Decision Making in Cardiac Therapeutics: Ethics, History, and Policy

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DISCLOSURE

I have no financial relationship with a commercial entity producing health-care related products and/or services.
What Is Social Medicine?

- Social Determinants of Disease
- Social Meanings of Disease
- Social Responses to Disease
- Practice: Health Care Delivery
- Medical Epistemology: how do we know what we know
The Global Fund to Fight AIDS, Tuberculosis and Malaria, an international financing institution, invests the world's money to save lives. To date, it has committed US$ 15.6 billion in 140 countries to support large-scale prevention, treatment and care programs against the three diseases.

- **HIV/AIDS**: Over 2.3 million people on ARV
- **TUBERCULOSIS**: 5.4 million people under DOTS
- **MALARIA**: 88 million bednets distributed

**Announcements**

2nd Replenishment - Mid-Term Review Meeting
Caceres, 30 March - 1 April

**New Publications**

- Progress Report
- Scaling Up for Impact Results Report
- Updated Demand Estimate 2008 - 2010

**On MyGlobalFund**

- CCM Chairmanship
- CCM Performance framework
- Proposal development process

**INNOVATING FOR IMPACT**

Global Fund launches the Affordable Medicines Facility-malaria (AMFM)

**Quick Links**

follow us on twitter

Courtesy of The Global Fund to Fight AIDS, Tuberculosis, and Malaria. Used with permission.
The best Rx for AMI is PCI? How do we know?

Painting by Frank Netter, M.D. of man suffering from angina pectoris, chest pain due to coronary artery disease, removed due to copyright restrictions.

Photo of coronary angioplasty removed due to copyright restrictions.
Risk Factors

“Im going to grow a hundred years old!”

More Doctors smoke Camels than any other cigarette!

Do you inhale?

Everybody's doing it!

7 out of 10 smokers inhale knowingly —
the other 3 inhale unknowingly

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Other Risks?

Fig. 1. Occupational class differences in life expectancy, England and Wales, 1997–1999

Fig. 4. Self-reported level of job control and incidence of coronary heart disease in men and women

Adjusted for age, sex, length of follow-up, effort/reward imbalance, employment grade, coronary risk factors and negative psychological disposition.

CAD as a Disease of Elites

Warren Harding
Calvin Coolidge
Dwight D. Eisenhower
Lyndon Johnson

Photo of President Dwight D. Eisenhower in wheelchair removed due to copyright restrictions.
Race and Differential Susceptibility?

Do not feel stress, or cannot handle it

Public domain photo from U.S. National Archives and Records Administration.
How to treat coronary artery disease?
Reduce Demand:
Disrupt sympathetic nervous system

Figure 4 from Jonnesco, Thomas. "La Résection Du Sympathique Cervico-Thoracique: Technique Opératoire." La Presse Médicale, no. 33 (1922).

Figure 1 from Swetlow, George I. "Paravertebral Alcohol Block in Cardiac Pain." The American Heart Journal 1, no. 4 (1926).
Reduce Demand:
Thyroid Ablation (surgery, radiation)

Excerpts from New England Journal of Medicine removed due to copyright restrictions.
For complete article, see Blumgart, Herrman L., A. Stone Freedberg, and George S. Kurland. "Treatment of Incapacitated Euthyroid Cardiac Patients by Producing Hypothyroidism with Radioactive Iodine."
Photos of patient seven years before operation, and three years and six months after operation from *Annals of Surgery* removed due to copyright restrictions. For complete article, see Cutler, Elliott C., and Stanley O. Hoerr. "Total thyroidectomy for heart disease: A five-year follow-up study." *Annals of Surgery* 113, no. 2 (1941).
77 patients: 36% cured, 32% improved

Excerpt from The New York Times removed due to copyright restrictions.

