

## APPENDIX G

### ***fhop***

# **FAMILY HEALTH OUTCOMES PROJECT REVISED RISK FACTORS FOR THE PUBLIC HEALTH INDICATOR TABLE**

## INFANT INDICATORS

### Infant Mortality

Race/ethnicity -- Black, Puerto Rican, American Indian, Alaska Native

Prematurity / Disorders related to short gestation

Low birth weight

Congenital anomalies

Young maternal age

Low maternal education level: less than a high school education

Maternal tobacco use

Maternal alcohol, substance use/abuse

Poor maternal nutrition

Inadequate prenatal care

Unintended pregnancy

Maternal psychosocial problems

Maternal medical complications/chronic illness during pregnancy (including diabetes)

Pregnancy complications

Short pregnancy interval

Injury (including domestic violence)

Infection

Respiratory distress syndrome

Previous family history of SIDS

### Fetal Death

Race/ethnicity -- Black

Maternal diabetes

Pregnancy complications

Maternal medical complications/chronic illness during pregnancy (including severe maternal infection)

Rh sensitization

Congenital anomalies

Intrauterine cocaine exposure

Maternal history of previous miscarriages

Newborn Screening, Treatment and Follow-up Care for Genetic Disorders

Inadequate newborn screening and/or treatment referral systems  
Inadequate access to follow-up treatment/specialty care

Congenital/Birth Related Infection

Lack of adequate prenatal care/prenatal screening  
Lack of family planning, pre-conception or prenatal counseling  
Maternal STD exposure -- HIV, chlamydia, gonorrhea, syphilis, herpes (HPV),  
Hepatitis B  
Galactosemia (inherited disorder)  
Sickle cell anemia  
Inadequate immunizations

Immunization -- Vaccine Status

Lack of access to primary care -- including geographic barriers,  
language/cultural barriers, lack of transportation, inadequate child care options,  
restrictive hours of primary care service  
Lack of a regular source of primary care  
Missed opportunity -- Provider failure to offer immunization services due to lack  
of time, inadequate reimbursement, lack of familiarity with current  
recommendations, inadequate reminder systems  
Race/ethnicity -- Black, Hispanic  
Low income  
Low parental education level: less than a high school education  
Lack of health insurance  
Lack of knowledge about required immunization and booster schedules  
Lack of consistent day care/child care regulations regarding vaccination  
requirements  
Foster care status

Infants with Substance/Alcohol/Tobacco Exposure

Race/ethnicity -- White\*, Black, Hispanic\*, American Indian, Alaska Native  
Young maternal age\*  
Low parental education level: less than a high school education\*  
Parental occupation -- working class, military\*  
Low income

Lack of adequate pre-conception, prenatal screening/counseling  
Maternal substance addiction/family history of smoking/maternal postpartum relapse of smoking

\* Identified tobacco exposure risk factor (only)

#### Infants Who Have/Have Not Attained Appropriate Growth

Inadequate nutrition  
Chronic/infectious disease  
Low birth weight  
Maternal alcohol/tobacco/substance use/abuse during pregnancy  
Fetal alcohol syndrome  
Inadequate maternal weight gain during pregnancy  
Inadequate health care/prenatal care/prenatal counseling  
Race/ethnicity -- Black, Hispanic  
Low income  
Homelessness  
Infants with disabilities/special needs  
Iron deficiency (maternal and/or child)  
Lack of breastfeeding/lack of use of iron fortified formulas

#### Access to Primary Care

Lack of insurance  
Low income/inability to pay for care  
Lack of knowledge about the value of preventive services  
Lack of access to primary care -- including geographic barriers, language/cultural barriers, lack of transportation, inadequate child care options, restrictive hours of service  
Lack of a regular source of primary care  
Race/ethnicity -- Hispanic  
Low parental education level: less than a high school education  
Inadequate supply of providers  
Missed opportunity -- Provider failure to offer services  
Maternal psychosocial problems/substance abuse

#### Eligible Infants Receiving WIC Services

Lack of access to WIC clinics/services  
Lack of provider education re appropriate referral patterns, WIC eligibility criteria, etc.

