addressing Neonatal Abstinence Syndrome

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# TOOLS AND RESOURCES FOR HIT

- AAP approach
- Bright Futures
- CHILD Registry



# NEONATAL ABSTINENCE SYNDROME\*

- Drug withdrawal syndrome experienced by some infants exposed to opioids
  - irritability; feeding difficulties; temp instability
- Increasing prevalence
  - tripled 1.5 to 6/1000 (2001-2016)
  - W. Virginia 33/1000 (2013)
- Short term and Long term effects
  - neurodevelopmental

\*[cdc.gov](http://cdc.gov)



# AMERICAN ACADEMY OF PEDIATRICS

Mission to attain optimal physical, mental, and social health and well-being for all infants, children, adolescents and young adults  
(whole child approach)

## Principles:

- All children have, and all pediatricians, provide a medical home
- All systems of care maintain health equity
- Profession of pediatrics is sustained, maintained, and improved



# AAP COMPETENCIES



# POLICY / CLINICAL GUIDANCE

- [A Public Health Response to Opioid Use in Pregnancy](#) (2017)
- [Medication-Assisted Treatment of Adolescents With Opioid Use Disorders](#) (2016)
- [Families Affected by Parental Substance Use](#) (2016)
- [Neonatal Drug Withdrawal](#) (2012, Reaffirmed 2016)
- Neonatal Abstinence Syndrome (under development)

# EDUCATION

- Online Courses
  - Acute Pain Management: Changes and Challenges
  - Chronic Pain and the Opioid Crisis
  - Research-Based Clinical Strategies to Prevent and Address Adolescent Substance Use and Prescription Medication Misuse—Being Part of the Solution
- Providers' Clinical Support System—Opioid Therapies
- Recorded Webinars
  - Unraveling the Mystery of Acute and Chronic Pain in the Child & Adolescent (2015)
  - Co-Occurring Psychiatric Illness and Substance Use in Youth (2016)
  - Rational Pain Management in Children With Chronic Medical Conditions (2016)
  - Demystifying Buprenorphine Prescribing for Youth With Opioid Use Disorders (2017)
  - **Understanding Neonatal Abstinence Syndrome for the General Pediatrician (2017)**
- EQIPP: Substance Use - Screening, Brief Intervention, Referral to Treatment





# ADVOCACY

- Promote healthy children
- Support secure families
- Build strong communities
- Ensure US is a leading nation for children

[www.aap.org/blueprint](http://www.aap.org/blueprint)



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# ADDRESSING THE OPIOID EPIDEMIC

Joint Principles organizations representing medical professionals (AAP, AAFP, ACOG, ACP, AOA, APA)

- research on prevention and treatment
- public health approach (childhood stress)
- maternal-child health impact
- address stigma
- comprehensive pain management



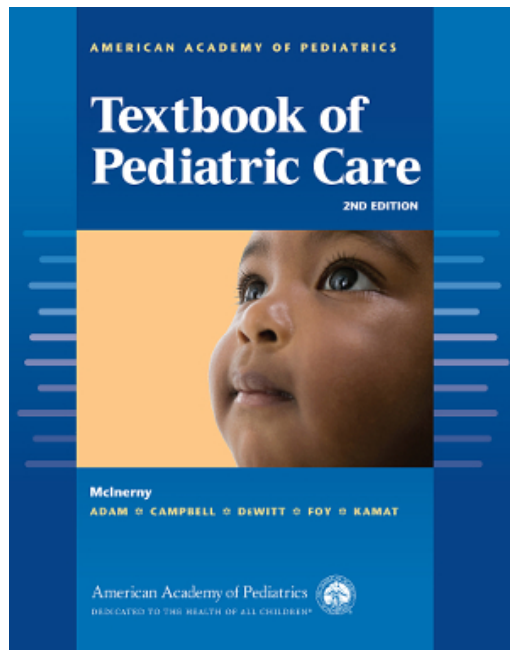
## NATIONAL CENTER ON

## Early Childhood Health and Wellness

- Provide training and support to early care and education teams
- [Resources](#) for home visitors and the home-based option of Head Start.



