



'more for
Healthy Babies™

Every baby counts on you

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PHASE Symposium
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Background

Background

- Definition:
 - Infant mortality = death of an infant before his or her first birthday
 - Infant mortality rate is defined as the number of infant per 1,000 live births
- Baltimore City has the highest infant mortality in Maryland
- 4th worst city in U.S.
- Primarily affects African-American population
- Health disparities
- Above even some developing countries

Background

BALTIMORE CITY

- In 2007, 112 infant deaths
 - 106 were African-American
- In 2008, 120 infant deaths
 - Rate of 12.1 per 1,000 live births (approx. average 10 infant deaths per month)
 - African American: 14.3 per 1,000

MARYLAND STATE

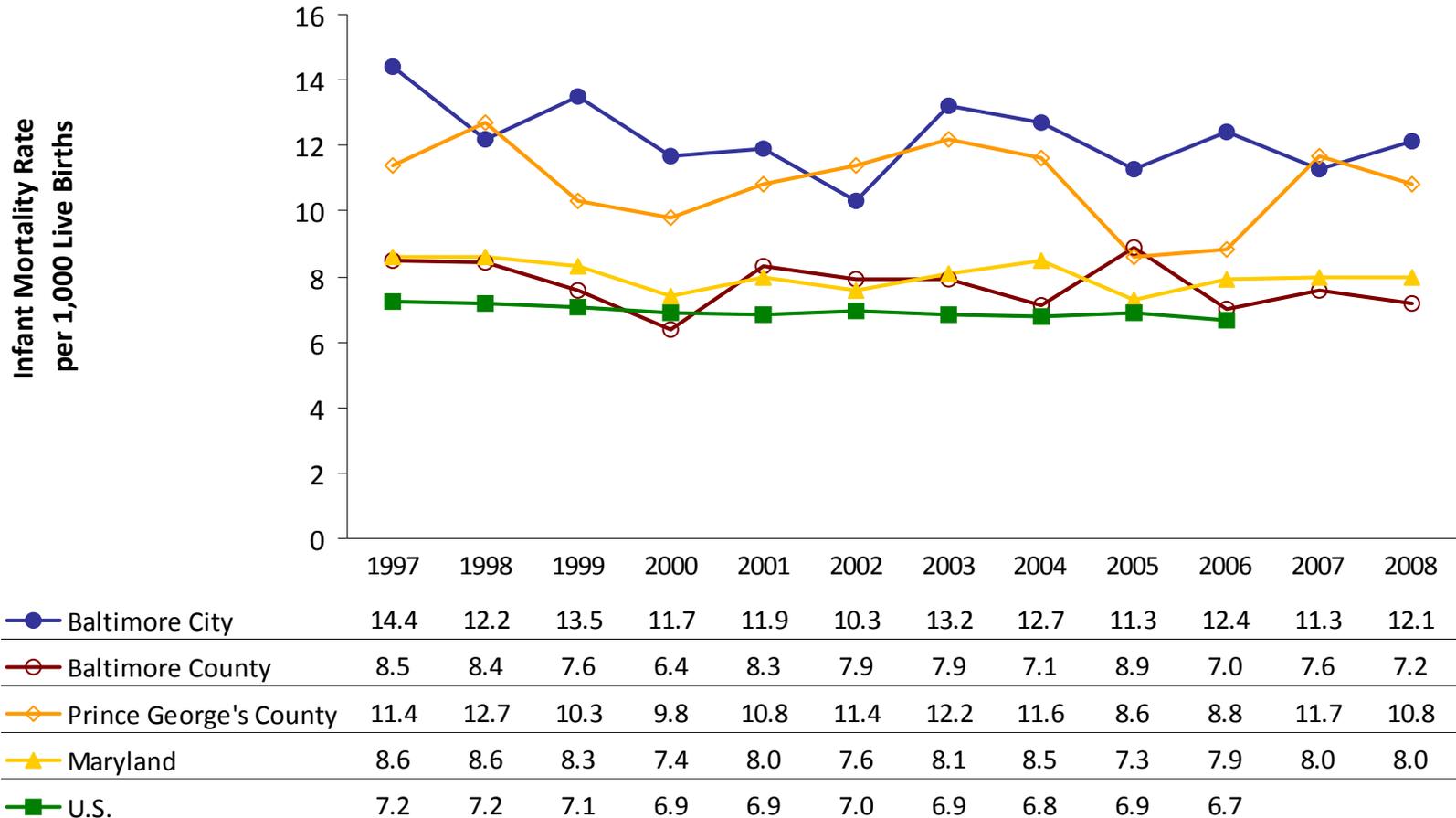
- MD state infant mortality rate: 8.0/1,000
- Ranks 40th in the nation
- If Baltimore were excluded, MD would rank 33rd



