Preventing Overdiagnosis Conference

Workshops

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PREVENTING OVERDIAGNOSIS
Winding back the harms of too much medicine

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Abstract # 18 - HOW CAN PRIMARY CARE PHYSICIANS AVOID OVERDIAGNOSIS AND OVERTREATMENT IN THEIR DAILY PRACTICE? HOW COULD WE IMPROVE OUR ACCESS TO BALANCED EVIDENCE?

Dr Julian Treadwell
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Introduction: Doctors might wish to practice in a more patient centered way, testing and treating less, but work within cultural and regulatory frameworks which strongly discourage this. Standard guidelines for practice and treatment steer us towards testing, diagnosing and treating our patient populations. The evidence to support an alternative course of action is difficult to access in a time limited environment and tends not to be promoted by official bodies. We therefore have a dual problem of inadequate access to information and barriers to using it, if and when we find it.

Aims: To examine where and how we find our evidence base for daily practice, consider if it is adequate for our purposes and how we can improve on this.

Methods: Presentation looking at the nature of current commonly used guidelines followed by active discussion.

Results/Conclusion: To produce a summary statement commenting on the nature and quality of evidence presented to primary care doctors within guidelines, and to propose or design solutions to drive improvement.

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Abstract # 39 - INTERACTIVE WORKSHOP ON HOW WE SHOULD DEFINE DISEASE

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Introduction: One of the barriers to preventing overdiagnosis is that there are no agreed criteria for defining disease. Without criteria for defining disease, it is difficult to claim that overdiagnosis is occurring. For example, the claim that chronic kidney disease (CKD) is over-diagnosed relies on assumptions about what a disease is, and the ways in which CKD maps onto these assumptions. The history of disease definition recognizes two broad approaches. The first is naturalist, in which disease is defined in terms of objective or measurable departures from norms of species functioning. The second is normative, in which disease is defined in terms of states that are more or less disvalued by society. Both approaches have strengths and weaknesses, and neither seems wholly correct.

Aims and methods: The aim of this workshop is to investigate *how* we should define disease. Should we rely upon pathology or other apparently objective measures? If so, what is the "normal" against which these should be calibrated, given that increasingly sophisticated tests have broken down the distinction between normal and pathological? What weight, if any, should we give to the harms that ensue from particular physical or mental states, when defining disease?

In the first part of the workshop, Rogers will present various criteria used in the definition of disease, including departures from normal species functioning, statistical definitions, observable pathology, individual and social disutility and so forth.
The second part of the workshop will comprise two case studies, one on CKD by Doust, and one on prostate cancer by Glasziou. The case studies will examine how CKD and prostate cancer fit or do not fit with various criteria for defining disease. We will use the case studies to examine questions such as determining the reference population for "normal", whether apparently harmless abnormalities should count as disease; and whether or not the definition should alter depending upon the availability of beneficial remedies.

Format:
Introduction and background to defining disease (W Rogers, 20 min including discussion)
Case study 1: CKD (J Doust 25, min including group discussion)
Case study 2: Prostrate cancer (P Glasziou 25, min including group discussion)
General discussion and wrap up (All, 20 min)

Potential outcomes:
Potential outcomes include:

a) Discussion about what a definition of disease ought to be able to tell us;
b) Potential criteria for defining disease and justifications for these; and

c) Greater clarity about the extent to which the definition of disease plays a key role in overdiagnosis.

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Abstract #113 - HOW SHOULD WE DEFINE “NORMAL”?

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Many diagnoses that previously were based on qualitative judgements or categorical discriminations are now made using quantitative criteria. With the increasing precision of measurements, subclinical relationships with risk factors and premorbid disease become apparent so that a continuous spectrum emerges from absolute health to established pathology. Diagnosis now involves making a decision about which point along this spectrum should be taken as the partition between health and disease. When there is no consensus about how this should be performed, clinical diagnosis can become arbitrary and therefore inconsistent between physicians and institutions.

Approaches adopted in different branches of medicine include:

- Using “hypercontrols” – e.g. in genome-wide analyses of polymorphisms
- Using reference ranges derived from healthy individuals who have no risk factors – leading to a high prevalence of abnormality in asymptomatic subjects
- Using confidence intervals derived from normative population samples – including all individuals, with disease defined as >2 or >3 standard deviations from the mean
- Defining healthy limits by clinical outcomes – e.g. as used to establish normal values for ambulatory blood pressure

Alternative concepts include deriving statistical models (or ‘atlases’) from large population studies and using information technology to implement clinical decision tools that adjust for risk factors and pre-test probability to give an individualised z-score. Different definitions may be appropriate in different circumstances, depending on the availability of effective treatment early in the natural history of a disease.

This workshop will explore these alternative approaches and seek consensus on common principles.

