



4TH WORLD CONGRESS ON INTERVENTIONAL THERAPIES FOR TYPE 2 DIABETES

HILTON MIDTOWN, NEW YORK CITY
APRIL 8-10, 2019

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FROM GUIDELINES
TO IMPLEMENTATION





IN PARTNERSHIP WITH



APRIL 8-10, 2019, NEW YORK CITY





Time to Think Differently About Obesity (and Diabetes)

Francesco Rubino, M.D.

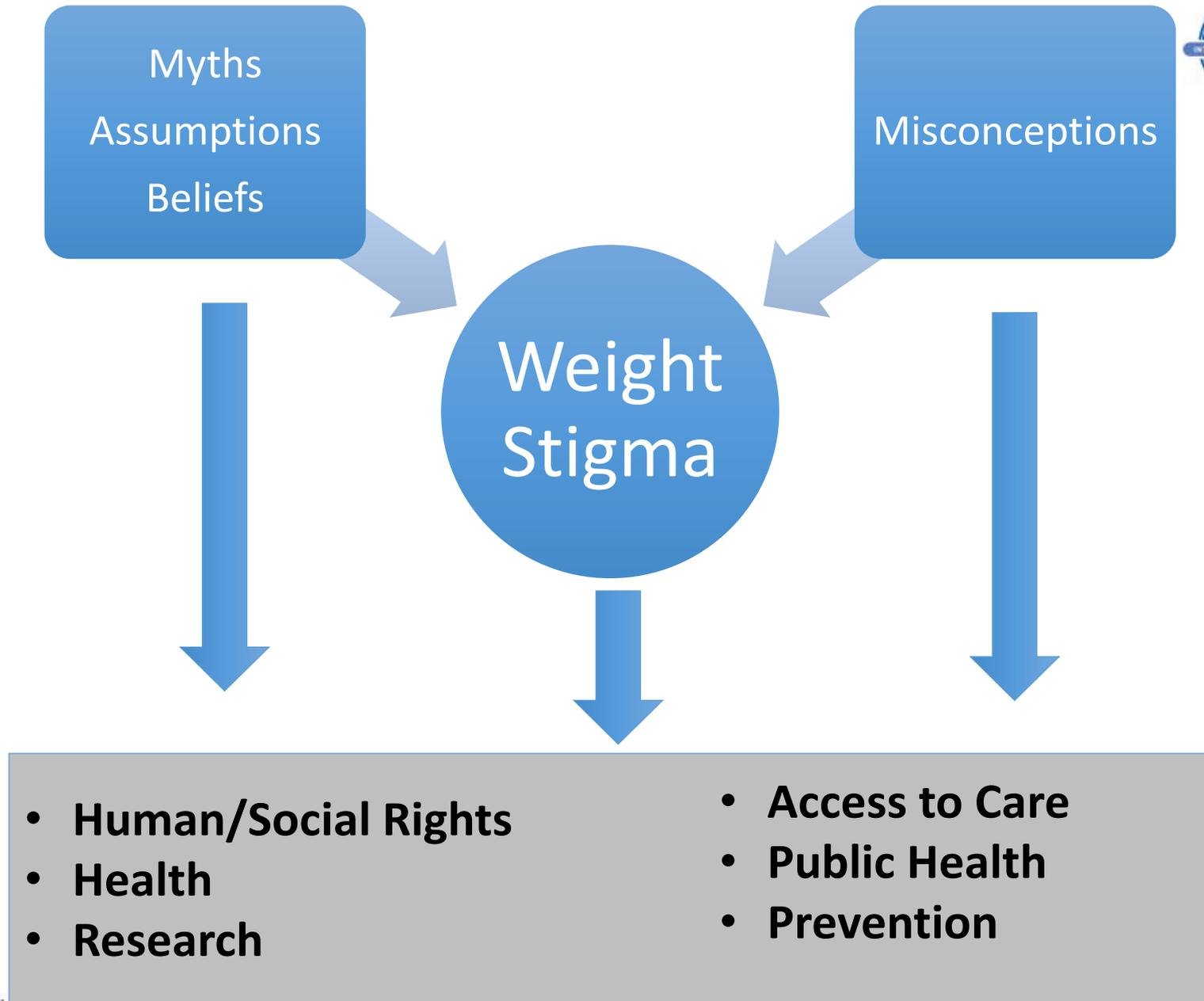
Chair of Bariatric and Metabolic Surgery

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London, UK

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Stigma





Stigma

JOINT CONSENSUS CONFERENCE

1. What is it?
2. Does it Harm?
3. What causes it ?
(myths, beliefs, assumptions)
4. What can we do about it ?

Reasons for a Bias



- Gap between science and the popular idea of obesity
- Misconceptions
- Obesity, an ill-defined condition and disease



MISCONCEPTIONS

“Prevention vs Treatment”



“Obesity should be prevented, not treated”

“We should focus our efforts on prevention of **Obesity** rather than spending tax-payer money on expensive therapies for **morbid obesity**”



Would this be acceptable?

“**AIDS** should be prevented, not treated”

“We should focus our efforts on prevention of **HIV infection** rather than spending tax-payer money on expensive therapies for **AIDS**”

Would this be acceptable?



DR MAX THE MIND DOCTOR: Jenni Murray and why weight-loss ops can offer false hope

Jenni's a brilliant broadcaster, and I wish her well. But as someone who specialises in eating disorders, I'd like to warn others before they follow her path