Infant Mortality Rates: Maryland & Baltimore



Infant Mortality Rate, Baltimore City, Maryland State and Select Counties, and U.S.,
1997-2008



Source - Maryland State and County Data: Maryland Department of Health and Mental Hygiene, Maryland Annual Vital Statistics Reports 1997-2008 (2008 data are preliminary). U.S. Data: Heron MP, et al. Deaths: Final data for 2006. National vital statistics reports; vol 57 no 14. Hyattsville, Maryland: National Center for Health Statistics. 2009. U.S. data for 2007 and 2008 are not yet available.

Leading Causes of Infant Mortality

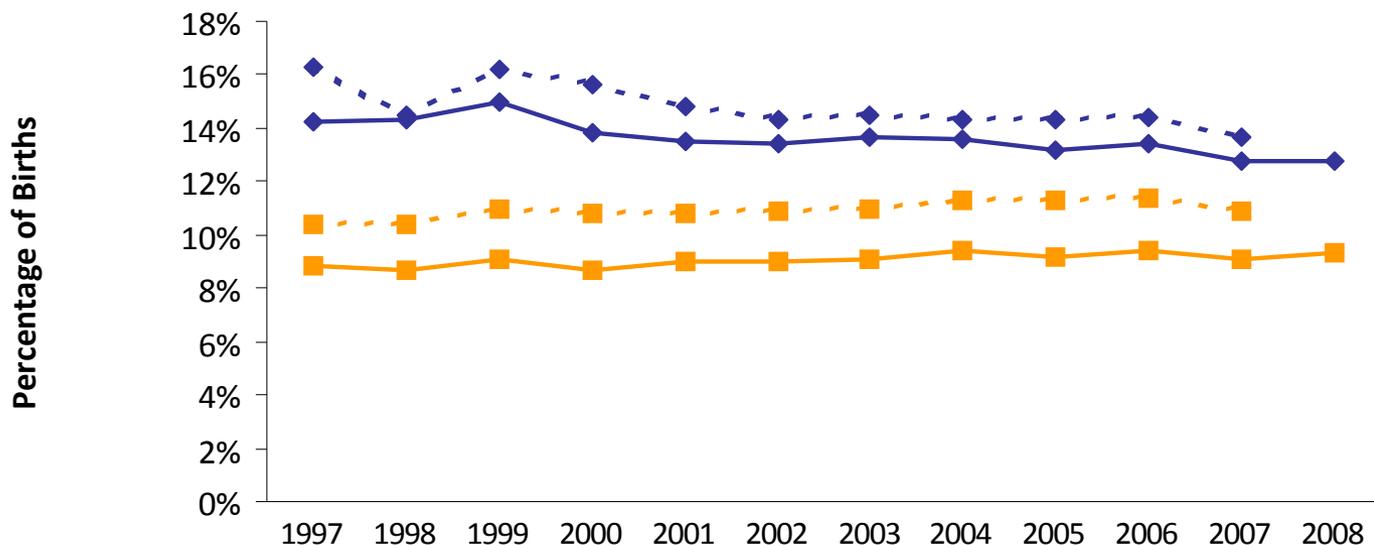
	% of all Infant Deaths	Rate per 1,000 Live Births
United States (2005)		
1. Congenital Abnormalities	20%	1.3
2. Low Birth Weight / Preterm Birth	17%	1.1
3. Sudden Infant Death Syndrome (SIDS)	8%	0.5
Baltimore City (2006)		
1. Low Birth Weight / Preterm Birth	26%	3.2
2. Sudden Infant Death Syndrome (SIDS)	17%	2.0
3. Congenital Abnormalities	10%	1.2