# CLINICAL RESOURCES



CHAPTER 11. QUICK REFERENCE SHEETS • • • 167

## Neonatal Abstinence Syndrome (NAS)

### What is neonatal abstinence syndrome (NAS)?

Neonatal abstinence syndrome (NAS) is a drug withdrawal syndrome that some infants experience after birth and that generally follows exposure to an opioid. Opioids are a broad class of drugs that can be licit (eg, Vicodin) or illicit (eg, heroin). The severity can vary based on a myriad of factors, including type of opioid, other exposures, and genetics. The syndrome is characterized by tremors, high-pitched cry, loose stools, vomiting, poor feeding, uncoordinated suck, sleep disturbance, seizures, and irritability. Mild clinical signs, such as irritability, may persist for several months. Long-term consequences such as learning difficulties may also occur; however, the severity of such consequences remains an area of debate in the medical literature.

### How common is it?

The Substance Abuse Mental Health Services Administration reported that in 2016, more than 20,000 pregnant women reported using heroin or misusing pain relievers in the past month. A May 2015 study in the *New England Journal of Medicine* reported that from 2004 through 2013, the rate of neonatal intensive care unit admissions for NAS

### What adaptations may be needed?

#### Medications

Medications are sometimes used to treat withdrawal symptoms during the acute phase, after birth, but are seldom continued by the time the infant is in out-of-home care.

#### Dietary Considerations

No dietary adaptations are usually needed; however, during the acute phase of NAS, infants may have increased suck but poor coordination of swallow and may require high-calorie feedings. Breastfeeding is allowed if the mother is in treatment without relapse.

#### Physical Environment and Other Considerations

Avoid overstimulation. A quiet, soothing atmosphere might be beneficial.

### What should be considered an emergency?

No emergencies are associated with infants who have had NAS, unless they are not identified during the birth hospitalization and withdrawal occurs at home.

### What times of training or policies are advised?



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# IMPROVING OUTCOMES RELATED TO OPIOID MISUSE: STRATEGIES ADDRESSING CLINICAL CARE FOR WOMEN AND INFANTS

## Year 1 Activities

- Partnership building
- Environmental scan to assess current practices
- Promotion of available education/training activities
- Dissemination of evidence-based public health science related to the prevention, intervention, and treatment

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# BRIGHT FUTURES

**American Academy of Pediatrics Bright Futures  
National Resource Center  
[brightfutures.aap.org](http://brightfutures.aap.org)**

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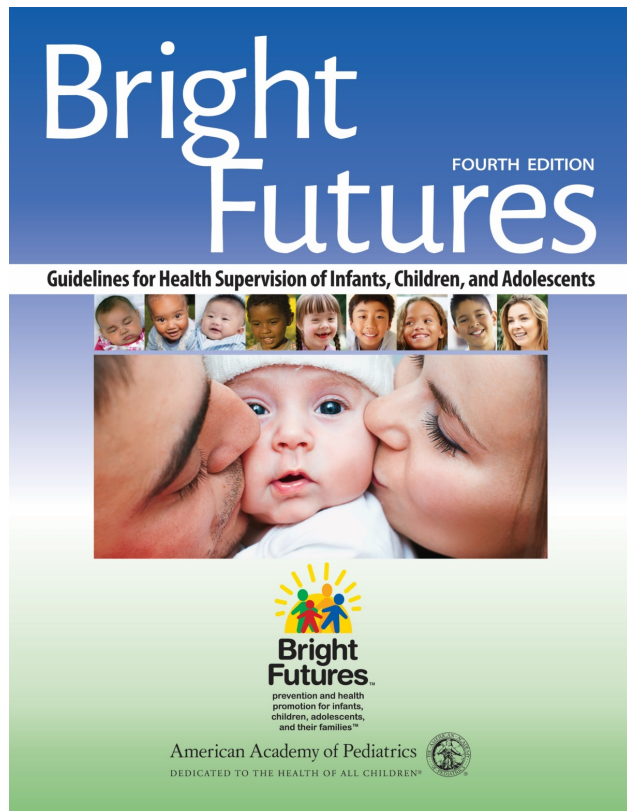


# *Bright Futures Guidelines, 4th Edition*

- Healthy Development
- Family Support
- Mental Health and Emotional Well-Being
- Nutritional Health
- Physical Activity
- Healthy Weight
- Promoting Lifelong Health for Families and Communities
- Oral Health
- Healthy Sexuality
- Safety and Injury Prevention
- Promoting Healthy and Safe Use of Social Media
- Children and Youth with Special Health Care Needs