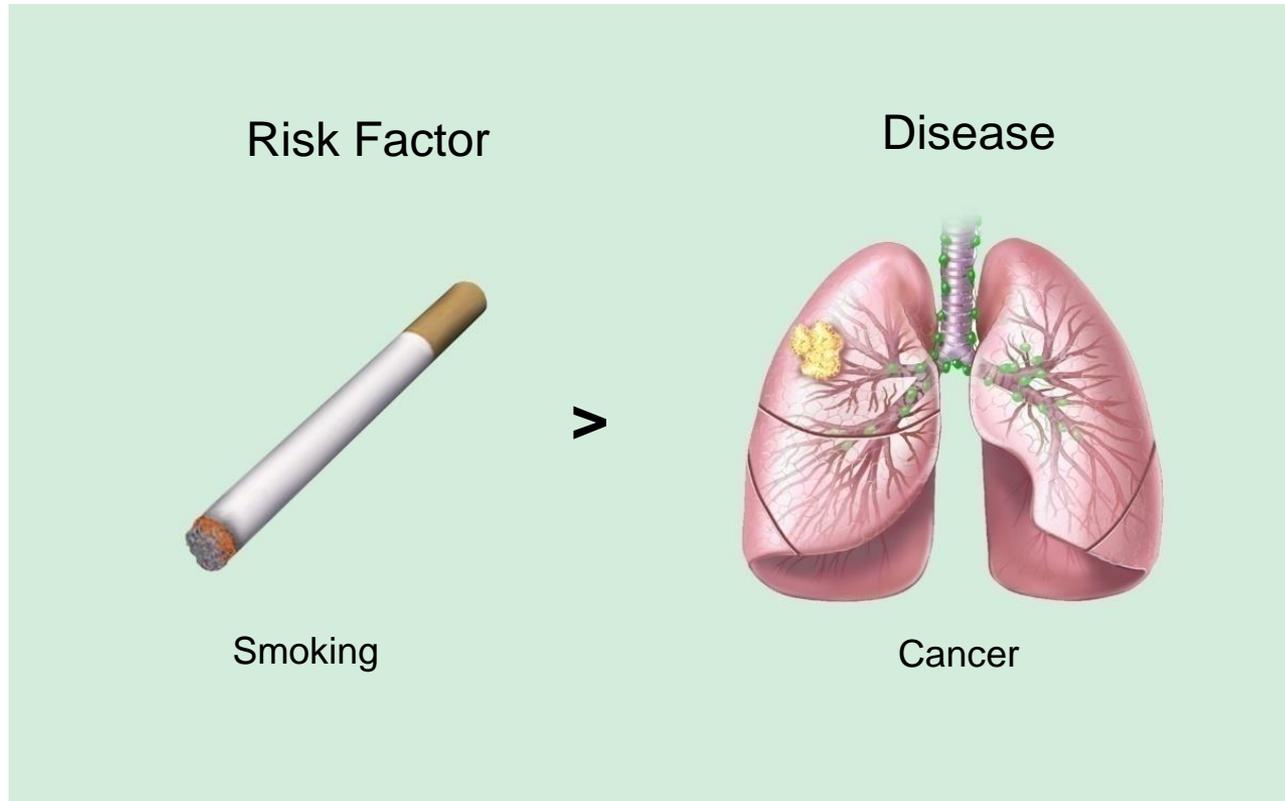
The way to avoid this misery is to get patients to address their underlying psychological issues through psychotherapy first.



MISCONCEPTIONS

“Obesity is a Lifestyle Choice”

“Lifestyle-related diseases”



Physiology, Pre-disease, Disease State



- Lifestyle Modifications
- Mechanical/Physical Remedies
- 'Over the counter drugs'

Medical Interventions
(drugs, surgery, radiotherapy etc)

"Point of No Return"

Physiologic Alterations or
Mild Dysfunction;
"Pre-disease"

Disease state

Depressed Mood

Clinical Depression





Misperceptions about Evidence



EXPRESS

Home of
the Daily and
Sunday Express



HOME

NEWS

SHOWBIZ & TV

SPORT

COMMENT

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UK

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POLITICS

WEATHER

ROYAL

NATURE

SCIENCE

SCOTLAND

WEIRD

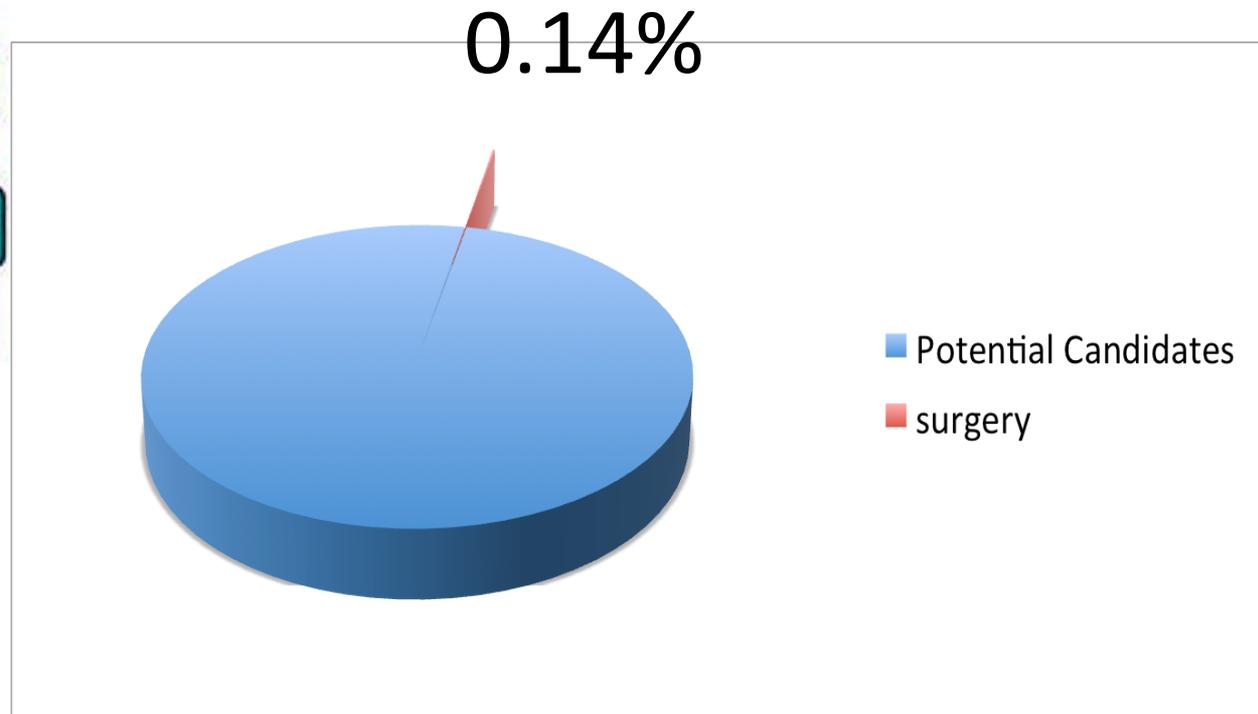
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Home > News > UK > NHS squanders millions on fat surgery