Background

- Baltimore City's infant deaths are preventable!
- Despite this, preterm births and low birth weight have not reduced in MD or Baltimore City over the past decade
- 15% of Baltimore's babies are premature, BUT 75% of infant deaths occur in premature babies

Percentage of Low Birth Weight and Preterm Births: MD & Baltimore

Percentage of Low Birth Weight Births and Preterm Births, Baltimore City and Maryland, 1997-2008



◆— Baltimore City LBW	14.2%	14.3%	15.0%	13.8%	13.5%	13.4%	13.7%	13.6%	13.2%	13.4%	12.8%	12.8%
■— Maryland LBW	8.8%	8.7%	9.1%	8.7%	9.0%	9.0%	9.1%	9.4%	9.2%	9.4%	9.1%	9.3%
◆- - Baltimore City PTB	16.3%	14.5%	16.2%	15.6%	14.8%	14.3%	14.5%	14.3%	14.3%	14.4%	13.7%	-
■- - Maryland PTB	10.4%	10.4%	11.0%	10.8%	10.8%	10.9%	11.0%	11.3%	11.3%	11.4%	10.9%	-

Source: Maryland Department of Health and Mental Hygiene, Vital Statistics Administration. Maryland Annual Vital Statistics Reports and Baltimore City Vital Statistics Profiles (2008 data for LBW are preliminary; 2008 data for preterm birth not yet available).

Background

- Factors that contribute to these leading causes:
 - Preconception health practices
 - Prenatal and obstetrics services during pregnancy
 - Post-pregnancy and neonatal services

11 high-impact service areas

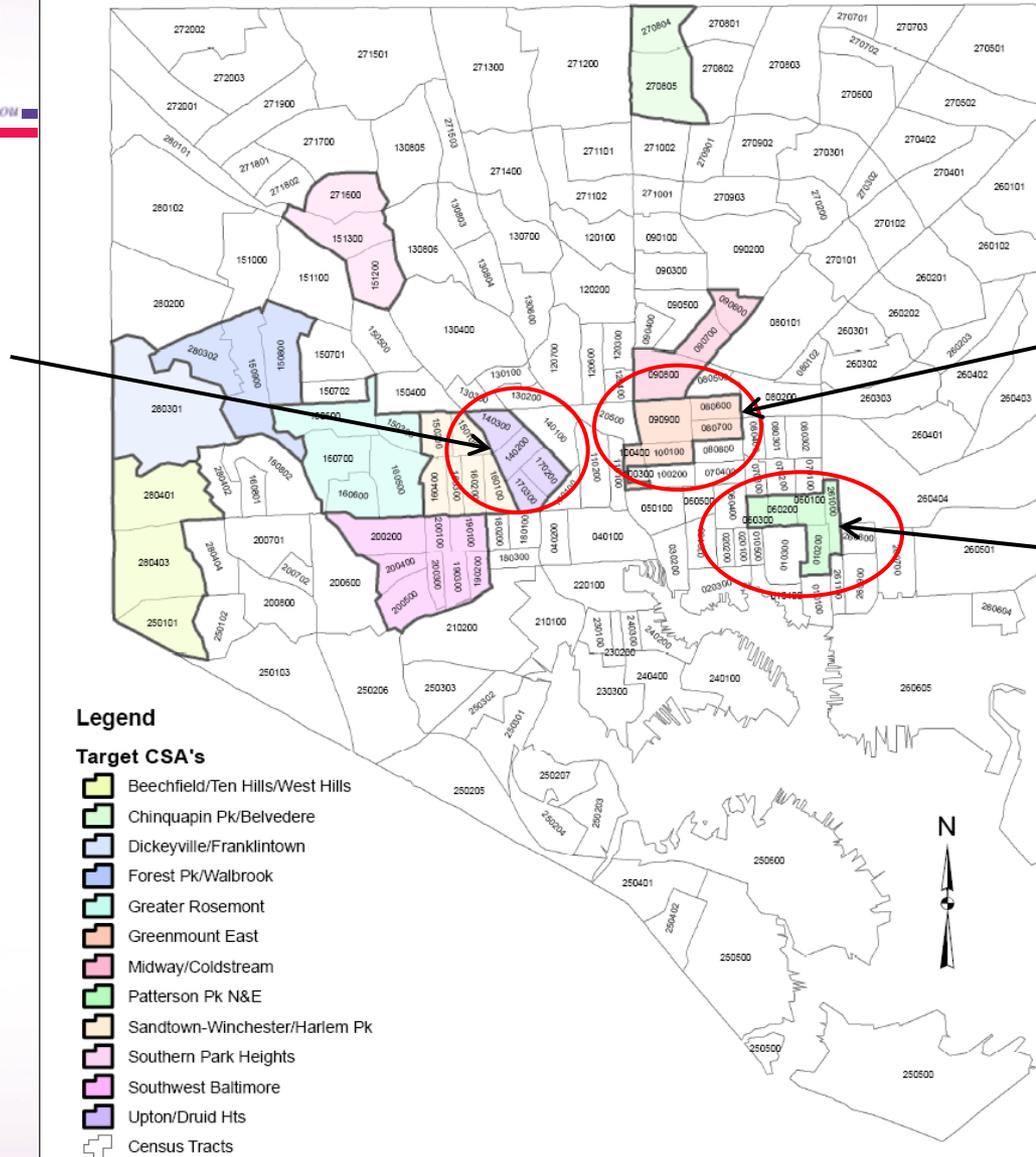
- Nutrition support
- Family planning
- Smoking cessation
- Safe sleep education
- Breastfeeding promotion
- Mental health care
- Domestic violence interventions
- Drug and alcohol treatment
- Home visiting
- Obstetric care
- Primary health care in medical home

