North Carolina's Plan to Address Obesity: Healthy Weight and Healthy Communities 2013-2020

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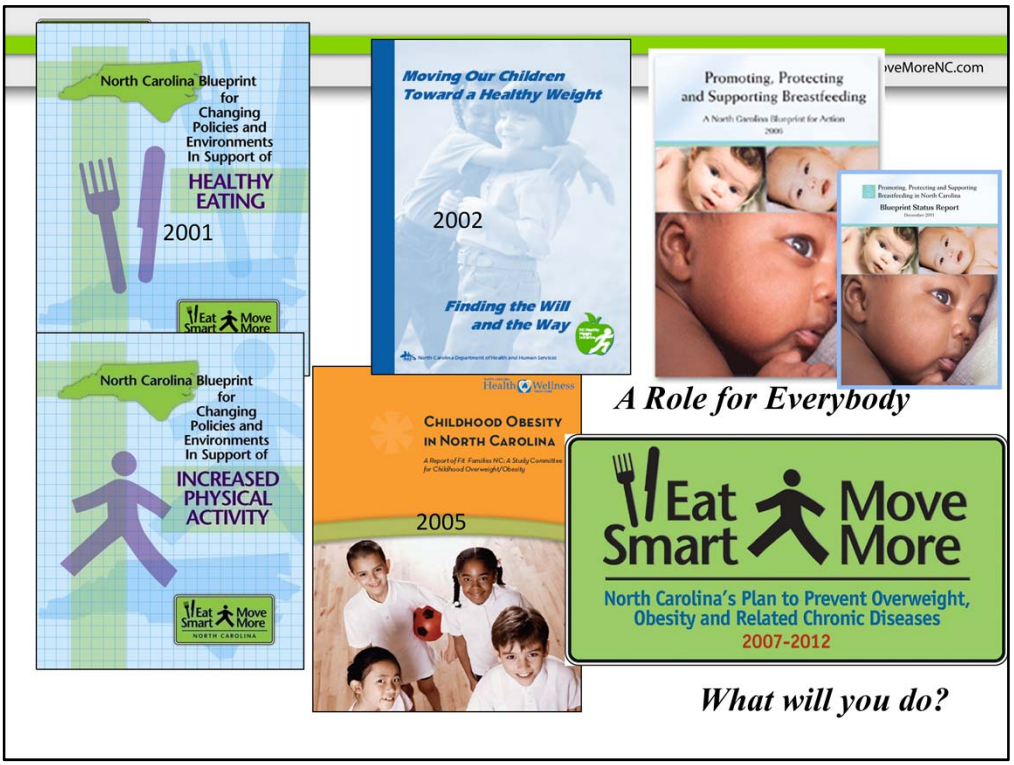
North Carolina's new Obesity Prevention Plan titled *North Carolina's Plan to Address Obesity: Healthy Weight and Healthy Communities 2013-2020* was released on January 24th.

Objectives

- Describe the core behaviors to address overweight and obesity included in the 2013-2020 plan;
- Describe strategies for health care; worksites; and colleges & universities to encourage adoption of six core behaviors;
- Describe local efforts to implement the state plan; and,
- Commit to at least one strategy.

Acknowledge Vidant Health's support for Dr. Kolasa's participation on planning and writing teams



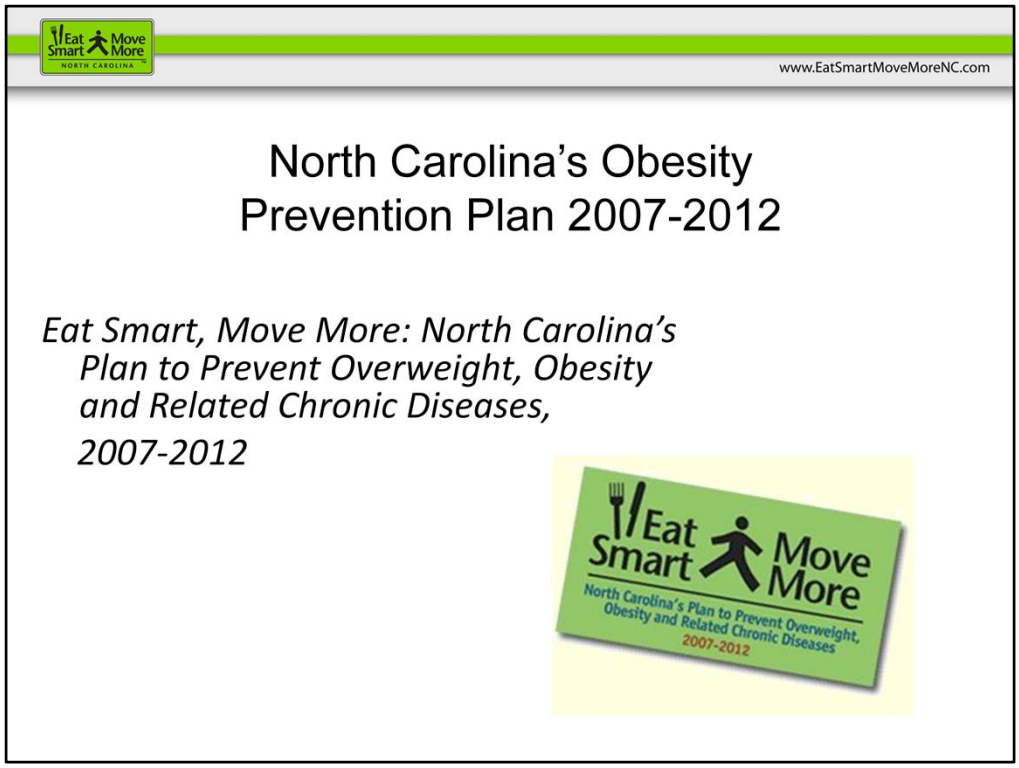
Personal involvement started with 2001 Health Eating Blueprint. I was senior author of that Blueprint and got me involved in world of policy. NC may have been the first state to have this type of plan. In 2002 played a small part in the healthy weight for children plan. Not much evidence at that time. I was appointed by the governor to represent the East ion the Childhood Obesity Task Force and we issued a report in 2005
Catherine Sullivan formerly of our department provided leadership for the breastfeeding plan and Dr. Weismiller and I played a role in its development. I was on the first NC Obesity plan. About 25 states have these plans.. If not required, an understanding that you will have one to get CDC funding; and now the 2013 plan .. The evidence has been evolving…

Let's start with some background. The Eat Smart, Move More North Carolina is a movement across our state to help people eat smart and move more wherever they live, learn, earn, play and pray. Anyone who works to make healthy eating and physical activity the easy choice for North Carolinians is considered part of this movement.