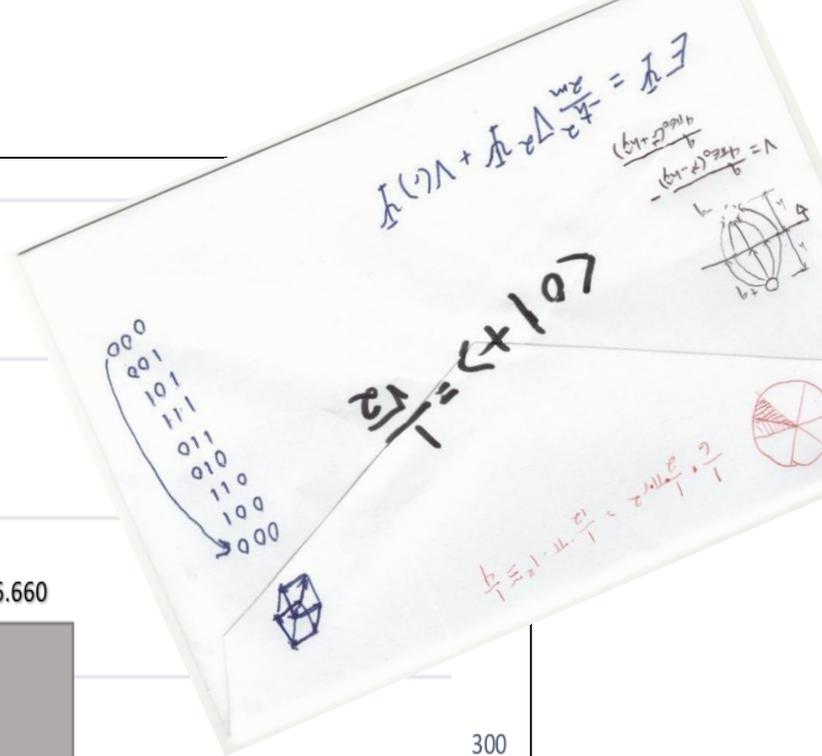
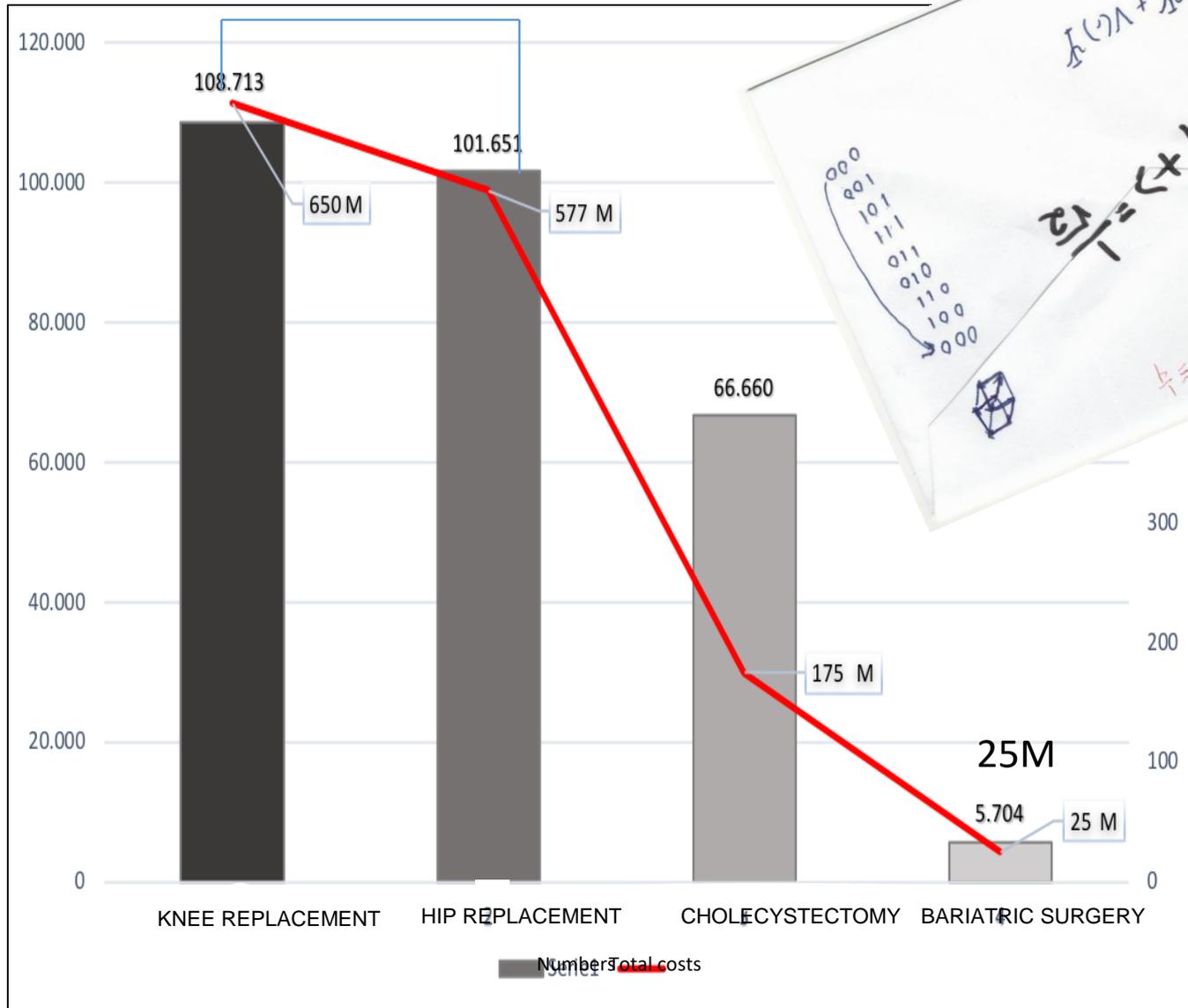
NHS squanders millions on fat surgery

A RECORD number of patients have had “quick-fix” obesity surgery on the NHS at a cost of £29million a year, shocking new figures show.

% of pts with T2DM who meet NICE (and International) criteria for surgery and have access to Surgical treatment