## Principles, strategies and tools

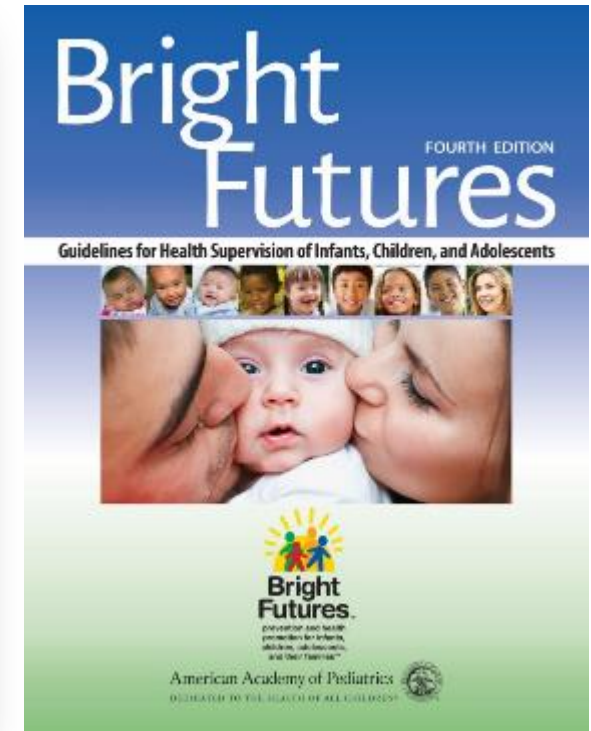
- theory-based, evidence-driven, and systems-oriented, improve the health and well-being of all children through
- culturally appropriate interventions
- current and emerging health promotion needs at the **family, clinical practice, community, health system and policy levels.**

# Components of a Bright Futures Visit

- ❖ History
- ❖ Surveillance
- ❖ Review of Systems
- ❖ Observation of Interaction
- ❖ Physical examination
- ❖ Screening
- ❖ Immunizations
- ❖ Anticipatory guidance

Prenatal/ Newborn	15 Months
3-5 Days	18 Months
1 Month	2 Years
2 Months	2 ½ Years
4 Months	3 Years
6 Months	4 Years
9 Months	5 Years
12 Months	Annually until 21 years of age

# The Periodicity Schedule and the Bright Futures Guidelines

[illegible]

The Periodicity Schedule tells you what to do in well- child visits, while the *Bright Futures Guidelines* tell you how to do it—and how to do it well.

# *Bright Futures Tool and Resource Kit, 2nd Edition*

## **Core Forms**

Key documents for each Bright Futures visit:

- Previsit Questionnaire
- Visit Documentation Form
- Bright Futures Parent-Patient Handouts

## **Supporting Materials**

- Screening and Assessment Tools
  - ❖ Medical Screening Reference Tables
  - ❖ Commonly Used Screening Instruments and Tools
- Additional forms that accompany the Visit Documentation Form
  - ❖ Initial History Questionnaire
  - ❖ Medication Record
  - ❖ Problem List
  - ❖ Problem Visit
- Supplementary AAP Education Handouts

# Core Tools: Integrated Format

## EXAMPLE Tools

PATIENT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

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**BRIGHT FUTURES PREVISIT QUESTIONNAIRE**  
**12 MONTH VISIT**

To provide you and your child with the best possible health care, we would like to know how things are going. Please answer all the questions. Thank you.

**WHAT WOULD YOU LIKE TO TALK ABOUT TODAY?**

Do you have any concerns, questions, or problems that you would like to discuss today? ☐ No ☐ Yes, describe:

**TELL US ABOUT YOUR CHILD AND FAMILY.**

What excites or delights you most about your child?

Does your child have special health care needs? ☐ No ☐ Yes, describe:

Have there been major changes lately in your child's or family's life? ☐ No ☐ Yes, describe:

Have any of your child's relatives developed new medical problems since your last visit? ☐ No ☐ Yes ☐ Unclear. If yes or unclear, please describe:

Does your child live with anyone who smokes or spends time in places where people smoke or use e-cigarettes? ☐ No ☐ Yes ☐ Unclear

**YOUR GROWING AND DEVELOPING CHILD**

Do you have specific concerns about your child's development, learning, or behavior? ☐ No ☐ Yes, describe:

Check off each of the tasks that your child is able to do.