- Twelve, targeted communities
- These have nearly **60%** of the City's excess infant deaths, but only **27%** of births

Census Tracts Overlaid by 12 High Risk Community Statistical Areas



Upton/
Druid Hts



Greenmount
East

Patterson
Park
North and
East

NOTE: High risk CSAs were defined as those containing a tract with > 4 infant deaths in excess of the number calculated using the infant mortality rate for Maryland (7.9 per 1,000 live births for 2002-2006).



- Three-year project
- Currently in Phase 1
- Three phases: Healthy Infants, Healthy Pregnancies, Healthy Baltimore
- What services exist and utilized
- What services are lacking
- How to bridge the gaps
- Information aids in resource mapping of city services
- Better organize needed services
- Connect pregnant women to them

BHB Initiative Goals

- ❖ To improve birth outcomes through reduction of...
 - ❖ Low birth weight babies by 10% (259 fewer LBW babies)
 - ❖ Preterm babies by 10% (263 fewer preterm infants)
 - ❖ Sleep related infant deaths by 30% (12 sleep-related infant deaths)

BHB Initiative Goals

Interim goals that will help achieve and sustain longer-term goals:

- Improve access to needed services in the targeted neighborhoods
- Improving use of standardized risk and referrals
- Increase number of home visitors and other outreach providers
- Increase number of at-risk women who initiate early prenatal care
- Increase number of communities that assemble public safe sleep events

Public Health Significance

- Baltimore's alarming infant mortality rates
- Health disparities
- Preventable poor birth outcomes
- Ineffective past efforts
- Lack of coordinated services
- Lack of funding for services
- Gaps in demand, capacity, and quality of services

My Internship

- My focus = maternal and infant nutrition
- Preconception, pregnancy, post-partum
- Folate
- Obesity
- Poor nutrition

My Internship

- Baltimore adolescents' poor dietary behaviors
- Significantly more sedentary
- Half as likely to drink milk 3x/week
- Less likely to eaten fresh fruit 1x/week
- Poor nutrition more striking among females
- Only 25% of school youth perform recommended physical activity compared to a third of nation
- Obesity
- Poor birth outcomes

Methods

Methods

- Literature review
- Identified nutrition support services in target neighborhoods
- Master agency list
- On-site visits & Service assessments
 - Nutrition-specific questionnaire
 - Available nutrition services/programs
 - Marketing strategies
 - Perceived barriers
 - Potential recommendations
 - 30-45 minutes
 - Survey Monkey

Methods

- Proposed nutrition recommendations for Baltimore City
- Policy
- Systems
- Services
- Goals: sustained reduction in infant mortality
- Increased collaboration and coordination
- Increased access to quality services