1.2 B





Bariatric Surgery



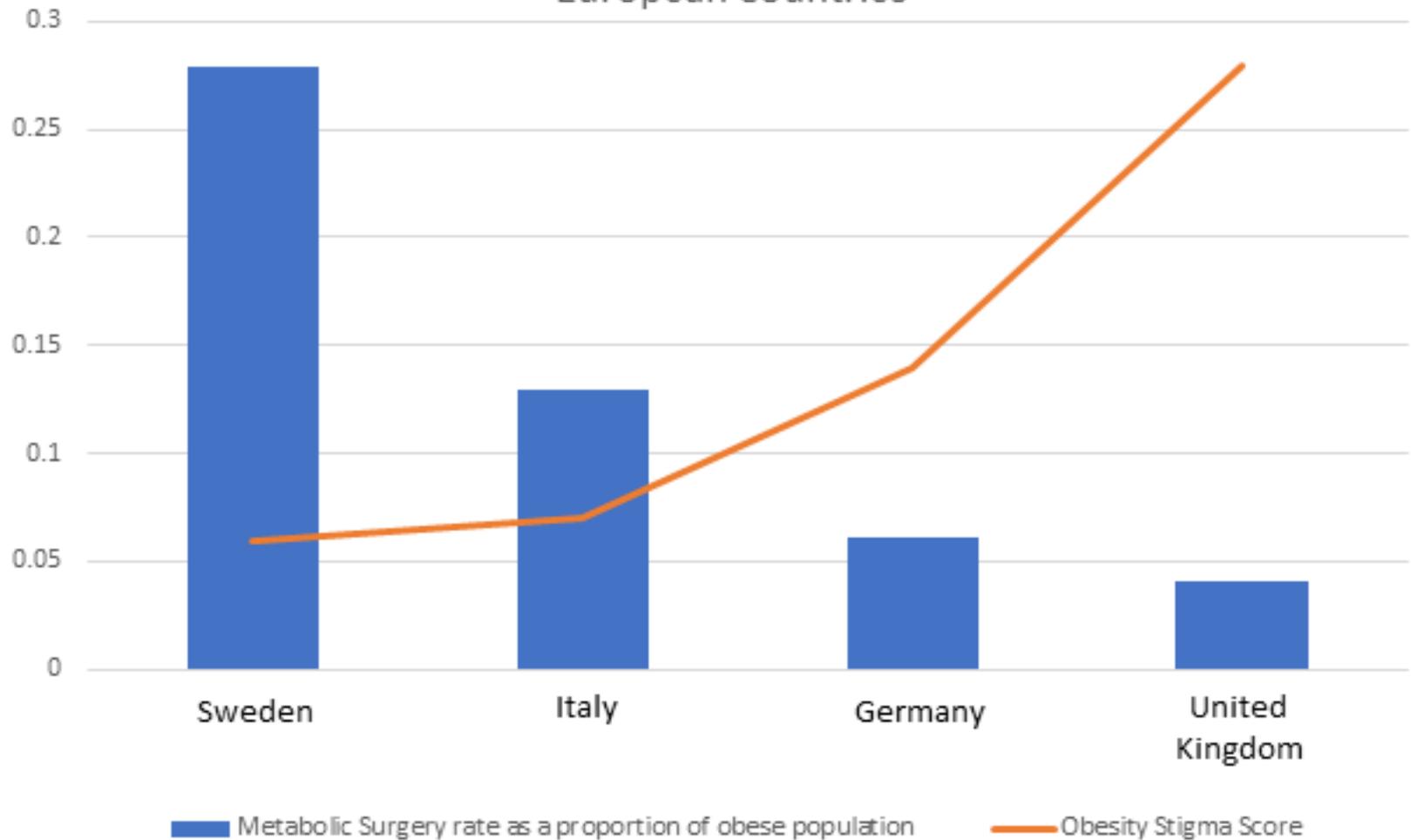
Elective General Surgery

Cholecystectomy, Hernia Surgery,
Reflux Surgery, Colorectal (benign)

Britain 'prejudiced against fat people'



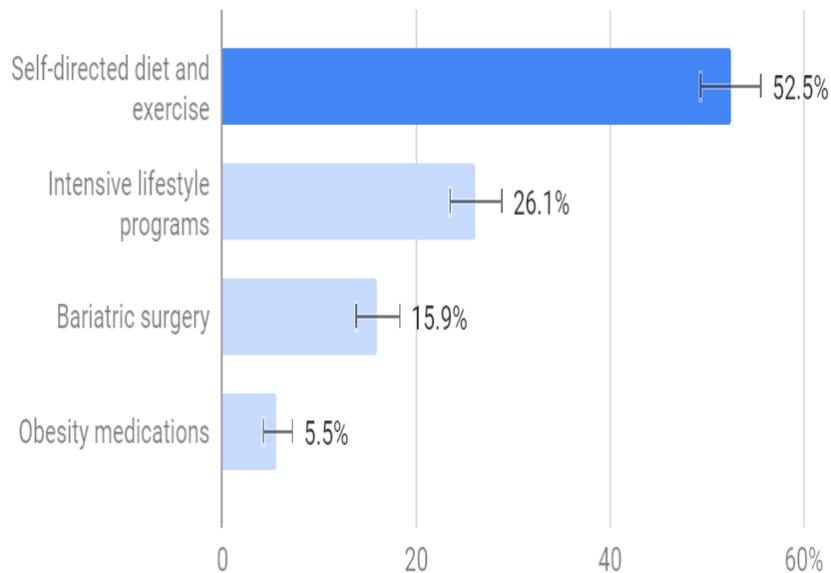
Obesity Stigma plotted against rate of Metabolic Surgery across four European Countries



Obesity Surgery - U.S.

1. Which of the following treatments for obesity is most effective?

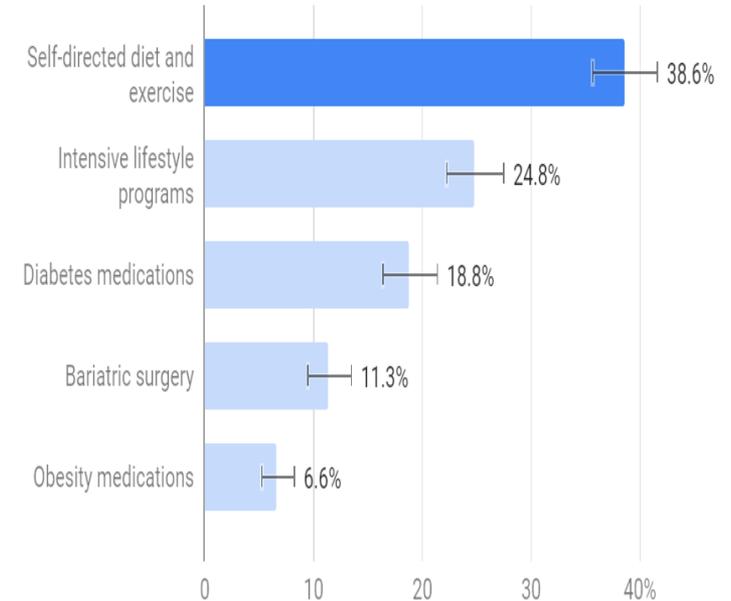
776 respondents



Diabetes Surgery - U.S.

1. Which of the following treatments for type 2 diabetes is most effective in people who also have obesity?

728 respondents



Attitudes, Stigma & Knowledge: The ASK Study



O'Keeffe¹, S.W. Flint², D. Qanaq³, L. Ferraro³, F. Rubino³

¹Department of Nutritional Sciences; ³Department of Diabetes, King's College London, UK

²School of Sport, Leeds Beckett University, UK

To understand *attitudes towards* and *awareness of obesity* and type 2 diabetes as well as *beliefs about* and *stigma towards people with obesity* and the *role and value of treatments* in an international sample of *healthcare professionals (HCPs)* and the *general population*.

N=3044



 KING'S HEALTH PARTNERS

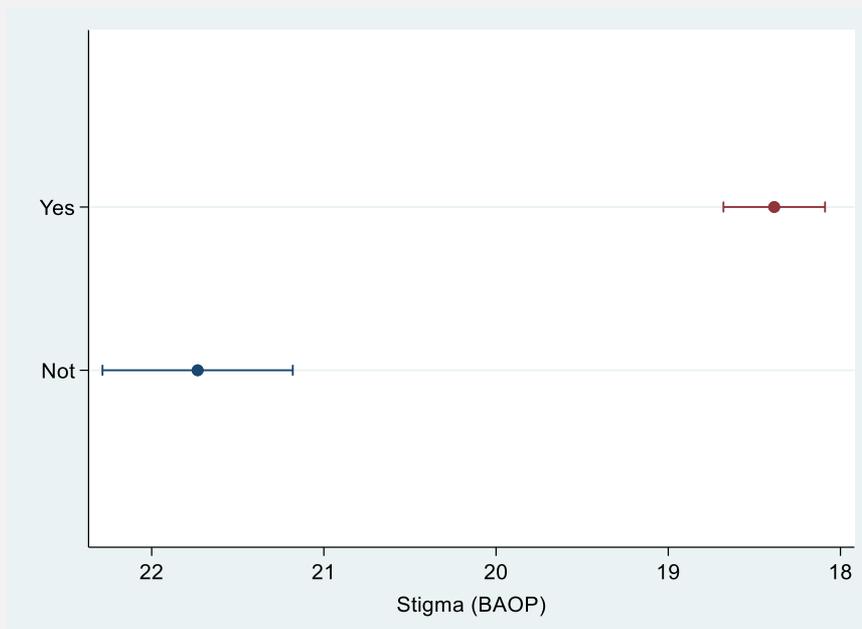
Pioneering better health for all

KING'S
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ASK Study: Stigmatizing Views & Treatment