<input type="checkbox"/> Look for hidden objects.	<input type="checkbox"/> Follow a verbal command that includes a gesture.	<input type="checkbox"/> Drop objects in a cup.
<input type="checkbox"/> Imitate new gestures.	<input type="checkbox"/> Take first independent steps.	<input type="checkbox"/> Pick up small object with 2-finger pincer grasp.
<input type="checkbox"/> Say "Dad" or "Mom" with meaning.	<input type="checkbox"/> Stand without support.	<input type="checkbox"/> Pick up food and eat it.
<input type="checkbox"/> Use one word other than Mom, Dad, or personal names.		

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- Previsit Questionnaire
  - Surveillance tool allows healthcare professional to gather pertinent information without using valuable time asking questions

Well Child | 12 Month Visit

Accompanied by: \_\_\_\_\_ Preferred Language: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Name: \_\_\_\_\_

Weight (kg): \_\_\_\_\_ Length (cm): \_\_\_\_\_ Weight for length (kg): \_\_\_\_\_ HC (cm): \_\_\_\_\_ ID Number: \_\_\_\_\_

Urine (if indicated): Temp: \_\_\_\_\_ HR: \_\_\_\_\_ Resp Rate: \_\_\_\_\_ SpO<sub>2</sub>: \_\_\_\_\_ Birth Date: \_\_\_\_\_ Age: \_\_\_\_\_ Sex: M ☐ F ☐

**HISTORY**

Concerns and Questions: ☐ None

Internal History: ☐ None

Medical History: ☐ Child has special health care needs. Assess reviewed and updated as needed.

☐ Past Medical History (See Initial History Questionnaire).

☐ Surgical History (See Initial History Questionnaire).

☐ Problem List (See Problem List).

Medications: ☐ None

☐ Reviewed and updated (See Medication Record).

Allergies: ☐ No known drug allergies

Nutrition: ☐ Good appetite ☐ Good variety

Solids:

**DEVELOPMENT**

☒ Normal development ☐ See Previsit Questionnaire.

caregiver concerns about development: ☐ None ☐ Yes

<input type="checkbox"/> SOCIAL LANGUAGE AND SELF-HELP	<input type="checkbox"/> VERBAL LANGUAGE	<input type="checkbox"/> GROSS MOTOR
• Looks for hidden objects	• Says "Dad" or "Mom" with meaning	• Takes first independent steps
• Imitates new gestures	• Uses one word other than Mom or Dad, or personal names	• Stands without support
• Initiates new gestures	• Initiates a verbal comment that includes a gesture	<input type="checkbox"/> FINE MOTOR
		• Drops object in a cup
		• Picks up small object with 2-finger pincer grasp
		• Picks up food and eats it

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The recommendations in this form do not include an exclusive roster of all content or serve as a checklist of medical care. History, physical, and patient/family information may be appropriate. Clinical data collection is part of the Bright Futures tool and is not intended to replace clinical judgment. The information in this form is not intended to replace clinical judgment. © 2015 American Academy of Pediatrics. All rights reserved.

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- Documentation Form
  - To document all pertinent information and fulfill quality measures

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**BRIGHT FUTURES HANDOUT ► PARENT**  
**12 MONTH VISIT**

Here are some suggestions from Bright Futures experts that may be of value to your family.

**✓ HOW YOUR FAMILY IS DOING**

- If you are worried about your living or food situation, reach out for help. Community agencies and programs such as WIC and SNAP can provide information and assistance.
- Don't smoke or use e-cigarettes. Keep your home and car smoke-free. Tobacco-free spaces keep children healthy.
- Don't use alcohol or drugs.
- Make sure everyone who cares for your child offers healthy foods, avoids sweets, provides time for active play and uses the same rules for discipline that you do.
- Make sure the places your child plays are safe.
- Think about joining a toddler playgroup or taking a parenting class.
- Take time for yourself and your partner.
- Keep in contact with family and friends.