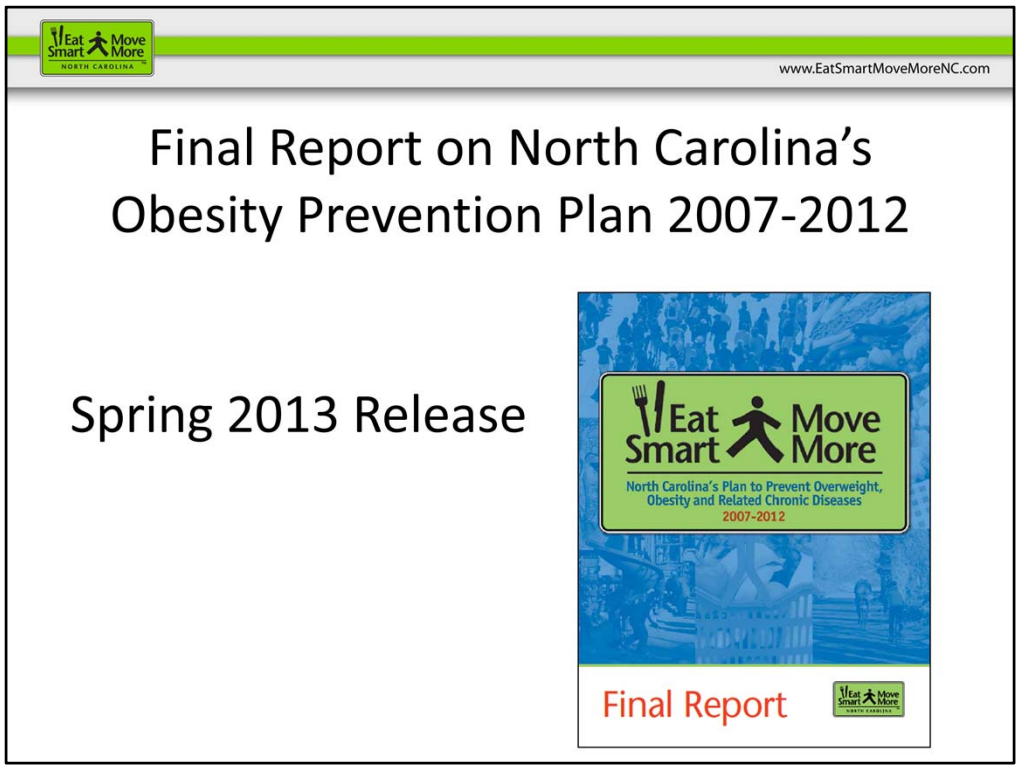
Started in 2003 and organizational structure formalized in 2006

The Eat Smart, Move More NC movement is guided by the ESMM NC Leadership Team. The Leadership Team is a partnership of organizations who work to increase opportunities for healthy eating and physical activity. Any organization whose mission aligns with the mission of the Leadership Team is welcome to join. There are currently over 80 partner organization in the Eat Smart, Move More NC movement.

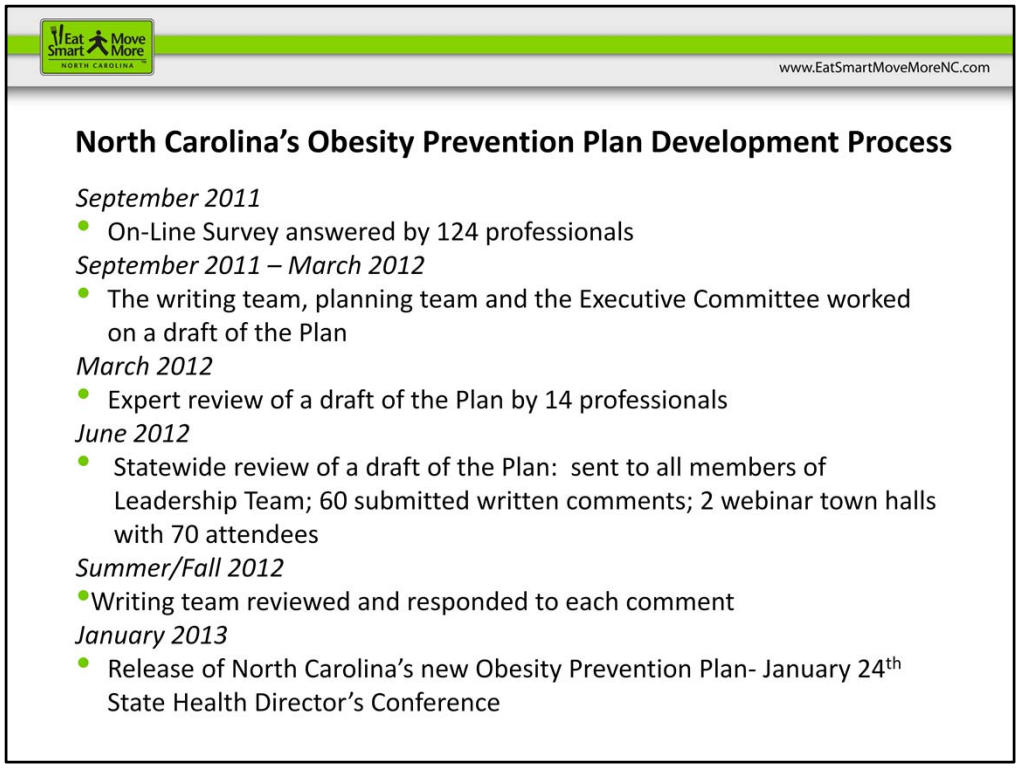
You can learn more about the Eat Smart, Move More NC Leadership Team and movement by visiting the our web site, listed on your screen. If you are interested in becoming a member of the Leadership Team, you can click on the “contact us” page of the web site for more information.



The Eat Smart, Move More NC Leadership Team created and released the first state plan in 2006. It provided a unique opportunity for every organization working in obesity prevention to focus on common goals and objectives, and use the same strategies. This plan guided our efforts for the past five years.



In spring 2013, we will be releasing a final report on the 2007- 2012 Plan. The report will provide an update on the progress that was made on North Carolina's Obesity Prevention Plan 2007-2012. It will include progress on reaching the goals and objectives of the Plan, as well as stories from communities across the state that have put the Plan's strategies into action.



North Carolina's Plan to Address Obesity: Healthy Weight and Healthy Communities, 2013-2020 was created under the guidance of the 2011-2012 Eat Smart, Move More NC Executive Committee. The Executive Committee established a writing team and a planning team to oversee the development and review of the Plan. The six member writing team was led by the Past Chair of the Executive Committee. The writing team was responsible for the overall writing and coordination of the Plan development. The planning team consisted of members of the writing team plus seven additional members from the Eat Smart, Move More North Carolina Leadership Team. The planning team guided the development of the Plan and provided feedback on early drafts of the Plan.