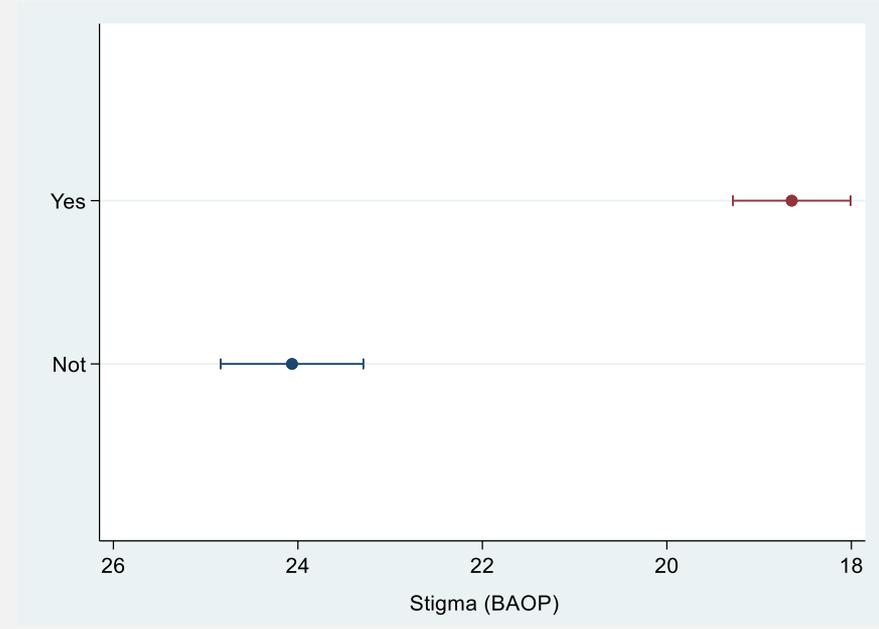
Association between stigmatizing views and opinion that **obesity** could be cured by commitment to follow a healthy lifestyle

General Population



Increasing stigma →

Healthcare Professionals



Increasing stigma →

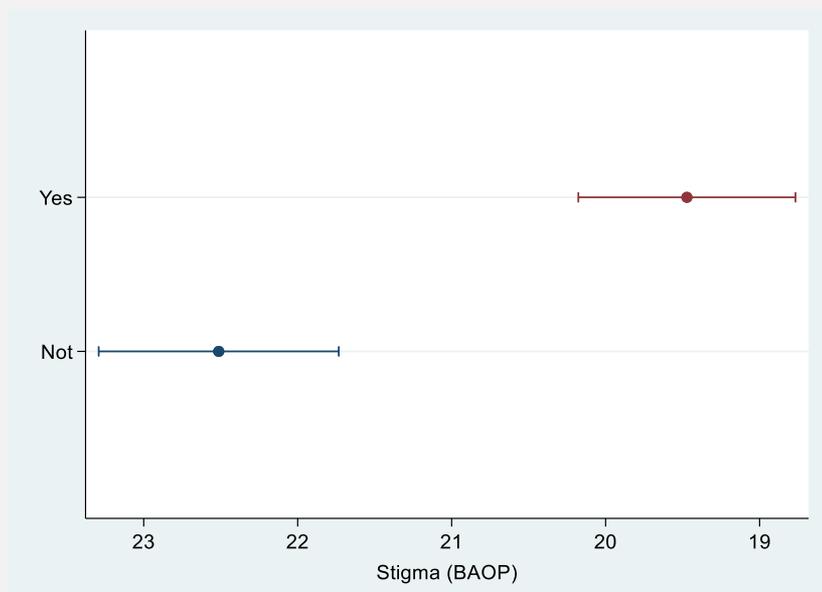
In Gen. Pop and HCPs those that consider obesity to be curable through a commitment to a healthy lifestyle have more stigmatizing views

*BAOP score used as proxy measure of stigma

Results: Stigmatizing Views & Treatment

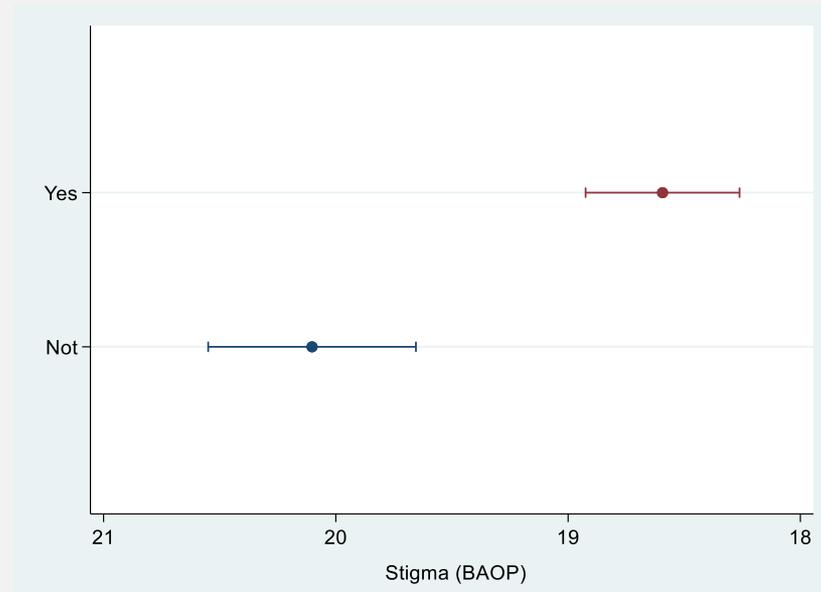
Association between stigmatizing views and opinion that **T2DM** could be cured by commitment to follow a healthy lifestyle