**✓ FEEDING YOUR CHILD**

- Offer healthy foods for meals and snacks. Give 3 meals and 2 to 3 snacks spaced evenly over the day.
- Avoid small, hard foods that can cause choking—popcorn, hot dogs, grapes, nuts, and hard, raw vegetables.
- Have your child eat with the rest of the family during mealtimes.
- Encourage your child to feed herself.
- Use a small plate and cup for eating and drinking.
- Be patient with your child as she learns to eat without help.
- Let your child decide what and how much to eat. End her meal when he stops eating.
- Make sure caregivers follow the same ideas and routines for meals that you do.

**✓ ESTABLISHING ROUTINES**

- Praise your child when he does what you ask him to do.
- Use short and simple rules for your child.
- Try not to hit, spank, or yell at your child.
- Use short time-outs when your child isn't following directions.
- Redirect your child with something he likes when he starts to get upset.
- Play with and read to your child often.
- Your child should have at least one nap a day.
- Make the hour before bedtime loving and calm, with reading, singing, and a favorite toy.
- Avoid letting your child watch TV or play on a tablet or smartphone.
- Consider making a family media plan. It helps you make rules for media use and balance screen time with other activities, including exercise.

**✓ FINDING A DENTIST**

- Take your child for a first dental visit as soon as her first tooth erupts or by 12 months of age.
- Brush your child's teeth twice a day with a soft toothbrush. Use a small smear of fluoride toothpaste (no more than a grain of rice).
- If you are still using a bottle, offer only water.

Helpful Resources: Smoking Quit Line: 800-784-8889 | Family Media Plan: [www.healthylittle.org/medialplan](http://www.healthylittle.org/medialplan)  
Poison Help Line: 800-222-1222 | Information About Car Safety Seats: [www.aap.org/parents](http://www.aap.org/parents) | Toll-free Auto Safety Hotline: 888-327-4336

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- Parent/Patient Educational Handout
  - Provides parental education for all of the Bright Future Priorities at each visit



# Office-Based Systems Components

- Preventive services prompting system
- System
  - immunizations and well child visits
  - track referrals
  - identify children exposed to opioids
- Link families to community resources
- Strength-based approach/shared decision-making strategy



# Bright Futures Previsit Questionnaire

## Examples of how patient and family are doing...

- ☐ Parental/youth concerns and questions for this visit
- ☐ Surveillance of patient/family strengths
- ☐ Surveillance of major changes in family
- ☐ Medical risk assessment (unique for each age/visit) such as:
  - TB, Lead, Anemia, STIs, Cholesterol
  - Vision and Hearing
- ☐ Oral health risk assessment
  - Dental home/fluoride H<sub>2</sub>O
- ☐ Developmental surveillance for young children
- ☐ Strengths/developmental surveillance for school aged children & adolescents
- ☐ Expanded anticipatory guidance questions such as:
  - Social Determinants of Health
  - Caring for infant/child/adolescent
  - Patient's emotional well-being
  - Safety

**This surveillance tool also alerts the patient/family that they will be universally screened for topics based on their age/stage (eg, child development, autism, depression, etc.).**

PATIENT NAME: \_\_\_\_\_ DATE: \_\_\_\_\_

Please print.

## 12 MONTH VISIT

### RISK ASSESSMENT

Hearing	Do you have concerns about how your child hears?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
	Do you have concerns about how your child speaks?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
Lead	Does your child live in or visit a home or child care facility with an identified lead hazard or a home built before 1980 that is in poor repair or that was renovated in the past 6 months?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
Oral health	Does your child's primary water source contain fluoride?	<input type="radio"/> Yes	<input type="radio"/> No	<input type="radio"/> Unsure
Tuberculosis	Was your child or any household member born in, or has he or she traveled to, a country where tuberculosis is common (this includes countries in Africa, Asia, Latin America, and Eastern Europe)?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
	Has your child had close contact with a person who has tuberculosis disease or who has had a positive tuberculosis test result?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
	Is your child infected with HIV?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
Vision	Do you have concerns about how your child sees?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
	Do your child's eyes appear unusual or seem to cross?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
	Do your child's eyelids droop or does one eyelid tend to close?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure
	Have your child's eyes ever been injured?	<input type="radio"/> No	<input type="radio"/> Yes	<input type="radio"/> Unsure

### ANTICIPATORY GUIDANCE

How are things going for you, your child, and your family?

