Translating Obesity Research: Gatekeepers and mosquito controllers

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Assumptions & Parameters

- Focus on Obesity
- Previous Speakers addressed the need for and barriers to effectiveness and dissemination research
  - Different outcomes (e.g., implementation, adoption, dissemination)
  - Attenuation of effects
- Physicians are the Gatekeepers for Weight Management, Obesity, and Diabetes

McDonalds & the translation dilemma

Efficacy →	Effectiveness →	Dissemination
First Restaurant	2nd-3rd Restaurant	Franchising
Menu Design	Training Chefs	Minimizing Human Input
Creativity	Common Prep	Automation
Best Ingredients	Common Ingredients	Frozen & Prepared
Frequent Menu Change	Occasional Menu Change	Rare Menu Change
Master Chef	Line Cook	Short Order Cook

"Behavior therapy is a useful adjunct to planned adjustments in food intake and physical activity. Specific behavioral strategies include the following: self monitoring, stress management, stimulus control, problem solving, contingency management, cognitive restructuring, and social support." (page 13)

The Practical Guide to Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. NHLBI/NAASO

Most successful behaviorally based weight control programs have been developed and implemented by behavioral specialists

To what extent are intervention effects attained by highly skilled behavioral specialists (under efficacy conditions) generalizable to standard medical practice?

Efficacy → **Effectiveness** → **Dissemination**

Psychologists | Physicians | Managed Care

Technology Transfer

Disconnect Between Obesity Research (ers) and Clinical Practice

- The Len Epstein Problem
- Is it the Chef, the recipe, or the ingredients?

Gap In Technology Transfer

1. Epstein L, Valoski A, Wing R, McCurley J. Ten-year follow-up of behavioral, family-based treatment for obese children. JAMA 1990;264(19):2519-2523.
2. Epstein LH, Valoski AM, Kalarchian MA, McCurley J. Do children lose and maintain weight easier than adults: a comparison of child and parent weight changes from six months to ten years. Obesity Research 1995;3(5):411-7.
2. Epstein LH. Family-based behavioural intervention for obese children. International Journal of Obesity & Related Metabolic Disorders 1996;20(Suppl 1):S14-21.
3. Epstein LH, Coleman KJ, Myers MD. Exercise in treating obesity in children and adolescents. Medicine & Science in Sports & Exercise 1996;28(4):428-35.
4. Epstein L, Myers M, Raynor H, BE S. Treatment of Pediatric Obesity. Pediatrics 1998;101(3):554-570.

How do we replicate Epstein?

One Solution

Physician Counseling among Obese Patients

	% Obese Patients Receiving...
Weight Reduction Counseling	15%-36%
Exercise Counseling	18%-33%
Nutrition Counseling	23%-42%
Blood Pressure Measurement	57%-68%

Source: Stafford RS, Farhat JH, Misra B, Schoenfeld DA. National patterns of physician activities related to obesity management. *Archives of Family Medicine. 9(7):631-8, 2000*

Physician Counseling among Obese Patients

	% Obese# Responding Yes
In the past 12 months has a doctor, nurse, or other health professional given you advice about your weight?	42%

- BMI > 30 based on self-reported height and weight

Source: Galuska DA, Will JC, Serdula MK, Ford ES. Are health care professionals advising obese patients to lose weight. *JAMA. 282(16):1576-8, 1999 Oct 27.*

Perceived Barriers in the Treatment of Overweight Children and Adolescents

	Percentage Responding "Most of the Time" and "Often"		
Barrier	RDs (n= 441)	PNPs (n = 293)	Pediatricians (n = 201)
Lack of patient motivation	61.9*	78.2*	85.7*
Lack of parent involvement	71.8*	82.5*	81.2*
Lack of clinician time	31.2*	45.9*	58.0*
Lack of reimbursement	68.1*	46.8*	45.8*
Lack of clinician knowledge	23.8*	32.2*	44.0*
Lack of treatment skills	27.3*	32.2*	45.0*
Lack of support services	55.5	57.0	60.0
Treatment futility	37.4*	52.6*	53.0*
Eating disorder concerns	17.2*	12.9*	10.0*

Story MT, Neumark-Stzainer DR, Sherwood NE, Holt K, Sofka D, Trowbridge FL, et al. Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. Pediatrics. 2002;110(1 Pt 2):210-4.

Perceived Skill Level in Pediatric Obesity Management Among Practitioners

	% Low Proficiency Level		
	RDs	PNPs	Pediatricians
Use of behavioral management strategies	15.8*	32.5*	38.9*
Modification of eating practices	2.4*	8.2*	15.1*
Modification of physical activity	10.6	7.2	13.6
Modification of sedentary behavior	12.9	11.0	18.4
Guidance in parenting techniques	31.0*	20.7*	25.0*
Addressing family conflicts	45.9*	30.2*	30.0*
Assessment of the degree of overweight	4.3*	22.3*	16.8*

Story MT, Neumark-Stzainer DR, Sherwood NE, Holt K, Sofka D, Trowbridge FL, et al. Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. Pediatrics. 2002;110(1 Pt 2):210-4.