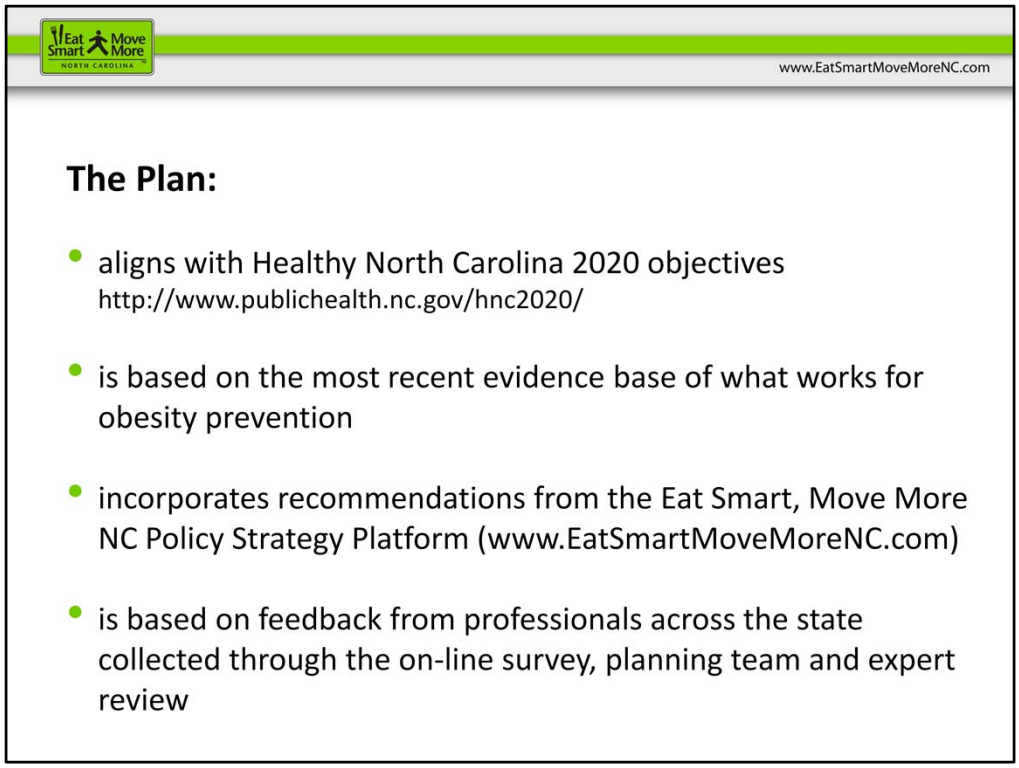
The development process began in September 2011 with an on-line survey. One hundred and twenty four professionals from across the state responded to questions about the current obesity prevention plan to inform the development of the new plan. A writing team and planning team composed of representatives from the Eat Smart, Move More NC Leadership Team created a draft plan under the advisement of the Executive Committee that was informed by the survey feedback.

In March, a review of the plan was conducted by technical experts. Overall, the Plan was reviewed by 14 subject matter experts.

In June 2012, we conducted a statewide review of the Plan. An email was sent to all the members of the Eat Smart, Move More NC Leadership with an opportunity to review the document and provide feedback. Over 60 people responded electronically. We also held

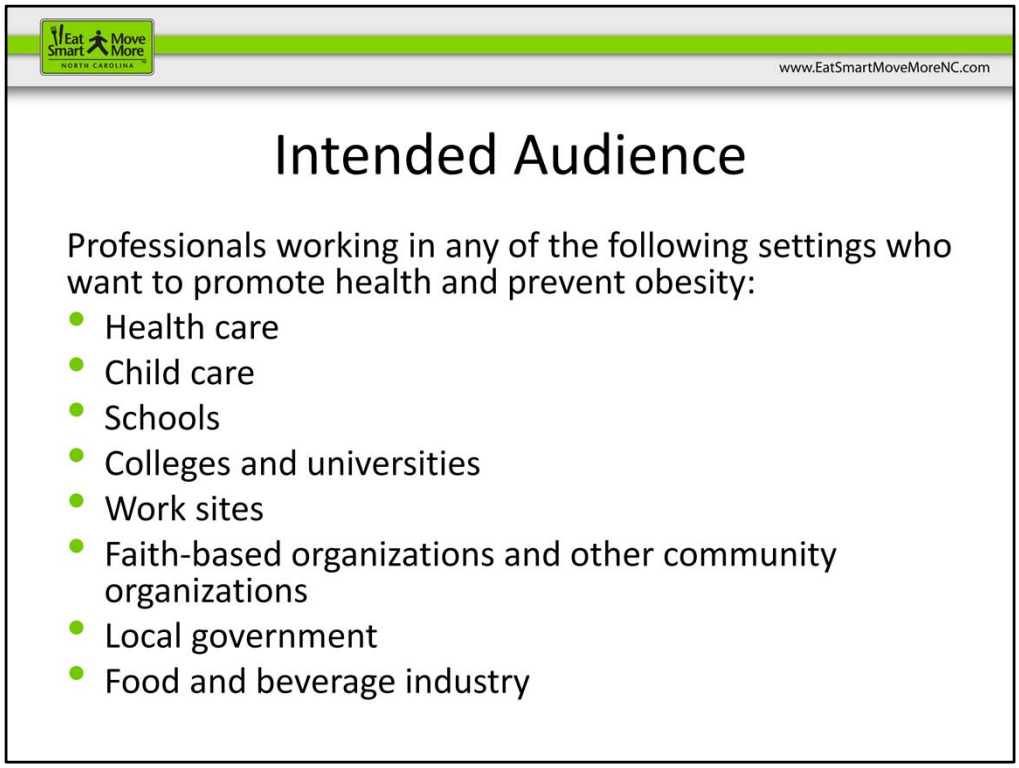
virtual town hall meetings during this time (webinars) and over 70 people attended.

The plan will be released next week, on January 24th, at the State Health Directors Conference.

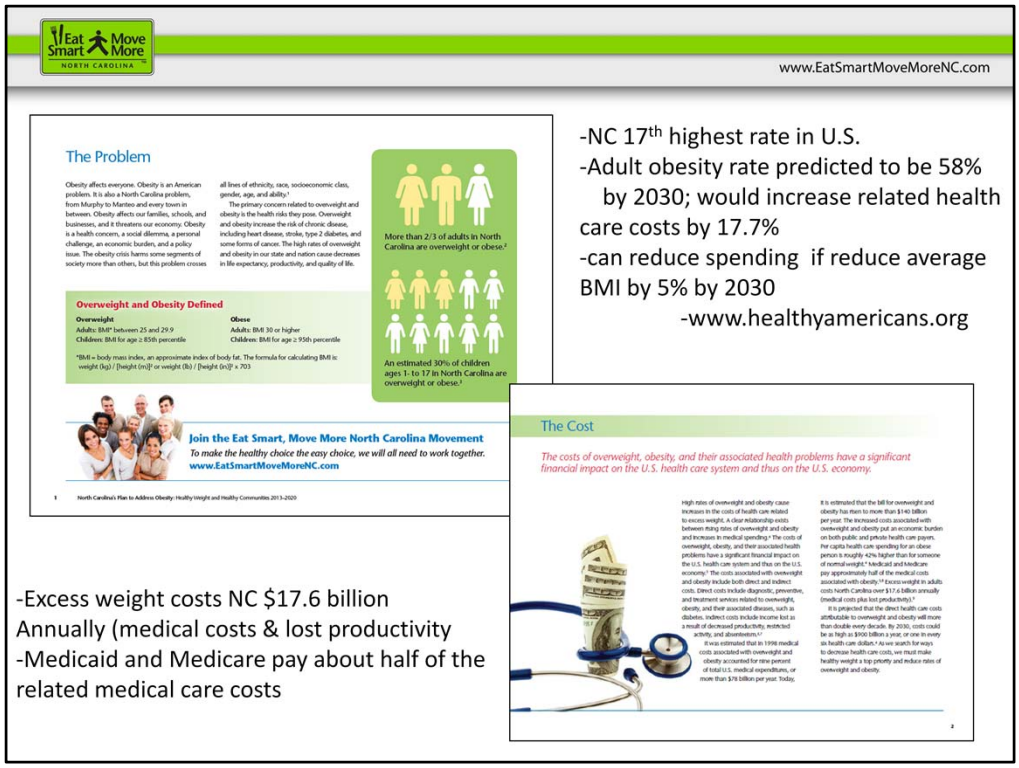


The plan:

- Aligns with Healthy North Carolina 2020 objectives
- Is based on the most recent evidence base of what works for obesity prevention
- Incorporates recommendations from the Eat Smart, Move More NC Policy Strategy Platform
- Is based on feedback from professionals across the state collected through the on-line survey, planning team and expert review



The Plan is intended for a broad audience – for professionals working in in any of the following settings who want to promote health and prevent obesity:
Health care
Child care
Schools
Colleges and universities
Work sites
Faith-based organizations and other community organizations
Local government
Food and beverage industry



-The Plan outlines the problem of obesity and the cost.
2/3 adults are overweight or obese
30% children 10-17 years old
Excess weight in adults costs NC $17.6 billion annually (medical costs and lost productivity)
-care for overweight person is 42% higher than normal weight

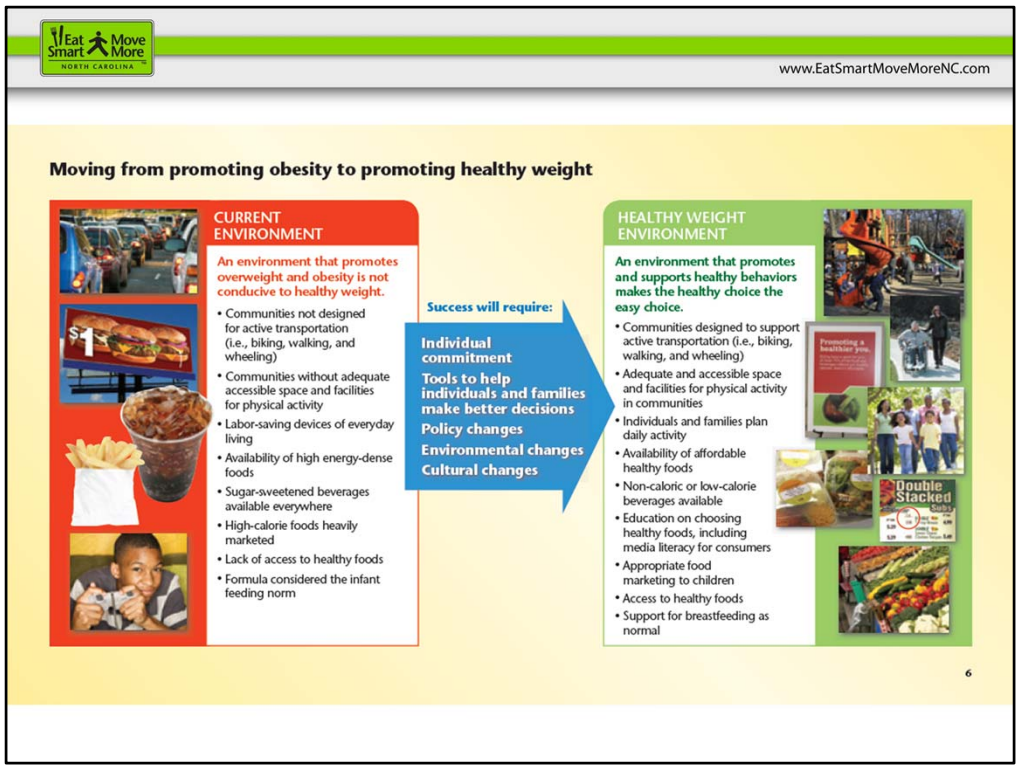
-text box if from Trust for America's Health and RWJ report, F as in Fat: How obesity threatens Americas future, 2012

if BMI is 40 get it down 2 points to 38… that is a weight loss of

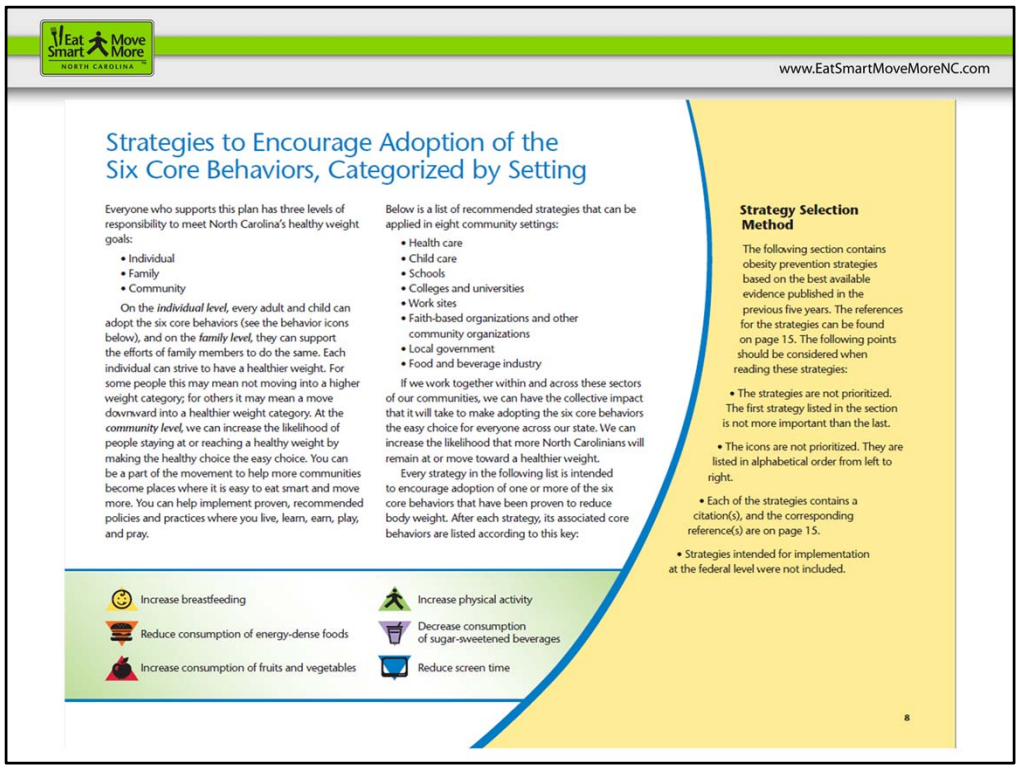
BMI and Mortality

- Lots of press recent systematic review and meta-analysis in JAMA (Flegal et al; 2012;309:71-82) no increased mortality risk in overweight adults
  - Greatest risks BMI >35 and BMI <18.5
- BMI known to be imperfect measure; recommendation to add waist circumference since 1998
- Aggressive management of weight related co-morbidities could be lowering the predictive value of BMI
- *Doesn't address quality of life and morbidity?!*

It explains the core behaviors for obesity prevention.
-increase physical activity
-increase consumption of fruits and vegetables
-decrease consumption of sugar sweetened beverages
-reduce consumptionof energy dense foods
Increase breastfeeding initiation, duration and exclusivity



The Plan uses a new graphic to summarize the change that is needed… a shift from our current environment to one that makes the healthy choice the easy choice.
-previous plans emphasized the socio-ecological model.. We wanted a new way of showing it



www.EatSmartMoveMoreNC.com

Strategies to Encourage Adoption of the Six Core Behaviors, Categorized by Setting

Everyone who supports this plan has three levels of responsibility to meet North Carolina's healthy weight goals:

- Individual
- Family
- Community

On the ***individual level***, every adult and child can adopt the six core behaviors (see the behavior icons below), and on the ***family level***, they can support the efforts of family members to do the same. Each individual can strive to have a healthier weight. For some people this may mean not moving into a higher weight category; for others it may mean a move downward into a healthier weight category. At the ***community level***, we can increase the likelihood of people staying at or reaching a healthy weight by making the healthy choice the easy choice. You can be a part of the movement to help more communities become places where it is easy to eat smart and move more. You can help implement proven, recommended policies and practices where you live, learn, earn, play, and pray.