## Injuries -- Intentional Injuries

Low income  
Race/ethnicity - Black  
Parental alcohol/substance abuse  
Untreated parental mental health problems  
Previous child abuse  
Parental history of abuse as a child  
Lack of victim awareness by health system  
Access to weapons/inadequate firearm regulation

## Injuries -- Unintentional Injuries

Low income  
Race/ethnicity - Black, American Indians, Alaska Natives  
Gender - males  
Inadequate parental supervision/environmental precautions taken  
Parental alcohol/substance abuse  
Access to weapons/inadequate firearm regulation/enforcement  
Lack of health care provider counseling/focus  
Lack of knowledge about injury protection devices/countermeasures/regulations  
Lack of consistent legislation/enforcement/use of protective devices (e.g., highway safety measures, car safety seats, safety belts, speed limits, etc.)

## Hospital Discharges for Ambulatory Care Sensitive Diagnoses

Low income  
Lack of access to primary care

## CHILD INDICATORS

### Immunization -- Vaccine Status

Lack of access to primary care -- including geographic barriers, language/cultural barriers, lack of transportation, inadequate child care options, restrictive hours of service

Lack of a regular source of primary care

Missed opportunity -- Provider failure to offer immunization services due to lack of time, inadequate reimbursement, lack of familiarity with current recommendations, inadequate reminder systems

Race/ethnicity -- Black, Hispanic

Low income

Low parental education level: less than a high school education

Lack of health insurance

Lack of knowledge about required immunization and booster schedules

Lack of consistent day care/child care regulations regarding vaccination requirements

Foster care status

### Child Substance, Alcohol and Tobacco Use/Abuse/Exposure

Second-hand smoke exposure in the home\*

Parental alcohol/substance addiction/parental smoking history/maternal postpartum relapse of smoking

Race/ethnicity -- Black, Hispanic\*, American Indian, Alaska Native, Southeast Asian\*

Parental occupation: working class, military

Low parental education level: less than a high school education

Low income

Lack of adequate substance abuse education/screening/counseling in schools, health care settings

Lack of tobacco/substance use prevention focus among health care providers

Advertising/media exposure

Homeless/runaway youth status

School dropout/truancy

Lack of parental supervision

Community/peer norms

Lack of enforcement of substance use minimum age laws

Place of residence -- urban, inner city\*\*

\* Identified tobacco exposure risk factor (only)

\*\* Identified alcohol/substance exposure risk factor (only)

## Children Who Have/Have Not Attained Appropriate Growth

Inadequate nutrition

Lack of awareness about proper nutrition

Inadequate nutrition assessment/screening/counseling/referral by health care providers

Chronic/infectious disease

Low birth weight

Fetal alcohol syndrome/maternal substance use/abuse during pregnancy

Inadequate health care

Race/ethnicity -- Hispanic, Asian, Southeast Asian, Pacific Islander

Low income

Homelessness

Children with disabilities/special needs

Chronic iron deficiency

Lack of breastfeeding/lack of use of iron fortified formulas

Inadequate school lunch/child care food services

## Access to Primary Care

Lack of insurance

Low income

Lack of knowledge about the value of preventive services

Lack of access to primary care -- including geographic barriers, language/cultural barriers, lack of transportation, inadequate child care options, restrictive hours of service

Lack of a regular source of primary care

Race/ethnicity -- Hispanic

Low parental education level: less than a high school education

Inadequate supply of providers

Missed opportunity -- Provider failure to offer services

Maternal psychosocial problems/substance abuse

## Oral Health

a) Children with dental examination

Low income

Lack of access to routine dental care

Inadequate insurance coverage

b) Children with early childhood caries, including baby bottle tooth decay

Feeding practices that promote baby bottle tooth decay  
Lack of access to routine dental care/dental counseling  
Race/ethnicity -- American Indian, Alaska Native

- c) Children with untreated dental caries
- d) Children with protective sealants on permanent molar teeth