Nutrition: Agencies Interviewed

- Interviewed: 15 agencies
 - Community Agencies/Health Clinics (10)
 - Healthy Homes – BCHD
 - WIC – Maryland
 - Jewel House
 - Healthy Teens and Young Adults Clinic
 - Planned Parenthood of Maryland
 - Laurence G. Paquin School
 - Baltimore Medical System
 - School Health - BCHD
 - Baltimore City Public Schools Health Curriculum
 - Youth Opportunity Baltimore
 - Baltimore City Healthy Start, Inc.
 - Advocacy(2)
 - Healthy Teen Network
 - Playworks Baltimore
 - Researchers (1)
 - JHSPH Center for Adolescent Health

13. Nutrition Questions

1. Do you target nutrition support pre-conception, during pregnancy, or post-pregnancy?

- pre-conception
 during pregnancy
 post-partum
 not sure

Comments

2. What/how is nutrition support information provided?

- face-to-face education
 reading materials
 other forms of media
 other (specify)

Comments

3. Do women understand the importance of nutrition support?

- Yes
 No
 Not Sure

Comments

4. How does your agency provide nutrition support? What effective community programs exist?

- education
 referrals
 vouchers
 counseling
 other (specify)

Comments

5. Media and Communication

	pamphlets	Internet	city bus advertisements	other (specify)
How do you utilize the media to communicate your available services to the public?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Which of these is the most effective strategy?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Comments

6. When providing nutrition support information, do such services target other family members or male partners as well?

- Yes
 No
 Not Sure

Comments

7. What do you think are the biggest barriers to pregnant women and new mothers in obtaining proper nutrition?

8. Biggest Barriers to Obtaining Proper Nutrition for Pregnant Women:

- Lack of Knowledge about Healthy Nutrition Benefits
 Geographic/Transportation Access
 High Expenses of Healthy Foods
 Time
 Cultural Norms
 Other

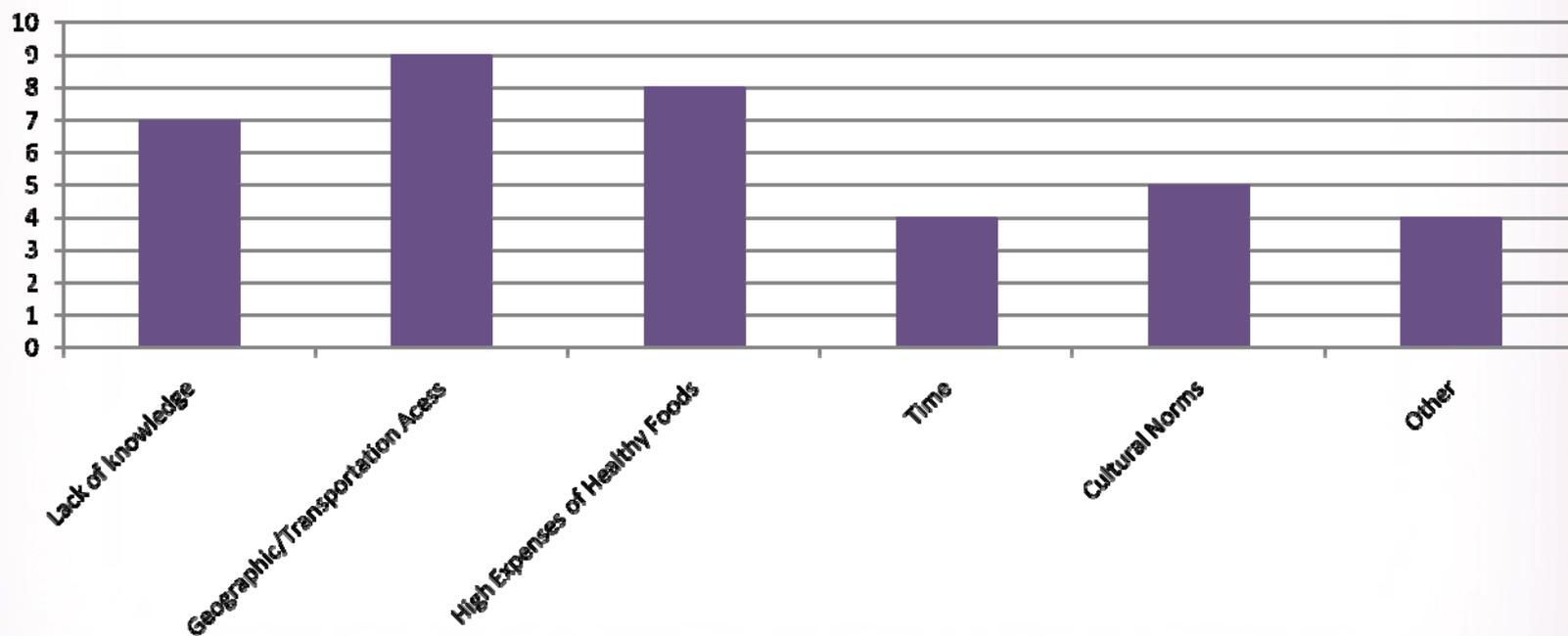
9. What policies/systems do you currently view being in place for nutrition support services?