Below is a list of recommended strategies that can be applied in eight community settings:

- Health care
- Child care
- Schools
- Colleges and universities
- Work sites
- Faith-based organizations and other community organizations
- Local government
- Food and beverage industry

If we work together within and across these sectors of our communities, we can have the collective impact that it will take to make adopting the six core behaviors the easy choice for everyone across our state. We can increase the likelihood that more North Carolinians will remain at or move toward a healthier weight.

Every strategy in the following list is intended to encourage adoption of one or more of the six core behaviors that have been proven to reduce body weight. After each strategy, its associated core behaviors are listed according to this key:

- Increase breastfeeding
- Reduce consumption of energy-dense foods
- Increase consumption of fruits and vegetables
- Increase physical activity
- Decrease consumption of sugar-sweetened beverages
- Reduce screen time

Strategy Selection Method

The following section contains obesity prevention strategies based on the best available evidence published in the previous five years. The references for the strategies can be found on page 15. The following points should be considered when reading these strategies:

- The strategies are not prioritized. The first strategy listed in the section is not more important than the last.
- The icons are not prioritized. They are listed in alphabetical order from left to right.
- Each of the strategies contains a citation(s), and the corresponding reference(s) are on page 15.
- Strategies intended for implementation at the federal level were not included.

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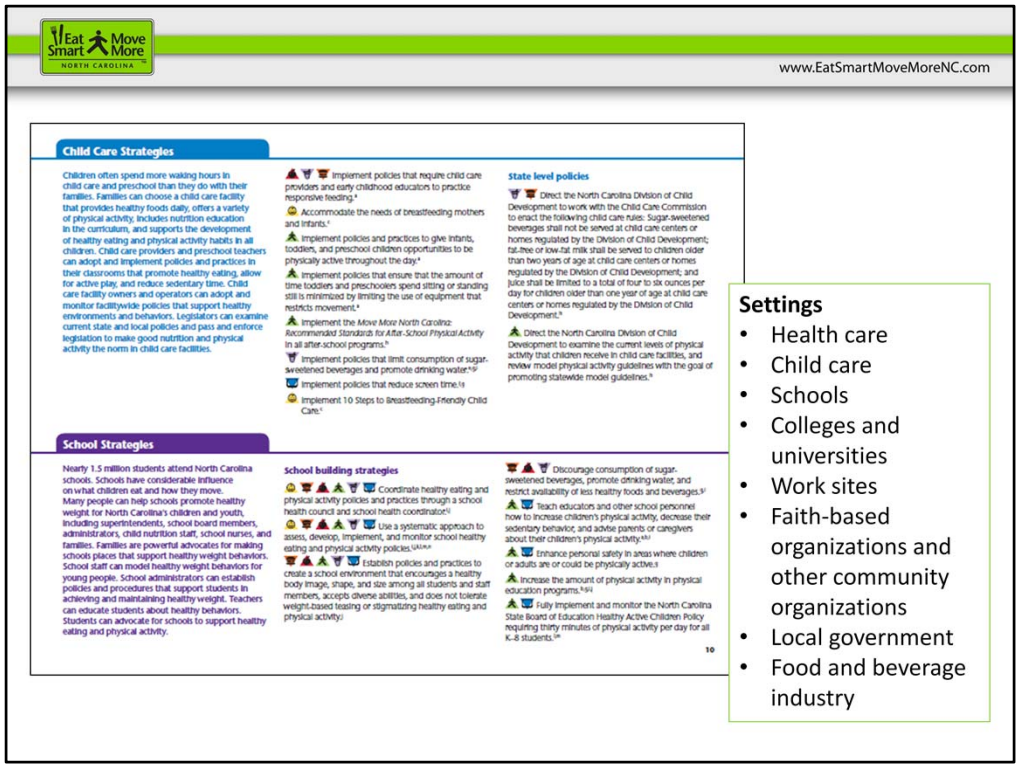
The Plan includes obesity prevention strategies, based on the best available evidence, for partners across the state to implement.

Yeoman work by several members of the writing team to match the strategies to evidence/references and icons



The strategies are organized by setting to make it easy for a reader to quickly find those that are more relevant.

Colleges and Universities

- Provide opportunities to volunteer with community coalitions/ partnerships addressing obesity.
- Include BMI screening & counseling at student health.
- Provide healthy food & beverages at dining facilities/ events.
- Implement menu-labeling policies & practices.
- Improve the capacity to purchase locally grown food.

Colleges and Universities

- Limit advertisements for less healthy foods & beverages.
- Implement policies to discourage sugar-sweetened beverages; increase consumption of water.
- Institute policies to support breastfeeding mothers.
- Several recommendations on policies/ practices/ infrastructure physical activity.

Worksites

- Provide worksite wellness programs; promote healthy foods & physical activity.
- Assess health risks; offer support to employees.
- Offer BMI screening & counseling.
- Use point-of-decision prompts encouraging use of stairs, drinking water, eating healthy.

Worksites

- Implement healthier food and beverage choice policies and practices.
- Offer options for smaller portion sizes in food services and vending.
- Support exclusive breastfeeding (6 mos.); then breastfeeding as long as mothers desire; provide space for pumping.

Health Care

Health care professionals can:

- Work for the creation of healthy environments, including vending, in healthcare worksites.
- Advocate for breastfeeding.
- As community leaders, can be powerful advocates for healthy eating & physical activity environments across all sectors of their communities.

Health Care

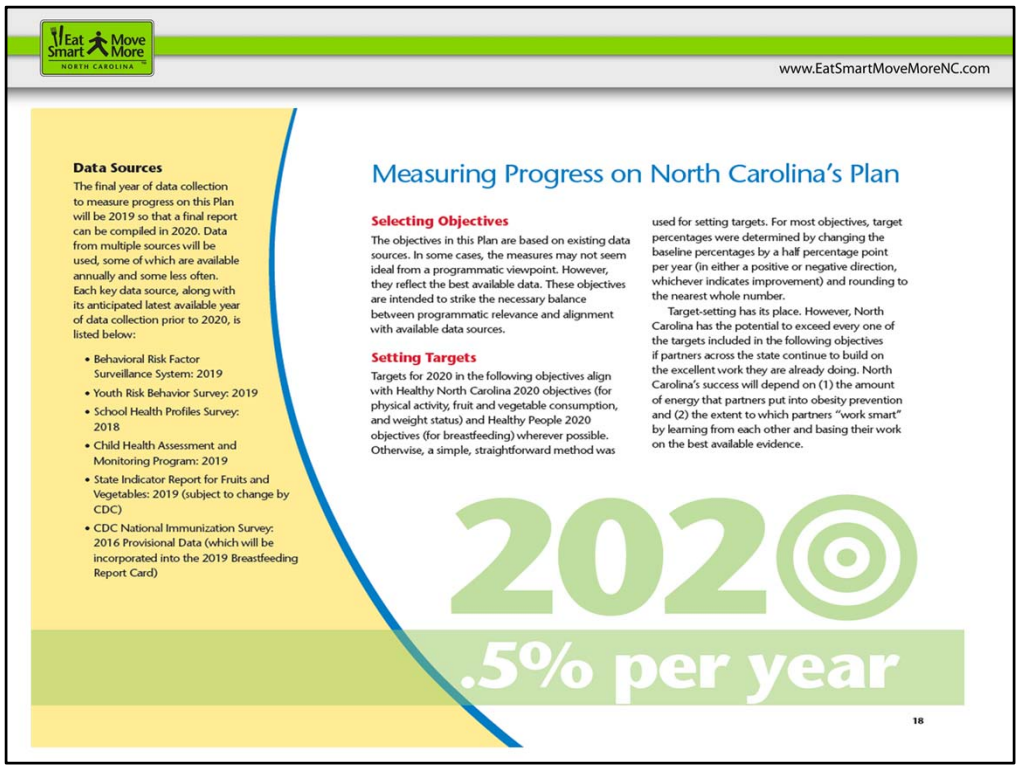
- Provide effective prenatal counseling about weight gain.
- Promote exclusive breastfeeding (6 mos.); continuation of breastfeeding with complementary food (1+yr).
- Record infant/ child growth in every well-child visit. Counsel caregivers about risk factors for obesity; about their children's diet.
- Use terms that are appropriate when defining healthy weight/ BMI; ways to achieve it.
- Advise caregivers to limit screen time (<2 hr/d); discourage placement of TV, computers, or other devices in bedrooms.