Age - 6 to 8 years  
Low parental education level: less than a high school education  
Parental occupation: migrant workers  
Race/ethnicity -- Hispanic, Black, American Indian, Alaska Native  
Geographic barriers to access  
Cultural/social norms  
Lack of community water fluoridation

#### Injuries -- Intentional Injuries

Low income  
Race/ethnicity - Black  
Gender - male  
Place of residence -- urban  
Parental alcohol/substance abuse  
Untreated mental health problems -- parental and/or child  
Previous child abuse  
Parental history of abuse as a child  
Lack of victim awareness by health system  
Access to weapons/inadequate firearm regulation  
Cultural norms for parental discipline

#### Injuries -- Unintentional Injuries

Low income  
Race/ethnicity - Black, American Indians, Alaska Natives  
Gender - males  
Inadequate parental supervision/environmental precautions taken  
Parental alcohol/substance abuse  
Access to weapons/inadequate firearm regulation/enforcement  
Lack of health care provider counseling/focus  
Lack of use of use of sports/recreation protective gear, bike helmets, etc.  
Lack of knowledge about injury protection devices/countermeasures/regulations  
Lack of consistent legislation/enforcement/use of protective devices (e.g., highway safety measures, car safety seats, safety belts, speed limits, etc.)

Low Hgb/Hct

Low income

Age -- 1 to 5 years

Race/ethnicity -- Black, Alaska Native

Genetics -- family history of anemia

Poor nutrition -- inadequate dietary iron intake/cultural practices

Lack of education about dietary requirements

Inflammatory conditions/infections

Chronic disease

Hospital Discharges for Ambulatory Care Sensitive Diagnoses

Low income

Lack of access to primary care

## ADOLESCENT INDICATORS

### Immunization -- Vaccine Status

Lack of access to primary care -- including geographic barriers, language/cultural barriers, lack of transportation, inadequate child care options, restrictive hours of service

Lack of a regular source of primary care

Missed opportunity -- Provider failure to offer immunization services due to lack of time, inadequate reimbursement, lack of familiarity with current recommendations, inadequate reminder systems

Race/ethnicity -- Black, Hispanic

Low income

Low parental education level: less than a high school education

Lack of health insurance

Lack of knowledge about required immunization and booster schedules

Foster care status

### Adolescent Substance, Alcohol and Tobacco Use/Abuse/Exposure

Second-hand smoke exposure in the home\*

Parental history of smoking, alcohol, substance use/abuse

Race/ethnicity -- Black, Hispanic\*, American Indian, Alaska Native, Southeast Asian\*

Parental occupation: working class, military

Low parental education level: less than a high school education

Low income

Place of residence -- urban\*\*

Lack of adequate substance abuse education/screening/counseling in schools, health care settings

Lack of tobacco/substance use prevention orientation among health care providers

Advertising/media exposure

Homeless/runaway youth status

School dropout/truancy

Lack of enforcement of substance use minimum age laws

\* Identified tobacco exposure risk factor (only)

\*\* Identified alcohol/substance exposure risk factor (only)

### Smokeless Tobacco Use (only)

Gender -- males

Race/ethnicity -- White, American Indian/Alaska Native

### Sexually Transmitted Diseases

Age -- 15 to 19 years

Multiple sexual partners

High risk partners (e.g., IV drug users)

High risk/unsafe sexual practices (e.g., anal intercourse)

Substance use/abuse (esp. IV drug use)

Male homosexuals

Low income

Homeless/runaway youth

Race/ethnicity -- Black

Lack of barrier contraceptive/condom use

Lack of access to STD treatment services/counseling

Lack of compliance with STD treatment regimens

Lack of knowledge/education about STDs, transmission prevention

Lack of consistent/routine STD screening, treatment referral practices

Impaired immune system

### Teen Births

Low income

Low maternal education level: less than a high school education

Race/ethnicity -- Black, Hispanic

Lack of effective contraceptive use/family planning practices

Lack of education/counseling regarding family planning/contraceptive use

Previous teen pregnancy

Initiation of sexual activity at a young age -- Risk factors for initiation of sexual activity at a young age include:

Delinquent behavior

Tobacco/alcohol/substance use

Poor academic performance

Poor communication with parents

Peer pressure

Lack of a traditional religious/moral orientation

### Access to Primary Care

Lack of insurance

Low income

Lack of knowledge about the value of preventive services  
Lack of access to primary care -- including geographic barriers,  
language/cultural barriers, lack of transportation, inadequate child care options,  
restrictive hours of service  
Lack of a regular source of primary care  
Race/ethnicity -- Hispanic  
Low parental education level: less than a high school education  
Inadequate supply of providers  
Missed opportunity -- Provider failure to offer services

## Oral Health

a) Adolescents with dental examination

Low income  
Lack of access to routine dental care  
Inadequate insurance coverage

b) Adolescents with untreated dental caries

c) Adolescents with protective sealants on permanent molar teeth

Age - 12 to 14 years  
Low parental education level: less than a high school education  
Occupation: migrant workers/families  
Race/ethnicity -- Hispanic, Black, American Indian, Alaska Native  
Geographic barriers to access  
Cultural/social/psychological norms  
Lack of community water fluoridation

## Injuries -- Intentional Injuries

Low income  
Race/ethnicity - Black, Hispanic  
Gender - male  
Age -- 19 to 24 years  
Place of residence -- urban  
Alcohol/substance abuse (parent and/or adolescent)  
Untreated mental health problems (parent and/or adolescent)  
Parental history of abuse as a child  
History of abuse/battering (child, spousal)  
Separated or divorced status  
Lack of available space/shelter for battered women  
Lack of victim awareness by health system  
Access to weapons/inadequate firearm regulation

## Suicide

Gender -- male  
Race/ethnicity -- White, American Indian  
Substance abuse  
Untreated mental health problem  
Loss of family member(s) or romantic partner  
Victim of physical abuse  
Difficulties at school

## Injuries -- Unintentional Injuries

Low income  
Race/ethnicity - Black, American Indian, Alaska Native  
Gender - male  
Inadequate parental supervision/environmental precautions taken  
Alcohol/substance use/abuse  
Access to weapons/inadequate firearm regulation/enforcement  
Lack of health care provider counseling/focus  
Lack of use of use of sports/recreation protective gear, bike helmets, etc.  
Lack of knowledge about injury protection devices/countermeasures/regulations  
Lack of consistent legislation/enforcement/use of protective devices (e.g., highway safety measures, car safety seats, safety belts, speed limits, etc.)  
Mental health/developmental disability

## Low Hgb/Hct

Low income  
Women of childbearing age (15 and above) -- especially pregnant women and women with menstrual disorders  
Genetics -- family history of anemia  
Race/ethnicity -- Black, Alaska Native  
Poor nutrition -- inadequate dietary iron intake/cultural and peer practices  
Lack of education about dietary requirements or iron supplementation requirements for women during pregnancy  
Inflammatory conditions/infections  
Chronic disease

## Hospital Discharges for Ambulatory Care Sensitive Diagnoses

Low income

Lack of access to primary care

## WOMEN'S INDICATORS

### First Trimester Onset of Prenatal Care

Low income

Young maternal age/teen pregnancy

Low maternal education level: less than a high school education

Race/ethnicity -- Black, Hispanic, American Indian/Alaska Native

High parity

Maternal substance abuse

Lack of health insurance

Lack of obstetric providers

### Adequacy of Prenatal Care

See risk factors under First Trimester Onset of Prenatal Care (above).