Excerpt from Journal of Thoracic Surgery removed due to copyright restrictions.
Excerpt from *American Journal of Cardiology* removed due to copyright restrictions.
For complete article, see Dimond, Grey, C. Frederick Kittle, and James E. Crockett. "Comparison of Internal Mammary Artery Ligation and Sham Operation for Angina Pectoris." *American Journal of Cardiology* 5 (1960).
Excerpt and Table 1 from Journal of the American Medical Association removed due to copyright restrictions. For complete article, see Beecher, Henry K. "Surgery as Placebo: A Quantitative Study of Bias." Journal of the American Medical Association 176, no. 13 (1961).
Increase Supply: Create or provide new conduits for blood

Three figures of surgery to treat coronary artery disease removed due to copyright restrictions. See Beek, Claude S., and David S. Leighninger. "Scientific Basis for the Surgical Treatment of Coronary Artery Disease." *Journal of the American Medical Association* 159, no. 13 (1955).

Figure 7 of interal mammary artery implantation from *Diseases of the Chest* removed due to copyright restrictions. For complete article, see Vineberg, Arthur. "The Bloodless Greater Omentum for Myocardial Revascularization." *Diseases of the Chest* 54, no. 4 (1968).

Re-engineering the body...
Figure 7 from *Annals of Surgery* removed due to copyright restrictions. For complete article, see Effler, Donald B. et al. "Increased Myocardial Perfusion by Internal Mammary Artery Implant: Vineberg’s Operation." *Annals of Surgery* 158, no. 4 (1963).
Selective Coronary Angiography

Figures 1, 4, and 5 from Circulation removed due to copyright restrictions. For complete article, see Lemmon, William M., Stauffer Lehman, and Randal A. Boyer. "Suprasternal Transaortic Coronary Arteriography." Circulation 19 (1959).
Mason Sones
Cine-angiography
1958

Photo of Mason Sones, c. 1960 at the Cleveland Clinic removed due to copyright restrictions.
January 12, 1962: Visual Proof?

Figure 9 from *Annals of Surgery* removed due to copyright restrictions. For complete article, see Effler, Donald B. et al. "Increased Myocardial Perfusion by Internal Mammary Artery Implant: Vineberg's Operation." *Annals of Surgery* 158, no. 4 (1963).
Endarterectomies and Patch Grafts

“Instant revascularization”

Figure from Scientific American removed due to copyright restrictions.
See page 41 of Effler, Donald B. "Surgery for Coronary Disease." Scientific American, October 1968.
Does Size Matter?

Photo of patient undergoing procedure removed due to copyright restrictions.
Excerpt from *New England Journal of Medicine* removed due to copyright restrictions.

Are RCT’s Right for Surgery?
Complications of Cardiac Surgery


Excerpt and figure from the *Journal of the American Medical Association* removed due to copyright restrictions. For complete article, see Tufo, Henry M. "Central Nervous System Dysfunction Following Open-Heart Surgery." *Journal of the American Medical Association* 212, no. 8 (1970).
Topics mentioned in early CABG outcomes reports, 1968-1973 (n = 200)

- Graft patency or flow: 90%
- Operative mortality: 85%
- Relief of angina: 80%
- Cardiac complications: 70%
- Non-cardiac complications: 60%
- Cerebral complications, major: 30%
- Cerebral complications, minor: 20%
- Cerebral complications, residual: 10%
- Cerebral complications, discuss: 5%

Percent of articles
Excerpt from October 1979 article on balloon dilation from Texas Heart Institute removed due to copyright restrictions.

Image courtesy www.genome.gov.
The “oculo-stenotic reflex”

A compulsion to treat?
Plaque Rupture

Volcano Corporation manufactures intravascular ultrasound (IVUS) products to measure the status of heart disease and to confirm correct expansion of stents following placement.

Image by MIT OpenCourseWare.
Plavix brochure "How do Clots Form?" removed due to copyright restrictions.

Advertisement for Lipitor removed due to copyright restrictions.

Disease Models and Treatments
Unwarranted Variation?

Why has there been so little attention?

What is an appropriate response?
HST.934 Introduction to Global Medicine: Bioscience, Technologies, Disparities, Strategies
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