SEEKING SICKNESS:
Medical screening and the misguided hunt for disease

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Selling Sickness 2013: People before Profit
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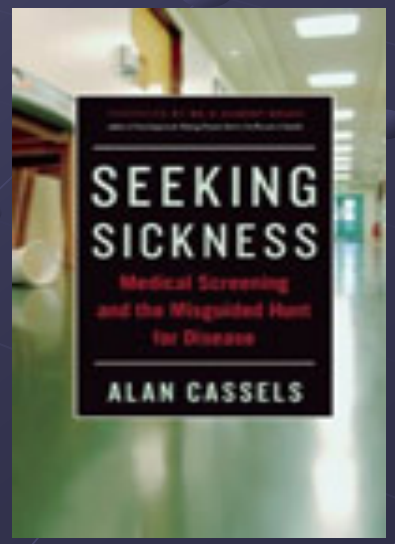

How does a good screening test look?*

- The condition should be an important health problem.
- There should be a treatment for the condition.
- Facilities for diagnosis and treatment should be available.
- There should be a latent stage of the disease.
- There should be a test or examination for the condition.
- The test should be acceptable to the population.
- The natural history of the disease should be adequately understood.
- There should be an agreed policy on whom to treat.
- The total cost of finding a case should be economically balanced in relation to medical expenditures as a whole.
- Case-finding should be a continuous process, not just a "once and for all" project.

*WHO guidelines published in 1968

What are biomarkers?

- A "biomarker" is a surrogate for disease symptoms. For example, cholesterol is a biomarker for heart disease.
- A good biomarker typically helps researchers and clinicians estimate disease risk and diagnose disease before symptoms appear.
- Physicians also use biomarkers to monitor disease progression and assess response to new drugs.

Looking for “pre-disease” Bioevangelism for biomarkers

- “Pre-dementia”
- “Pre-hypertensive”
- “Pre-diabetes”
- Cholesterol test which drives much unneeded, expensive, and sometimes harmful drug treatment.

Three things you need to know about cholesterol-lowering (statin drugs)

- High cholesterol is not a disease in and of itself, it is a “risk factor” like being overweight, sedentary, or eating poorly.
- The drugs to lower cholesterol could prevent heart attacks and strokes.
- The drugs to lower cholesterol could seriously injure or kill you.

What are men told when offered prostate cancer screening?

More than 50% of men over 60 have prostate cancers.
Yet only about 3% of men die of prostate cancer.

Also:

- Men have suffered serious infections and some have died from prostate biopsies.*
- More than 1 million transrectal prostate biopsies are done in the U.S. each year
- Treatment leaves mean many men impotent or incontinent. 60% of the men treated for prostate cancer were left impotent 18 months after the surgery and 8% had urinary incontinence**

*Journal of Urology (Robert Nam)

**JAMA 2000;283:354-60

“Over 2 million American men have been treated unnecessarily for prostate cancer.”

Dr. Gilbert Welch

Screening: five reasons on why we should care.

1. Overdiagnosis

"Overdiagnosis is threatening to become an increasingly important public health problem because of the enthusiasm for and proliferation of unproven screening tests."

-- Dr. Michael S. Lauer of National Heart, Lung, and Blood Institute in Bethesda, Maryland

Screening: why should we care?:
2. Economics—we can't afford it.

"Screening people outside the boundaries of evidence could bankrupt the nation in a heart beat."

-- Gary Schwitzer, Founder of Healthnewsreview.org

Screening: why should we care?:
3. We are detecting Pseudodisease

“Physicians cannot easily ignore diagnoses made with screening tests because it is impossible for them to determine whether their patients have real disease or pseudodisease.

Therefore, physicians prescribe tests, medications, procedures, or even surgical procedures, all of which carry inherent risks."

- -- Dr. Michael S. Lauer of National Heart, Lung, and Blood Institute in Bethesda, Maryland

4. Why “natural history” is so important: Regression and the case of the missing breast cancers.

The Swedish study:

317,404 women controls

328,927 women screened.

“Cumulative incidence of invasive breast cancer was significantly higher in the screened group (982 per 100 000) than it was in the control group (658 per 100 000)

“Spontaneous regression”

"Mammography screening detects a lot of subclinical cancers that will never become clinical, but it's considered unethical not to remove [the lesion] if it has been diagnosed.“

Per-Henrik Zahl, statistician at the Norwegian Institute of Public Health

Screening: why should we care?:

5. We are easily fooled by hope and hype

"A survey of over 10,000 Europeans found that 89% of men overestimated the benefit of PSA testing and 92% of women overestimated the benefits of breast cancer screening. Many estimated the benefit to be ten times and some as much as 100 times more it actually is."

- From Gigerenzer and Gray.—Launching the Century of the Patient.

Screening: why should we care?:
6. "Informed Consent" is largely a myth

- **""Cancer screening discussions across all screening tests (breast, colorectal, prostate) apparently did not routinely meet criteria for informed decision making."**
- **"Participants reported that health care providers frequently failed to discuss the cons of screening and did not routinely elicit patient preferences. Even when participants reported feeling well informed, they performed poorly in answering knowledge questions "**

Fagerlin et al. Patients' knowledge about 9 common health conditions: the DECISIONS surveyMed Decis Making. 2010 Sep-Oct;30(5 Suppl):35S-52S.

7. Screening: why should we care?: You can't "unadopt" screening

"Politicians, insurers, and doctors alike are lauded when they promote screening tests and vilified when they do not….[they] cannot "unadopt" a screening test once people are aware of it (unless superseded by a newer, more technologically sophisticated test)."

Anne Peticolas, Conductors on a One-Way Track: Do Medical Authorities Really Get to Decide Policy About Medical Screening Tests? Medscape General Medicine, 05/05/2003

A cornucopia of screening….

- Whole Body Scan
- Blood Screening
- Cancer Screening: Breasts and Prostates
- Colon and Cervix screening
- Eye Screening
- Mental Health Screening
- Self-screening for "Low Testosterone"
- Lung Screening
- Bone Screening
- Gene Screening

CALL TO ACTION ON DISEASE MONGERING
Washington, DC, February 22, 2013

- I would combine these two:
  - drugs, diagnostic tests, and devices are tested, approved, reported and marketed solely with the goal of ensuring patient safety, scientific integrity and individual and public health;
    - and
- patients and health care consumers are fully informed about and involved in individual health decisions, as well as in research priorities, research design, and regulatory policy;

Any Screening test complies with the principles of the WHO's 1968 Guidelines to Screening and that patients sign a declaration of "informed consent" prior to being tested. This consent form must tell the patient in clear, simple language what is known of the NATURAL history of the disease, the likelihood of avoiding a death by screening and the rates of false positive and false negative findings.

Alan's basic lessons* about Medical Screening?

1. People believe that an "early diagnosis" is always better (even with proof it sometimes it makes matters worse).
2. Screening programs are often introduced with no evidence of their effects (and kept going when new negative evidence arises).
3. The benefits of screening are often exaggerated while the harms are often unknown or ignored.
4. People invited for screening need balanced information, especially information on the benefits, harms, and risks of screening.

(with thanks to Imogen Evans, Hazel Thornton and Iain Chalmers, Testing Treatments, 2nd Edition)