Health Care

- Practice healthy lifestyle behaviors; be role models, participate in community coalitions.
- Establish policies/ practices to offer counseling and behavioral treatments for obese adults.
- Record patients' dietary patterns; physical activity levels; stress importance of daily PA.
- For people with severe mental illness, consider meds that are more weight-neutral; emphasize behaviors to minimize weight gain.

Health Care

- Limit ads of less healthy foods & beverages in clinical settings.
- Implement & maintain baby-friendly hospitals.
- Provide point-of-decision prompts encouraging use of stairs in clinical settings.



The Plan includes specific, measureable objectives on places and practices, healthy behaviors and weight status.
Use existing data sources

Lots of debate on how to set targets that would be achievable. Settled on moving the baseline percentages a half percentage point per year in either a positive or negative directions.. Which ever indicates improvement and rounding to the nearest whole numbe

Measurable objectives

46 listed in total

- Data not available for all recommendations made in the document
- By Jan 1, 2020, at least 29% of NC adults will consume >5 servings fruits an vegetables/d (baseline in 2011 is 13.7%)
- By Jan 1, 2020, no more than 20% of NC adults will be obese (baseline in 2011 is 29.1%)

East Carolina University's Response to the Plan

- Coordinated Leadership (p.23): Joined Team
- Chancellor appointed Task Force to review plan; assess current state at ECU; make recommendations
  - Challenges: no available data on obesity rates of students, staff, faculty
  - ECU participating in Work Healthy America. Team attending Prevention Institute in January
  - Snack vending survey completed. Policy being drafted.

ECU Family Medicine's Response to the Obesity Plan

Offering evidence based weight management services to all patients

Establish policies and practices to offer counseling and behavioral interventions for adults identified as obese

Medical Nutrition Therapy (MNT)

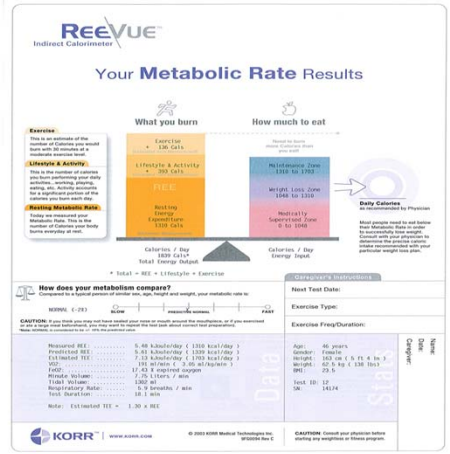
- Covered by many private medical insurance companies
  - State BCBS covers 4 visits per year for weight management
  - Many private BCBS policies offer 6 visits per year
  - Medicare covers visits for diabetes and renal disease
  - Intensive Behavior Therapy for Obesity
  - Medicaid does not cover nutrition for adults

Managed Care, 2013

Conclusion: MNT is a valuable adjunct to health management programs that can be implemented for a relatively low cost. MNT warrants serious consideration as a standard inclusion in health benefit plans.

Academy of Nutrition and Dietetics

- **Evidence Analysis Library-Adult Weight Management (AWM)**
  - Determining Energy Needs: Estimated energy needs should be based on RMR. If possible, RMR should be measured (e.g., indirect calorimetry).
  - If RMR cannot be measured, then the Mifflin-St. Jeor equation using actual weight is the most accurate for estimating RMR for overweight and obese individuals.
  - Rating: Strong



MNT for weight management at FMC includes measuring Resting Energy Expenditure and development individualized meal plans

Measured REE:	5.48 kJoule/day (1310 kcal/day)
Predicted REE:	5.61 kJoule/day (1339 kcal/day)
Estimated TEE:	7.13 kJoule/day (1703 kcal/day)
VO2:	191 ml/min (3.05 ml/kg/min)
FeO2:	17.43 % expired oxygen
Minute Volume:	7.75 Liters / min
Tidal Volume:	1302 ml
Respiratory Rate:	5.9 breaths / min
Test Duration:	18.1 min

Note: Estimated TEE = 1.30 x REE

Age:	46 years
Gender:	Female
Height:	163 cm (5 ft 4 in)
Weight:	62.5 kg (138 lbs)
BMI:	23.5
Test ID:	12
SN:	14174

Name:
Date:
Caregiver:

Measured REE:	4.10 kJoule/day (979 kcal/day)
Predicted REE:	5.69 kJoule/day (1359 kcal/day)
Estimated TEE:	5.32 kJoule/day (1270 kcal/day)
VO2:	142 ml/min (2.20 ml/kg/min)
FeO2:	15.41 % expired oxygen
Minute Volume:	3.44 Liters / min
Tidal Volume:	873 ml
Respiratory Rate:	4.2 breaths / min
Test Duration:	10.6 min

Note: Estimated TEE = 1.30 x REE

Age:	47 years
Gender:	Female
Height:	166 cm (5 ft 5 in)
Weight:	64.5 kg (142 lbs)
BMI:	23.4
Test ID:	6
SN:	14174

Name:
Date:
Caregiver:

REE varies significantly from patient to patient

Daly JM, Heymsfeld SB, Head A, Harvey LP, Nixon DW, Katzeff H, Grossman GD. Human energy requirements: Overestimation by widely used prediction equation. *Am J Clin Nutr* 1985;42:1170-1174.

