Culinary Medicine:

An Interdisciplinary Approach

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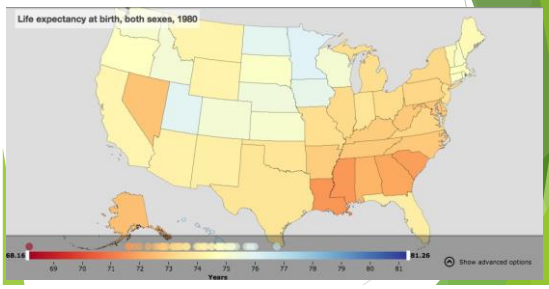
Objectives

- Identify linkages between diet and chronic disease.
- Discuss relationships between diet, health, and food access in Mississippi.
- Define Culinary Medicine and outline the Culinary Medicine program at UMMC.
- Discuss the expansion of the UMMC Culinary Medicine program into community outreach and research opportunities.

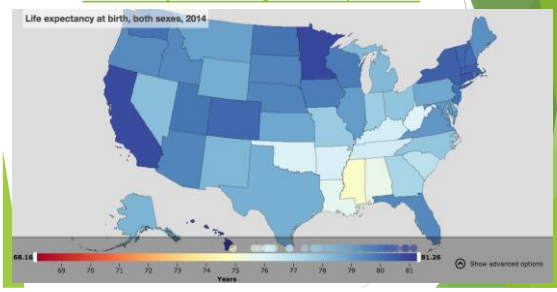
Disclosures

- No financial interests
- No conflicts of interest
- No off-label drug utilization
- **But we do like food!**

Life Expectancy in MS, 1980



Life Expectancy in MS, 2014



Mississippi's Top Health Problems

- Cardiovascular Disease
- Diabetes
- Obesity

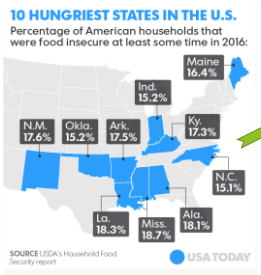
So, what do these conditions have in common?

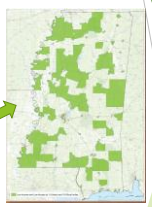
Food Access in Mississippi

Holmes County Farm
(MS Extension Service)

The only grocery store in Tchula lacks fresh produce and many of the everyday food items families need.
(Photo: Anna Wolfe/The Clarion-Ledger)

Food Insecurity

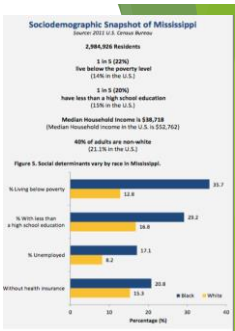




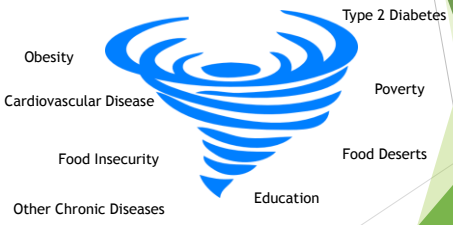
Food Deserts
in Mississippi
(Food Atlas, USDA)

Social Determinants of Chronic Disease

- Chronic diseases and food insecurity rates are frequently elevated among socioeconomically disadvantaged groups
  - Racial minorities
  - Low-income families
  - Low educational attainment
  - Unemployed

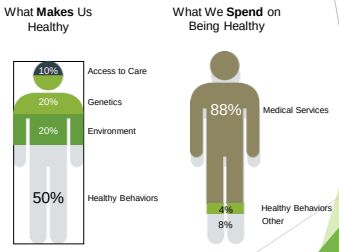


Perfect Storm for Poor Health Outcomes

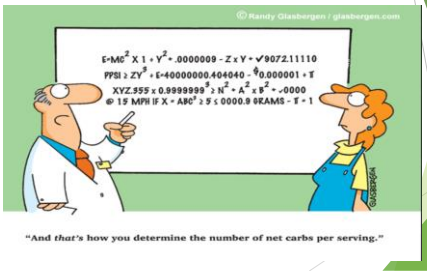


So, what do WE do now????

What Makes Us Healthy?



Food & Health



Nutrition Education Efforts

- UMMC
- Community Classes
- Research
- School of Medicine

What is Culinary Medicine?