10. What recommendations would you make to restructure current policies regarding nutrition support programs in Baltimore?

11. Other comments/notes:

Findings

Biggest Barriers to Obtaining Proper Nutrition for Pregnant Women



* “Other” includes lack of safe neighborhoods, lack of motivation/poor attitudes, even if women understand importance of healthy nutrition, they do not know how to cook healthy food

Barrier: ACCESS

- Residents will not travel far
- Corner stores
- Chicken boxes
- Supermarket flight
- Unaffordable

Barrier: CULTURAL NORMS

- Recommended changes should not only target pregnant women
- Male partner
- Family
- Support network

Barrier: TIME

- Time to buy healthy groceries
- Time to cook healthy meals
- Many kids at home
- Trouble maintaining prenatal appointments

Barrier: KNOWLEDGE/EDUCATION

- Some do not know the healthy benefits of good nutrition
- Low demand for healthy foods in corner stores

OTHER Barriers

- Unsafe neighborhoods
- Lack of motivation
- Poor attitudes
- Even if understand benefits, do not know how to cook healthy food

Nutrition Recommendations

1. Virtual Supermarkets – increase capacity and accessibility

- Expand and implement site close to community health clinics, prenatal care locations, or public transportation stops
- Accept WIC coupons
- Barriers challenged: Increases access, saves time, provides incentive to maintain appointments/seek care
- Needed support: WIC

2. Farmers Markets– increase capacity and accessibility

- Locate closer to public transportation
- Extend operating hours beyond noon
- Partnership with WIC:
 - Make WIC coupons accepted at all locations
 - WIC should also inform WIC women about timings and locations of various farmers markets and also distribute healthy recipes
- Partnership with Food Stamps
 - Promote more farmers markets accepting food stamps
- Barriers challenged: Access (Geographic and Affordability)

3. Either (a) reform the maintenance of horses of Arabbers and increase Arabber's presence in Baltimore neighborhoods or (b) introduce The Green Cart Program into City neighborhoods

- Program in NYC
- Fresh fruit and vegetables for neighborhoods that do not consume
- Purchase fresh food close to home
- Cost-benefit analysis to decide which of the two
- Barriers challenged: Access, Time
- Needed support: community residents, Arabbers, Mayor



4. Increase nutrition-specific funds

- When funds are cut, nutrition programs are the first to go
- Increase funds specifically set aside for nutrition support programs at community agencies
- Barriers challenged: Access, Education/Knowledge
- Needed support: BHB may not be able to do this, but at least increase awareness

5. Implement interactive, cooking classes at nutrition support agencies

- Learn benefits of healthy eating
- Also how to prepare healthy meals
- Promote male involvement
- Involve family
- Involve other pregnant women and mothers – fosters a supportive, social network
- Interactive
- Could also be integrated with existing home visiting programs
- Barriers challenged: Education/Knowledge
- Needed support: City agencies with nutrition services,

6. Rezoning city ordinances to introduce delis, healthy grocery stores into the City

- Presently, city is flooded with corner stores and chicken boxes
- Store examples: Superfresh, Trader Joe's
- Promote green space and community gardens
- Barriers challenged: Access (Geographic and Affordability)
- Needed support: Residents, supermarket chain storeowners, Baltimore City Council