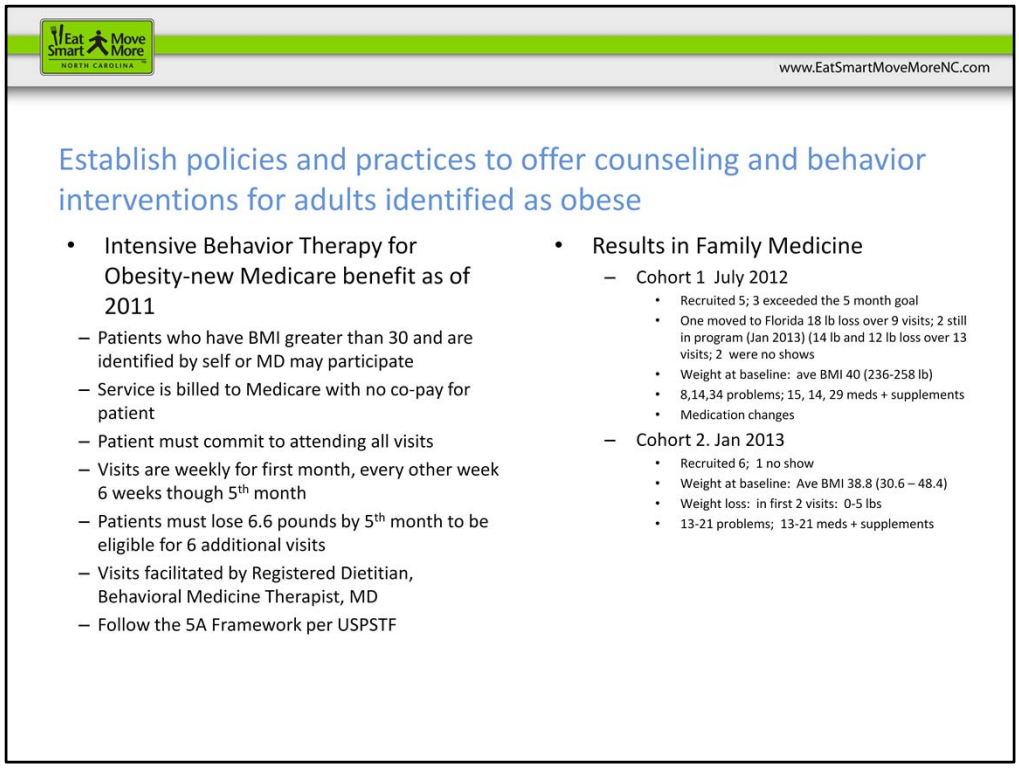
Establish policies and practices to offer counseling and behavioral interventions for adults identified as obese

Weight Management Classes

- Are offered without charge to all patients upon referral by ECU Family Medicine Physicians and Extenders
- Meet weekly in the Family Medicine Center auditorium
- Measures weight at every visit
- Teach evidence based concepts for achieving and maintaining a healthy weight
- Includes monthly session provided by behavior medicine staff on resolving barriers and achieving lifestyle change
- Includes monthly session on adaptive exercise taught by exercise physiology students
- Assist patients in goal setting using SMART goals at each session
- Documented in patient chart for communication with physician
- Provide notification to providers via group email of week's activities and progress to enhance awareness of services
- Provide opportunity for third year medical students to have obesity training
- Provide opportunity for ECU Physician volunteers to interact with patients

Success to date

- 170 adults attended the class in the last 18 months
- 62 adults attended regularly and lost weight
- Average weight loss 6 lbs
- 368.6 lbs total lost for the group
- 37.2 lbs was largest weight loss for one individual who was regular attender
- About 20% of the group who lost weight, lost more than 10 pounds
- 82 adults attended only one time



Cohort 1: 2 continuing have T2DM

Practice healthy lifestyle behaviors, be role models for patients, and participate in community coalitions

- 10 week weight management class to faculty and staff of the Family Medicine Department
- Used State Health Plan weight management benefit
- 15 participants
- Weight change range +3 to -13.6 pounds
- Average weight loss per participant 4.4 pounds

- Class included:
  - Resting Energy Expenditure (REE) measurement
  - Personalized meal plan developed by a Registered Dietitian
  - Included formal group exercise classes
  - Included formal group nutrition classes
  - Used point-of-decision prompts at stairs

Diabetes Education and Management Program

- BRIDGE
  - Bringing Resources and Instruction in Diabetes into Group Encounters
- Target audience
  - Patients with poorly controlled diabetes and without resources for diabetes education
- Goal
  - Improve diabetes control with focus on minimizing weight gain

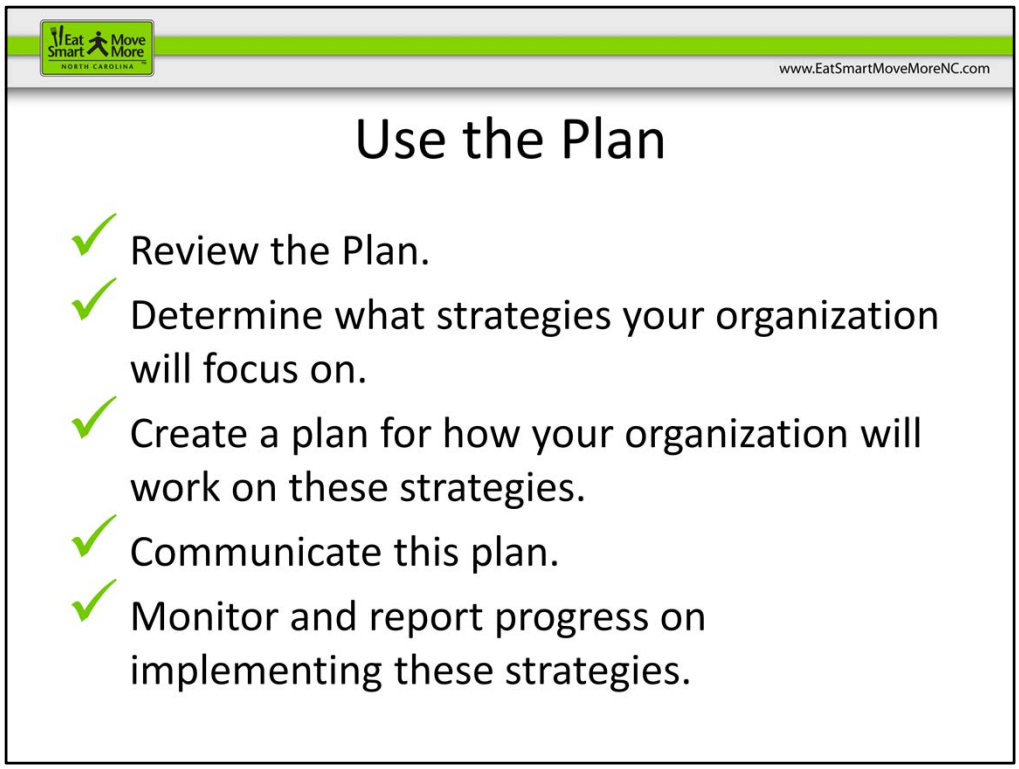
	Baseline Average	Current Average	Better or Worse
A1C (Sugar control)	10.7	9.1	Better

- **A1C** –**76% of those participants with baseline and current A1C levels improved with an average reduction of 1.6 points and a range of reduction of 1.6 - 7.0 points.**
- **Weight**–**Of the participants who improved their diabetes control, 68 % lost or maintained weight with an average of 3.4 pounds lost. The largest weight loss for an individual participant was 94 pounds.**

Vending in the new FMC

- Vidant: 75% meet calorie goals
- City of Greenville/GUC:50% meet calorie goals
- ECU Business Services: strive for 25% snacks
  <200 calories
  -Health Sci at 14%; West campus at 16% (Jan 2013)
- ECU Fam Med guiding principles: 50% snacks meet calorie goals; at least 2 slots with diet drinks; stock water
  (not realized)