General Population



Increasing stigma

Healthcare Professionals



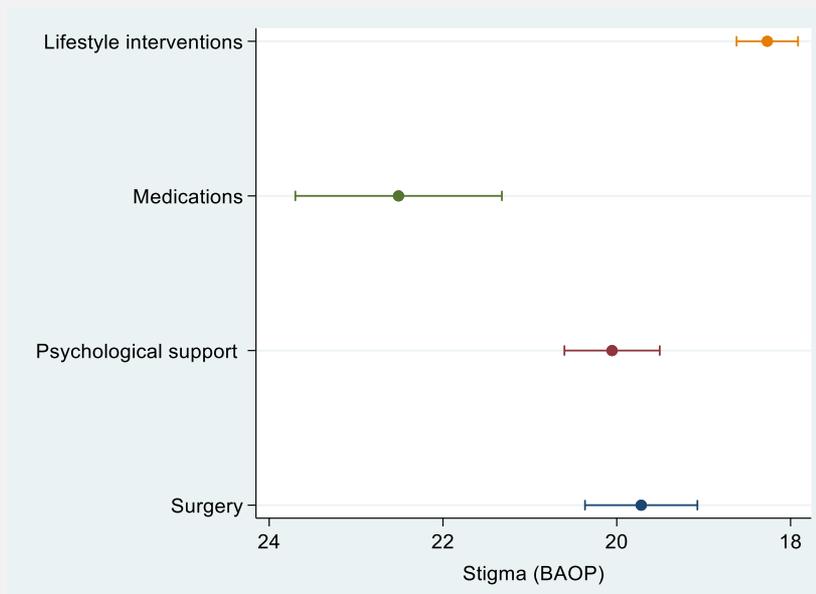
Increasing stigma

In Gen Pop. and HCP those that consider T2DM to be curable through a commitment to a healthy lifestyle have more stigmatizing views

ASK Study: Stigmatizing Views & Treatment

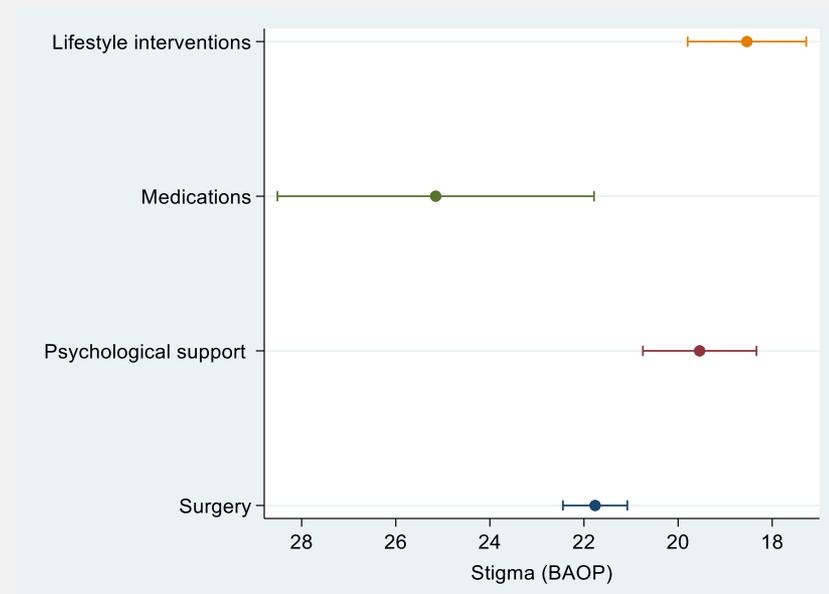
Association between between stigmatizing views (as measured by BAOP) and opinion on most effective treatment for **severe obesity (BMI >35 kg/m²)**

General Population



Increasing stigma →

Healthcare Professionals



Increasing stigma →

In Gen Pop. and HCPs those that consider lifestyle intervention to be the most effective treatment for severe obesity have more stigmatizing views



Time to Think Differently About Obesity



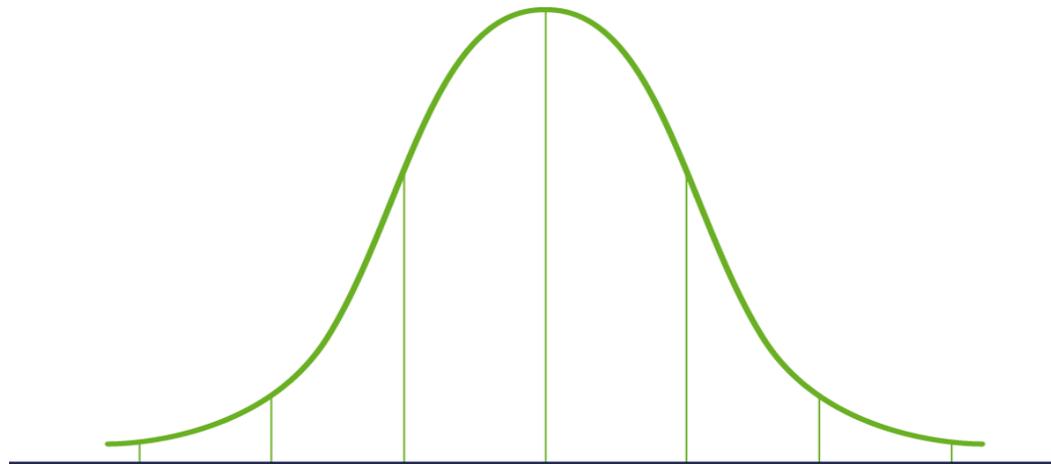
DISEASE IS ILL-DEFINED

DEFINITION OF DISEASE

“ a condition of the living animal or plant... that impairs normal functioning and is typically manifested by distinguishing signs and symptoms

(Merriam Webster)

... A DEVIATION FROM A BIOLOGICAL NORM



DEFINITION OF OBESITY

WHO: “Overweight and obesity are defined as **abnormal** or **excessive** fat accumulation that presents a risk to health”.

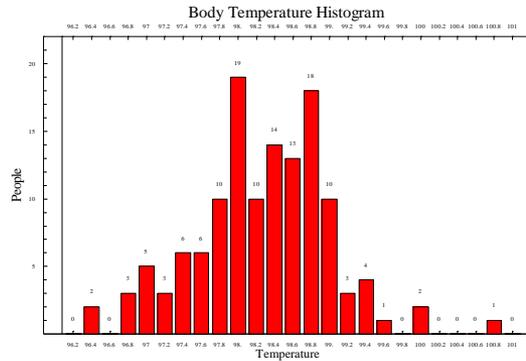
NIH/NIDDK: “The terms “overweight” and “obesity” refer to **body weight** that is greater than what is considered normal or healthy for a certain height”.