- Not nutrition or dietetics
- Not preventive or internal medicine
- Not culinary arts or food sciences

It is an evidence-based medical field that blends the art of food and cooking with the science of medicine and nutrition

---- Puma (2016) What is Culinary Medicine and What Does It Do? Population Health Management 19(1): 5-7

Culinary Medicine

- Limited nutrition education for medical students and practitioners at UMMC
- Increased treatment of diet-related chronic diseases
- Tulane Goldring Center for Culinary Medicine
- Piloted as a Cooking Club
- Currently incorporated in medical school curriculum

Culinary Medicine Selective

- Introduction to Medical Professionalism Selective
- 30 medical students
- 3 sessions during the M1 year
- Modules include:
  - Introduction and Mediterranean Diet
  - Weight Management
  - Diabetes
- Pre-readings for each session

Culinary Medicine Classes



- 5:30 – 8:30 P.M.
- "pop-up" style cooking stations with limited access to a kitchen – set up beforehand
- Administer pre-test
- Didactic portion (30 minutes)
- Group assignments, review recipe, gather ingredients
- Cook! – 1 to 1.5 hour(s)
- Eat family style and discuss recipes & readings
- Clean up!
- Post-test

Example: Introduction/Mediterranean Diet

- Pre-test: What is a legume?!
- Didactic: No, drinking red wine does not count as a fruit serving ☺
- Cooking:
  - Group 1: Salad with red wine vinaigrette
  - Group 2: Traditional spaghetti with meat sauce
  - Group 3: Spaghetti with ½ meat sauce with mushrooms
  - Group 4: Spaghetti with meat & lentils
  - Group 5: Spaghetti with lentils
- Eat & Discuss: Recipes & Reading (*Impact of Preventive Medicine and Nutrition Curriculum for Medical Students)*
- Clean up and Post-test

https://youtu.be/wjUTyOpLJYk

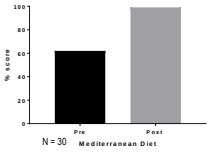
Goals:

- Comprehend **basic nutrition** and dietary information as it relates to chronic disease using evidence-based research
- Explore the **socioeconomic conditions** that affect dietary habits such cost, availability, and education
- Learn the essential tools needed to **communicate** healthy eating principles to patients in everyday, accessible ways
- **Practice** basic culinary terms, techniques, and principles while participating in hands-on cooking classes

Role of Registered Dietitians in Culinary Medicine

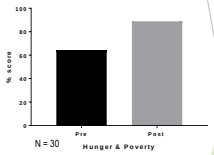
- Goal: introduce medical students to the **expertise of registered dietitians**
- Interdisciplinary approach
- Voice for guidelines and advocacy

Assessment – Pre & Post Test



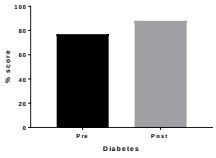
Q1: Which of the following is not one of the 9 components of the Mediterranean Diet?

Q2: Which of the following would not be considered a legume?



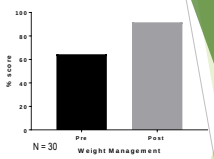
Q1: **What does SNAP stand for?**

Q2: **You automatically qualify for SNAP benefits if your income is below the poverty level?**



Q1:The best diet for someone with diabetes to follow is:

A. High carb/low protein
B. High protein/low carb
C. Eat only sugar-free foods
D. Other _____



What is a portion size?

A. A recommended amount of food
B. How much food you choose to eat
C. The amount of ingredients in a recipe
D. The amount of food as specified on the packaging
E. A standard amount of food to meet certain nutritional standards

Student Feedback

- Lots of questions!
  - "Is coconut oil good or bad?"
  - "Do you recommend the keto diet?"
  - "What about Arbonne?"
  - "Is intermittent fasting better than calorie restriction?"
  - "What do you think about….."
  - "Do people really have this little?"
  - "Is it okay to just drink an Ensure if I'm too busy to eat?"

Next Steps in Education

- M4 Elective Fall 2019
- Expand to other schools over the next 4 years
  - Health Related Professions
  - Nursing
  - Dentistry

Teaching Kitchen

- We need one!
- Currently using a "pop-up" style approach with limited access to a kitchen
- Jackson Medical Mall space

Community Outreach

OPERATION SHOESTRING
We All Rise Together

UNACARE Health Clinic, Jackson MS

Fresh Start

Get Right or Get Left

- Geared towards parents & their desire to learn about healthier options for their families
- 6 sessions

1. Introduction	4. Cooking session
2. Sugar	5. Cooking session
3. Spice	6. Potluck + RD counseling

- Activities

Example: Sugar Session

- Introduced the food label and demonstrated how to read it
- Hands-on activity
  - Different sugar-sweetened beverages
  - Count grams of sugar and scoop into bag
    - Basic math skills, using measuring spoons
  - Discussion

Research

- Community-based Participatory Research
  - Mapping Informal and Formal Food Outlets
  - GIS Mapping
  - Candy Ladies
    - Interviews
    - Quarterly Inventories
  - Parents, Teens, & Children
    - Focus Groups
    - Food diaries

Additional Research

- Educational Evaluation
  - UMMC Culinary Medicine Selective and M4 Elective

Future Directions

- Teaching Kitchen
- Expanded Student Classes
- Community Referrals
- Practitioner Sessions
- Research

THANK YOU!

Questions or want to connect?

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