### Sexually Transmitted Diseases

Women of childbearing age -- 15 to 44 years

Multiple sexual partners

High risk partners (e.g., IV drug users)

High risk/unsafe sexual practices (e.g., anal intercourse)

Low income

Race/ethnicity -- Black

Lack of barrier contraceptive/condom use

Lack of access to STD treatment services/counseling

Lack of compliance with STD treatment regimens

Lack of knowledge/education about STDs and transmission prevention

Lack of consistent/routine STD screening, treatment referral practices

Substance use/abuse (esp. IV drug use)

Impaired immune system

### Low Birth Weight

Young and old maternal age

Low income

Low maternal education level: Less than a high school education

Race/ethnicity -- Black, Puerto Rican, Southeast Asian

High parity

Short pregnancy interval  
Multiple gestation  
Unintended pregnancy  
History of low birth weight  
Poor reproductive history  
Prior preterm birth  
Late entry into prenatal care  
Lack of comprehensive prenatal care  
Low pre-pregnancy weight  
Tobacco use during pregnancy  
Alcohol/substance abuse during pregnancy  
Low pregnancy weight gain  
Placenta previa  
Premature rupture of the membrane  
Stress during pregnancy  
Strenuous exertion during pregnancy

#### Adequacy of Prenatal Screening, Treatment and Follow-up Care for Fetal/Genetic Disorders

Late initiation of prenatal care  
Lack of uniform prenatal screening  
Lack of knowledge about screening services/requirements  
Missed opportunity for prenatal screening/counseling/referral  
Cultural and/or religious beliefs

#### Eligible Pregnant, Postpartum and Breastfeeding Women Receiving WIC Services

Lack of access to WIC clinics/services  
Lack of provider education re appropriate referral patterns, WIC eligibility criteria, etc.

#### Low Hgb/Hct

Low income  
Women of childbearing age -- especially pregnant women, women with menstrual disorders  
Genetics -- family history of anemia  
Race/ethnicity -- Black, Alaska Native

Poor nutrition -- inadequate dietary iron intake/cultural practices  
Lack of education about dietary requirements or special iron supplementation requirements for women during pregnancy  
Inflammatory conditions/infections  
Chronic disease

#### Maternal Alcohol/Substance Use/Abuse

Race/ethnicity -- Black, American Indian, Alaska Native  
Low income  
Low maternal education level: less than a high school education  
Place of residence -- urban  
Lack of access to pre-conception/prenatal substance abuse screening/counseling  
Lack of substance use prevention focus among health care providers

#### Cigarette Smoking by Pregnant Women

Young maternal age/teenage pregnancy  
Race/ethnicity -- White, Black, Hispanic, American Indian, Alaska Native  
Occupation: working class, military  
Low maternal education level: less than a high school education  
Low income  
Lack of adequate pre-conception/prenatal counseling  
History of smoking/maternal postpartum relapse of smoking

#### Preterm Delivery

#### Appropriate Maternal Weight Gain During Pregnancy

Young maternal age  
Inadequate diet/nutritional intake  
Low pre-pregnancy weight  
Low income  
Race/ethnicity -- Black  
History of tobacco use and/or substance abuse  
Chronic illness  
Strenuous physical exertion during pregnancy

#### Unintended Births

Low income  
Young maternal age  
Unmarried status  
Lack of access to family planning services/counseling  
Lack of effective contraceptive use  
Race/ethnicity -- Black

#### Women Who Breastfeed Their Infants

Young maternal age  
Low education level: less than a high school education  
Low income  
Race/ethnicity -- Black, Hispanic, American Indian, Alaska Native  
Cultural/regional norms  
Contraindications to breastfeeding: substance use/abuse, HIV-positive status, radioactive medication use  
Women who work in environments that do not facilitate child care or breastfeeding

#### Cervical Cancer Screening/Occurrence

Low income\*  
Lack of health insurance\*  
Lack of access to primary care/preventive screening services\*  
Low education level: less than a high school education\*  
Age -- older women  
Race/ethnicity -- Black, Hispanic, American Indian, Alaska Native, Asian/Pacific Islander  
History of STDs: esp. HPV/genital herpes/genital warts  
History of tobacco use  
Nutrition -- high fat diet  
Early initiation of sexual activity

\* Screening risk factor (primarily)

#### Hospital Discharges for Ambulatory Care Sensitive Diagnoses

Low income  
Lack of access to primary care