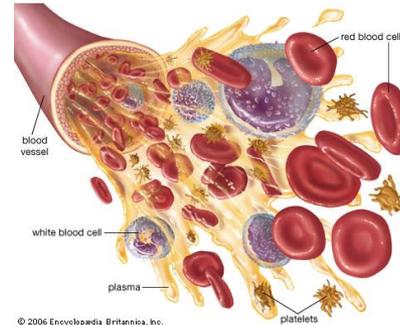
Weight and the Domino-Effect



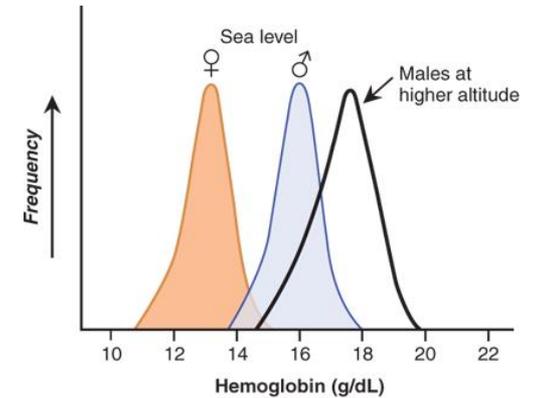
Physiology vs Disease



Body Temperature



WBC



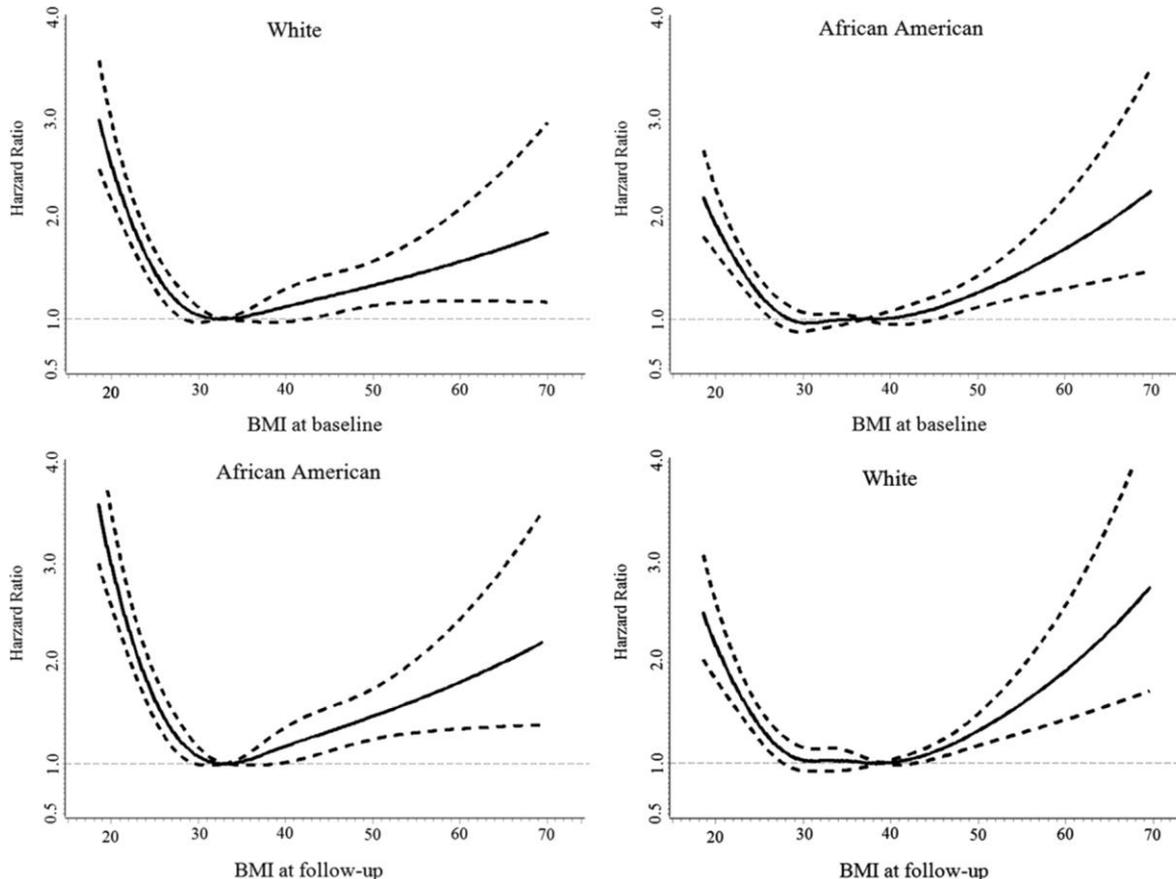
Source: R.S. Hillman, K.A. Ault, M. Leporrier, H.M. Rinder: Hematology in Clinical Practice, Fifth Edition, www.hemonc.mhmedical.com Copyright © McGraw-Hill Education. All rights reserved.

Hb

Increased level of Body Temperature, Hb, White blood Cells (like weight) can:

- reflect physiologic states
- result from distinct pathophysiologic mechanisms
- be associated with different disease and conditions

Mortality and BMI



A significantly increased risk of all-cause mortality was observed among blacks with BMI $<30 \text{ kg/m}^2$ and ≥ 35 and among whites with BMI $<25 \text{ kg/m}^2$ and $\geq 40 \text{ kg/m}^2$ compared with patients with BMI of 30 to 34.9 kg/m^2

Hazard ratios for all-cause mortality based on different levels of body mass index (BMI) at baseline and during follow-up among black and white patients with type 2 diabetes mellitus.