#### YOUR FAMILY'S HEALTH AND WELL-BEING

<b>Living Situation and Food Security</b>		
Do you have enough heat, hot water, electricity, and working appliances in your home?	<input type="radio"/> Yes	<input type="radio"/> No
Do you have problems with bugs, rodents, peeling paint or plaster, mold, or dampness?	<input type="radio"/> No	<input type="radio"/> Yes
Within the past 12 months, were you ever worried whether your food would run out before you got money to buy more?	<input type="radio"/> No	<input type="radio"/> Yes
Within the past 12 months, did the food you bought not last, and you did not have money to get more?	<input type="radio"/> No	<input type="radio"/> Yes
<b>Alcohol and Drugs</b>		
Does anyone in your household drink beer, wine, or liquor?	<input type="radio"/> No	<input type="radio"/> Yes
Do you or other family members use marijuana, cocaine, pain pills, narcotics, or other controlled substances?	<input type="radio"/> No	<input type="radio"/> Yes
<b>Social Connections With Family, Friends, Child Care, Home Visitation Program Staff, and Others</b>		
Do you have child care or an adult you trust to care for your child?	<input type="radio"/> Yes	<input type="radio"/> No
Have you talked about your thoughts on feeding, sleeping, discipline, and media use with your caregiver?	<input type="radio"/> Yes	<input type="radio"/> No
Do you participate in activities outside your home? These may be social, religious, volunteer, or recreational programs.	<input type="radio"/> Yes	<input type="radio"/> No

#### CARING FOR YOUR CHILD

If your child is upset, do you help distract him using another activity, book, or toy?	<input type="radio"/> Yes	<input type="radio"/> No
Do you use time-outs as a way to manage your child's behavior?	<input type="radio"/> Yes	<input type="radio"/> No
Do you have any questions about what to do when you become angry or frustrated with your child?	<input type="radio"/> No	<input type="radio"/> Yes
Does your family regularly make time for reading, playing, and talking together?	<input type="radio"/> Yes	<input type="radio"/> No
Do you eat together as a family?	<input type="radio"/> Yes	<input type="radio"/> No
Do you have regular mealtimes and snack times?	<input type="radio"/> Yes	<input type="radio"/> No
Do you help your child feel comfortable around new people and new situations?	<input type="radio"/> Yes	<input type="radio"/> No
Do you have regular nap time and bedtime routines for your child, such as reading books and brushing teeth?	<input type="radio"/> Yes	<input type="radio"/> No

## Social Determinants of Health questions

Responses in the right-hand column highlight the “let’s talk about this” issues—the health topics and concerns that require focused discussion.

# EHR : Social History Screening

## ☐ Social/Environmental (Questions to ask family during visit)

Child lives with

\* Are you having problems receiving WIC food stamp, daycare vouchers, medical card, or SSI?

Yes

No



**Benefits**

\* Housing problems (overcrowding, roaches, rodents, utilities, mold, lead)?

Yes

No



**Housing**

\* Threatened with eviction or losing your home?

Yes

No



\* Over the past 2 weeks, have you felt down, depressed or hopeless?

Yes

No



**Depression**

\* Over the past 2 weeks, have you felt little interest or pleasure in doing things?

Yes

No



**Domestic Violence**

\* Do you feel that you and/or your children are unsafe in your relationships?

Yes

No



**All others**

\* Would you like to speak with a social worker or legal advocate in the clinic about these issues?

Yes

No



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# CHILD Registry

Child Health Improvement  
through Longitudinal Data

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# ASPIRATION FOR THE CHILD REGISTRY

**Collect, store, & analyze data for US children**

- **Health**
- **Disease (acute and chronic)**
- **Wellness**
- **Behavior**
- **Development**



# CHILD REGISTRY

- Facilitate data-driven improvements in child health care, outcomes, and well-being
  - Inform evidence based guideline development and implementation
  - Research and benchmarking
  - Demonstrate quality of care
  - Support care coordination
- HIPAA compliant data collection from EHRs and other systems
- Exploring inclusion of patient reported outcomes to complete information on the whole child

## Ultimate goal

Positively influence trajectory of children to become healthy adults