7. Increase the partnerships of nutrition agencies with Text4Baby

- Only a few nutrition programs currently participate
- Text messaging services that delivers consistent, small reminders to take prenatal vitamins and encourage healthy eating
- Agencies commented on this program's effectiveness
- YouthWorks encouraging resident to sign up for Text4Baby this summer
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: Residents, City agencies with nutrition services

8. Increase nutrition education at prenatal care visits

- It should emphasize:
 - Importance of BOTH prenatal vitamin consumption and healthy eating
 - Importance of continuing prenatal vitamins or ability to take other forms of prenatal vitamins
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: physician, JHSPH's Center for Communication Program (CCP)

9. Promote “multivitamins for women”

- Marketing strategy promoting women’s multivitamins even during preconception
 - Women should be taking once they reach reproductive age
- 1 in 4 Baltimore women do not seek prenatal care until after the first trimester
- Adequate folic acid especially important in early pregnancy to prevent neural tube defects
 - Obese women need more folic acid and are at higher risk
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: prenatal vitamin manufacturers, physicians, and CCP

10. Integrate sexual education curriculum with nutrition education

- Currently, nutrition education and sexual education are taught as two separate domains in the Baltimore City Public Schools Health Curriculum
- The topics should be combined at some point in high school to address the importance of good nutrition in pregnancy and early prenatal care
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: School system, Parents

11. Mandate more physical education be completed prior to graduating

- Currently, only one semester of physical education is required
- Increase requirement could be four semesters of engaging physical activity, completed in the order that the student prefers
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: School system

12. Implement a junk food or soda tax in neighborhoods

- Corner stores
- Money can be funneled back into the same communities to implement healthy strategies, such as the Green Cart program or a sustainable physical activity program
- Playworks Baltimore
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: Consumers

13. Maintaining and promoting sustainability of school meal reform in BCPS



- School meal reform implemented for the 2009-2010 school year
 - Includes Meatless Mondays, partnering with local farm, fresh fruits and vegetables, minimally processed whole grains, on-site meal preparation
 - More nutritious, environmentally-friendly, cheaper
- 73% of students participate in the USDA free and reduced lunch program
- Eat one or two meals, five days a week at school → school is a good place for preconception, nutrition intervention
- Do evaluations that assess cost-effectiveness, classroom focus/performance, students'/parents' reception of changes
- Portion size should also be addressed
- Barriers challenged: Education/Knowledge, Cultural Norms, Access, Time, High expenses

14. Restrict candy and soft drinks sales in school vending machines between 8 am and 3 pm

- Reduces consumption
- Barriers challenged: Restricts access to unhealthy food
- Needed support: School system

15. Increase parental involvement in school health and nutrition curriculum

- Disconnect of what is taught at school and what is taught at home
- How to bridge the gap?
- Distributing healthy recipes for parents
- Educational workshops two evenings in the semester for the parents
 - Offer a free, nutritious dinner as an incentive
- Have parents of students care for a fruit and vegetable garden at school
- Barriers challenged: Education/Knowledge, Cultural Norms
- Needed support: School system

16. Organize community education workshops

- Should not be limited to parents of public school students
- Nutrition-specific workshops for pregnant women and the general community
- Interactive
- Include male partner
- Culturally appropriate
- Barriers challenged: Education/Knowledge, Cultural Norms, Access
- Needed support: Community residents

17. Expand MCHP coverage for pregnant women to 6 months postpartum

- MCHP targets children in families who are not eligible for Medicaid, but are still low-income
- Also covers pregnant women , regardless of age
- Includes prenatal and postpartum care and family planning services.
- In Maryland, lose coverage two months post-partum
- Barriers challenged: Access
- Needed support: physicians, MCHP

18. Cover parental benefits under MCHP until the child is age 5

- Some states provide parental coverage and benefits through the Children's Health Program
- Maryland does not
- Barriers challenged: Access
- Needed support: Physicians, MCHP

19. During physician visits, increase awareness about coverage and accessibility for Medicaid beneficiaries

- Medicaid covers access to a nutritionist in Baltimore City
- Nutritionists do accept Medicaid
- Covered for children under age 21 as part of EPSDT/Healthy Kids Federal requirements
- Covered for adults if referred by a primary care provider, especially diabetes and cardiac patients
- Physicians would be advocates for this information
- Barriers challenged: knowledge/education, Access
- Needed support: Physicians

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