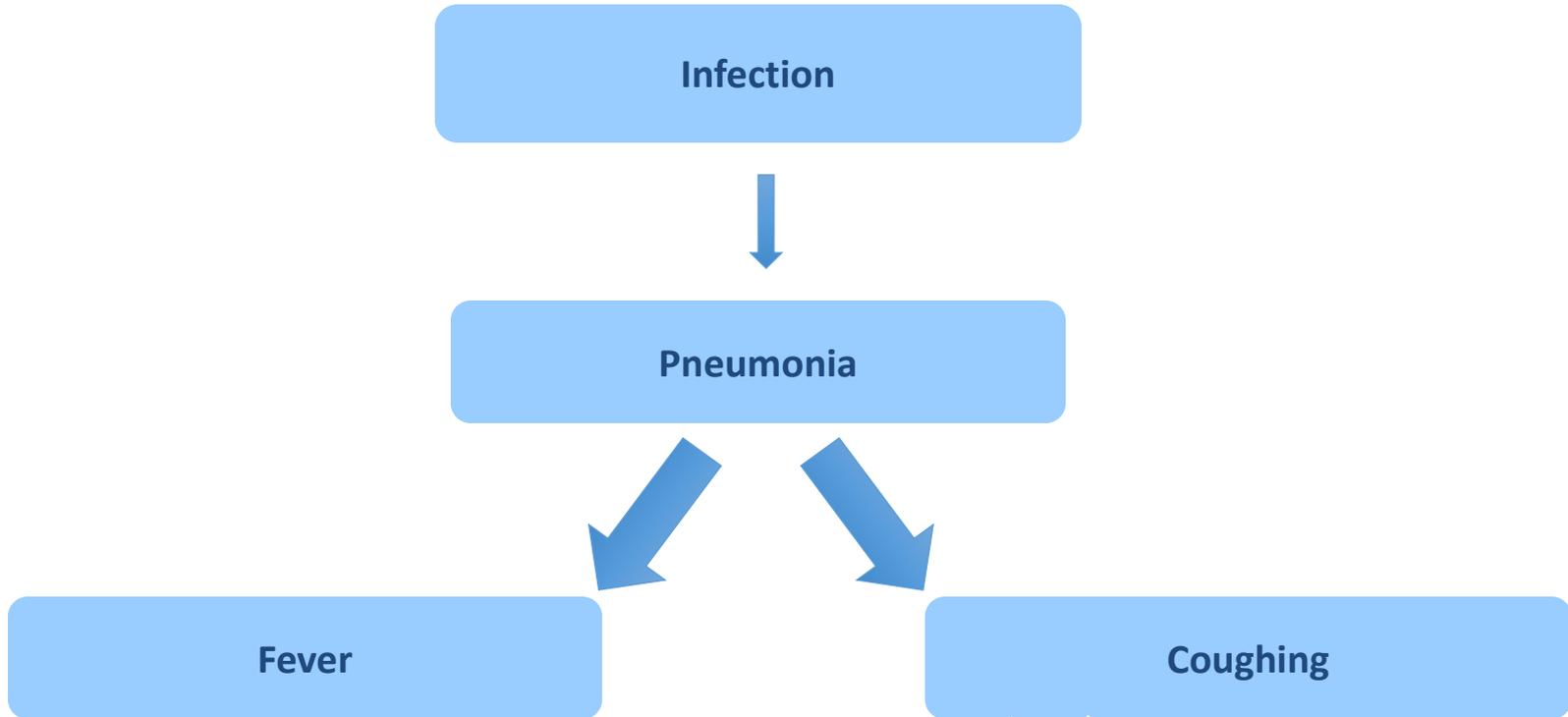


The *big fat* truth

More and more studies show that being overweight does not always shorten life — but some public-health researchers would rather not talk about them.

BY VIRGINIA HUGHES

Signs and Symptoms of Disease



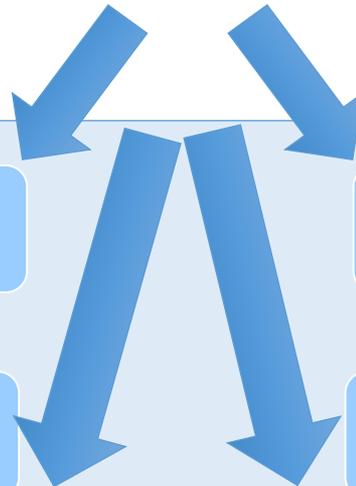
Signs and Symptoms of Disease



Etiology (?)



Pathophysiology



Increased Adiposity/
Weight Gain

Hyperglycemia

Dyslipidaemia

NAFLD/NASH

Excess Weight Can Be:

- Physiological
- Risk Factor
- Disease
- Sign/Symptom of Another Disease



OBESITY IS ILL-DEFINED



Negative consequences of defining obesity as a condition of excess body weight:

- “Deviation from norm” difficult to define
- Weight is regulated by complex, yet precise biological mechanisms, like body temperature, HR, Hb, WBC etc > individual, physiologic and pathophysiologic variations
- Diagnosis based on single symptom is problematic
- Obesity defined as having a BMI > 30Kg/m²
 - Cause vs association with “illness”, mortality
 - Is BMI 30 a biological “point of no return”?
 - Cosmetic vs medical issue

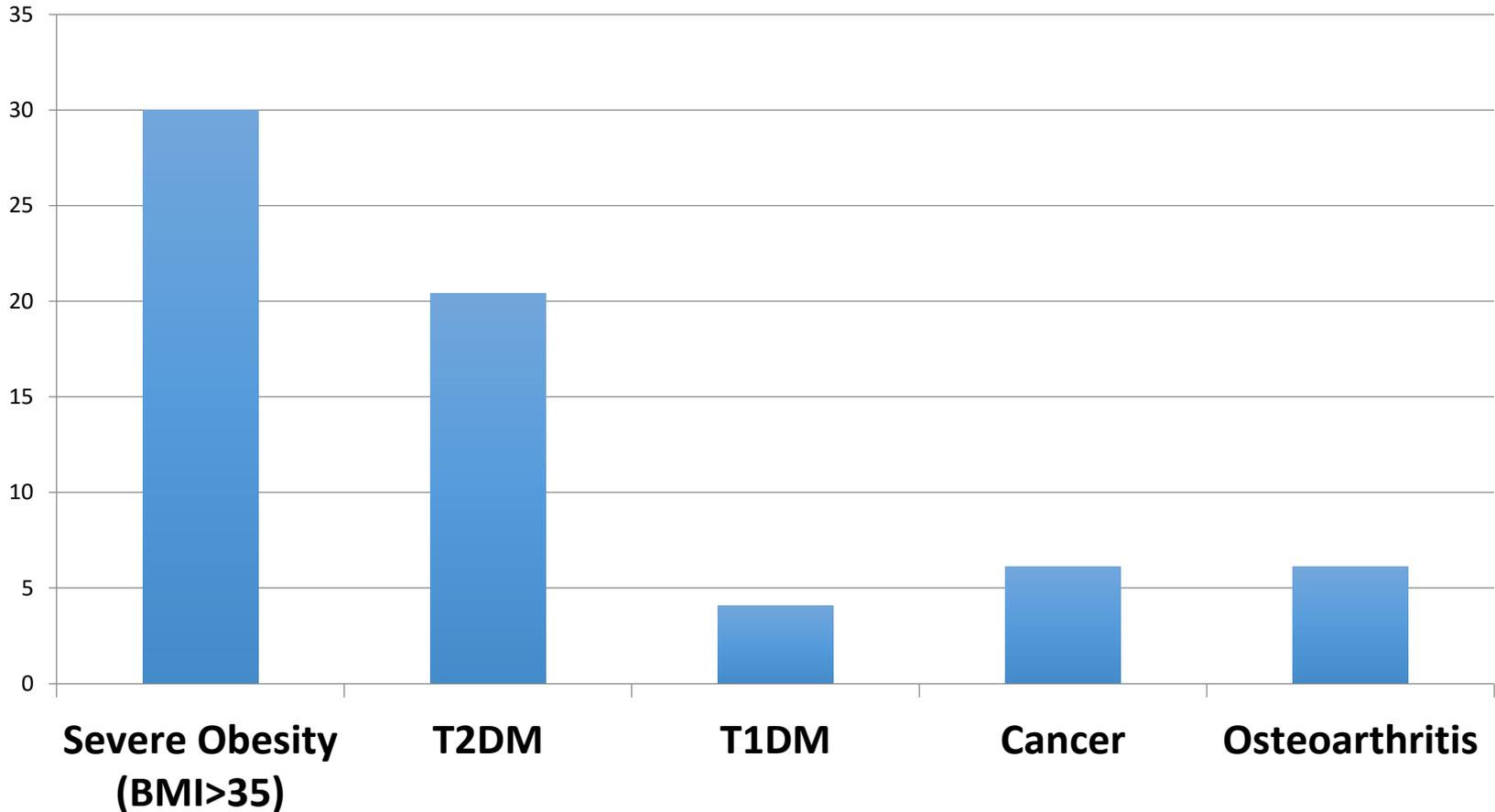
>>> Prone to stigma/discrimination



Could the following conditions/diseases be resolved by just lifestyle changes?



% of YES





Tackling Obesity Stigma

- Explain Gap between Science and misconceptions that fuel stigma
- Educate HCPs and the Public about mechanisms of weight regulation
- Define Clinical Obesity Distinct from an Overweight Issue



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