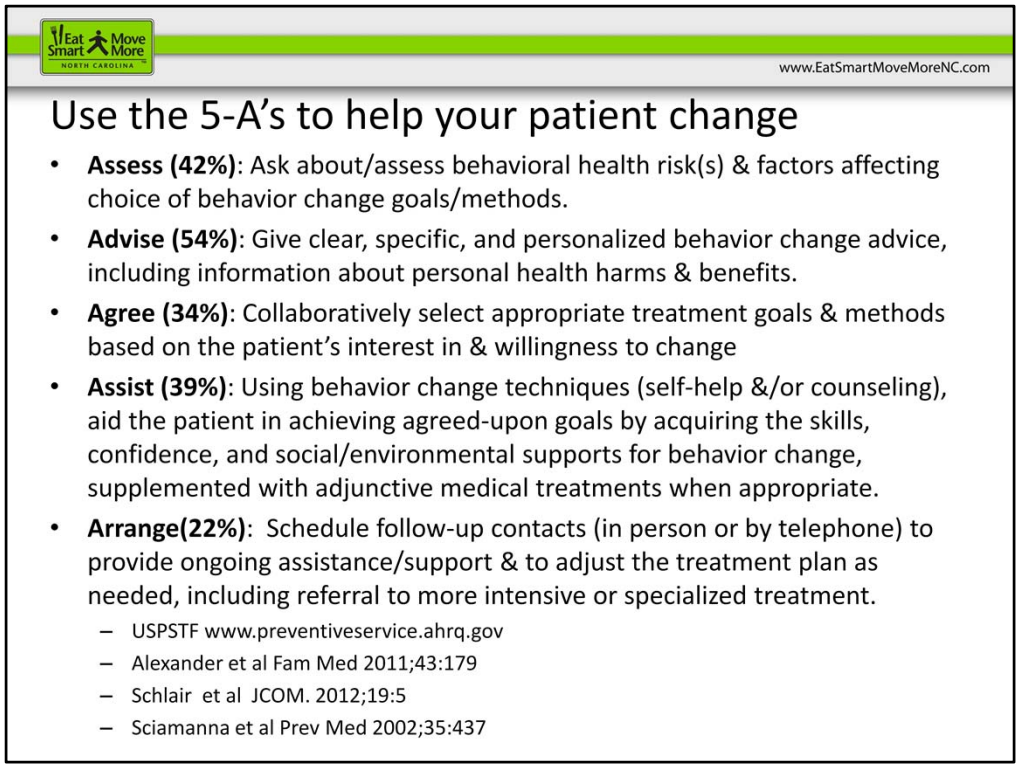
NC MCBFD is based on BFHI. We use the same thresholds as BFHI but allow facilities to work across a continuum of improvement awarding a star for every two steps implemented. It is voluntary and has no fees attached. No site visit is required but they must submit validating material for each step. But not a proxy



As partners hear about the Plan, it is our hope that they will follow these simple steps. The first step is to determine what strategies from the Plan their organization or coalition will focus on. This might mean scheduling meetings with internal staff or leadership to discuss and make this decision. The next step is to create a plan for how the organization or coalition will work on these strategies. Then comes the important step of communicating this plan to make sure that everyone is on the same page. Finally, we encourage partners to monitor and share their progress on putting the Plan's strategies into action.

What more can we do?

- Consider recent JAMA viewpoint: "changing physical activity participation for the medical profession" Yancey et al. Jan 9, 2013, p. 141-142
  - Emerging data suggests physical activity bouts as short as 3-5 minutes may contribute to positive organizational and individual health outcomes
  - Have structured group exercise breaks or during meetings; encourage use of stairs; park further from the building



85% primary care docs do at least one step; only 5% complete all 5 steps routinely; percentages after each item are based on studies on how often the primary care provider does those steps

Help set patient set a **SMART** goal

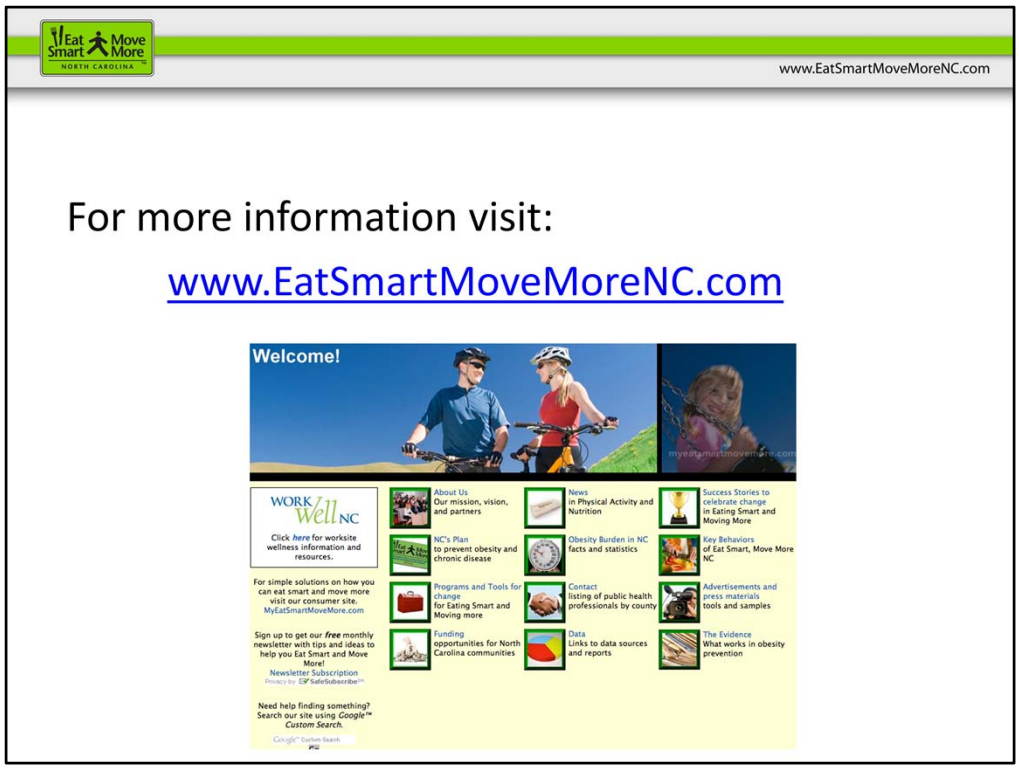
- **S**pecific/significant/stretching (where, when, how)
- **M**easurable/meaningful/motivational (how much? many?)
- **A**ttainable/Achievable/agreed upon/action oriented
- **R**ealistic/relevant/reasonable/rewarding/result oriented
- **T**rackable/timely tangible

- Seal THE DEAL!

What if we Don't/Do?

- Estimate adult obesity rate would rise from current 29.1% to 58% by 2030 with related health care costs increasing 17.6%
- If BMIs lowered by 5%, North Carolina could save 7.5 % in health care costs (~$ 21,101,000,000 by 2030).
- The number of North Carolinians spared from developing new cases of major obesity-related diseases includes:
  - 261,785 people could be spared from type 2 diabetes
  - 213,310 from coronary heart disease and stroke
  - 195,735 from hypertension
  - 115,491 from arthritis
  - 17,382 from obesity-related cancer.

  - From "F as in Fat: How Obesity Threatens America's Future, 2012" prepared by Robert Wood Johnson Foundation. http://www.healthyamericans.org



You can learn more about the Eat Smart, Move More NC Movement and Leadership Team at www.EatSmartMoveMoreNC.com.