Research to Practice

Practitioner

Inadequate Skills

Low Efficacy

Low Motivation

- Low Perceived Benefit
- High Perceived Failure Rate
- Unmotivated Patients

Under Referral to Nutritional and Behavioral Support

System

Insufficient Time

Poor Reimbursement

MD, Nurse, RD, Psychologists

Lack of Prevention Focus

Emphasis on Risk Factors/Disease

Lack of Nutritional and Behavioral Support

The majority of physicians lack the confidence, motivation, time, skills, and economic incentive to treat their overweight patients

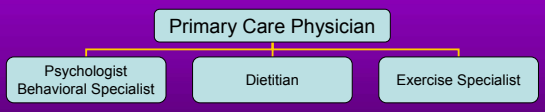
Solutions within Paradigm

- Practitioner
  - Improve Behavioral/Nutritional Skills Pre and Post Graduate
- System
  - Improve Collaboration between Medical and Behavioral Professions
  - Improve Reimbursement for Behavioral Components of Treatment & Prevention
    - De-emphasize co-morbidities
  - Create Obesity prevention/treatment specialists
    - CDE, HIV & ATOD
- Research
  - Conduct Practice-Based Intervention Research, tailored to clinical practice
    - Consistent with physician's training, practice orientation, and time
  - Technology-based Interventions
    - Internet, PDA, Computer Interactive, Telephone-linked Counseling

Solutions Outside Paradigm

"To treat malaria, go to a physician. To prevent it, consult a mosquito controller"

Current Model: Physician as Gatekeeper



"Behavior Therapy is a useful adjunct to planned adjustments in food intake and physical activity. ……

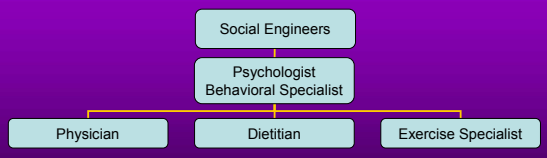
The Practical Guide to Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. NHLBI/NAASO

"MEDICAL MANAGEMENT is a useful adjunct to planned adjustments in food intake and physical activity..……

FROM The UNOFFICIAL ABRIDGED, POLITICALLY INCORRECT BUT Practical Guide to Identification, Evaluation, and Treatment of Overweight and Obesity in Adults. NHLBI/NAASO

Proposed Model: Behaviorist as Gatekeeper

Proposed Model: Social and Behavioral



Consider the Obesities

"Treating obesity as a homogenous condition, with all participants receiving a common intervention, might contribute to the mixed treatment outcomes that are reported…."

Epstein L, Myers M, Raynor H, et al. Treatment of Pediatric Obesity. Pediatrics 1998; 101(3):554-570.

The Obesities: Sources of Energy Imbalance

	A	B
	Excess Intake	Low Expenditure
Type I	-	+
Type II	+	-
Type II	+	+

The Obesities
High Intake Subtypes: Nutrient Patterns

	High Fat	High Sugar	High Alcohol
SubType a	+	-	-
SubType b	-	+	-
SubType c	+	+	-
SubType d	+	+	+

The Obesities
High Intake Subtypes: Eating Patterns

	Fast Food	All You can Eat	Binger	Fast Eater
SubType a	-	+	-	+
SubType b	-	-	+	-
SubType c	+	+	+	+
SubType d	+	+	+	-

The Obesities
Low Caloric Expenditure

	Low Activity	Low Thermogenic Response	Low BMR
SubType a	-	+	+
SubType b	-	-	-
SubType c	+	+	+

The Obesities
Psychosocial Subtypes

	Depression	Low Efficacy	All or nothing Thinking
Type 3a1A1	-	+	-
Type 3a3C2	+	+	+
Type 3a4D3	+	+	-

The Obesities
Metabolic Subtypes

	Hypertension	Dyslipidemia	Type II DM	History of CHD
Type Ia1A	-	+	-	-
Type Ia2B	-	-	+	-
Type Ia3C	+	+	+	-
Type Ia4D	+	+	+	+

Additional Factors

Genetic
Metabolic

Age
Socioeconomics
Gender
Race/Ethnicity/Culture
Poor Satiety Response
Family Factors

ONE CONDITION ?

Dietary Patterns
Metabolism
Age
Socioeconomics
Co-Morbidities
Physical Activity
Familial/Genetic
Psychosocial
Gender
Race/Ethnicity/Culture

When Low-fat and Low-Carb Worlds Collide

Balanced Diet

Excessive Intake of Both

+

=

Consumer Confusion

Public Health Credibility Crisis

Backlash