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Abstract # 123 - PREVENTING OVERDIAGNOSIS IN THE EMERGENCY DEPARTMENT: LESSONS LEARNED FROM THE EVALUATION OF PATIENTS WITH SUSPECTED PULMONARY EMBOLISM

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Pulmonary embolism (PE) mortality has remained steady for decades despite an increasing use of testing, mainly computerized tomography (CT). This increase has been associated with overdiagnosis of clinically inconsequential PEs. CT-related risks include contrast-induced nephropathy and long-term cancer risks related to radiation exposure. Despite a growing recognition of the risks associated with our current diagnostic and treatment paradigm, the number of PE CTs continues to increase each year in the United States. This workshop will review the reasons for overdiagnosis of PE and potential approaches to change this paradigm.

Over 60-minutes, this workshop aims to use PE evaluation in the emergency department (ED) as a case study for changing practices resulting in overdiagnosis in a stressful and highly variable clinical area. Panelists will present the 10-minute topics discussed below, followed by three concurrent 20-minute breakout groups, each focused on one aspect of reducing overdiagnosis in the ED: improving evidence uptake, use of technology, or use of policy. Each subgroup will then summarize their conclusions.

Dr. Carpenter will review the epidemiology and etiology of increased ED PE testing rates with an emphasis on CT based upon his work developing an ongoing series in the leading peer-reviewed journal for emergency medicine.

Dr. Schuur will discuss system and policy efforts to reduce testing for PE based upon his work leading a CT appropriateness project across the 7 EDs of Partners Healthcare. He will share methods, challenges and successes from this effort. He has previously spoken nationally on quality measures with his work group's guideline for appropriate testing endorsed by the National Quality Forum.

Dr. Raja will discuss innovative strategies to change physician behavior using electronic decision support and accountability tools. He will use his NIH-funded work as actionable and pragmatic approaches for these challenges.

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Abstract # 158 - ASSESSING HARMS OF SCREENING: PSYCHOSOCIAL CONSEQUENCES, HEALTHCARE COSTS AND RATES OF OVERDIAGNOSIS, FALSE-POSITIVE AND FALSE-NEGATIVE

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To reduce mortality many healthy screening participants will be overdiagnosed and hundreds will inevitably receive false-positive screening results. These healthy participants may experience physical and psychosocial harm. In this workshop, we will explore methodological challenges in assessing psychosocial consequences of screening, healthcare costs associated with screening, and assessment of the accuracy of screening programs.

Methods for development and validation of psychosocial measures in three cancer screening programmes (breast, cervical, lung) and in abdominal aorta aneurism screening will be presented. In addition, we will present methods for the analysis of these psychosocial measures over time. Those with most psychosocial harm, i.e. those with positive screening results, will have a tendency not to answer the questionnaires. Hence, longitudinal analysis needs to take into account the differential dropout. We will present published and unpublished results from longitudinal surveys on psychosocial consequences in lung and breast cancer screening that illustrate these challenges. Research about harms of screening should include qualitative research. The methodology and results from a 12-year follow-up qualitative study including women from a population study who have had a bone scan examination will be presented.

At present, one of seven randomised low dose computerised tomography (CT) screening trials for lung cancer show reduced overall and lung cancer-specific mortality; the six remaining trials have not reported their mortality data. In addition, it is unclear whether CT-screening is cost-effective. A registry study of the population in the Danish lung cancer CT-screening trial (DLCST) investigated the healthcare costs in both the primary and secondary healthcare sector. The data collection in the registry study, the methods and the results from the comparison between: 1) the randomised screening group and control group, and 2) each of the diagnostic groups (true-positives, false-positives and true-negatives) and the control group will be presented.

Participant misclassification underlies the two major harms of screening (false-positives and overdiagnosis). In CT-screening for lung cancer it has been suggested that increasing the cut-off would reduce the number of false-positives for a small number of false-negatives. Data from the DLCST were used to explore the consequences of different choices of cut-offs.

Generally, the choice of an optimum cut-off point depends on the test characteristics, incidence of disease, assumptions about overdiagnosis and utility of the different outcomes of the test.

Abstract # 159 - PROMOTING AWARENESS OF THE POTENTIAL HARMS OF SCREENING: AN APPROACH TO REDUCING OVERUSE AND OVERDIAGNOSIS

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Background: One approach to increasing awareness of overdiagnosis emphasizes the financial cost of intensive testing and screening. The public, however, is skeptical about reducing even low-value testing “simply to save money”. An alternative approach, focusing on how intensive testing and screening exposes people to unnecessary harms, has been impeded by the lack of a clear understanding and taxonomy of these potential harms, and of a robust literature exploring them.

Aims and Content: In the first hour, three 10-minute presentations will each address a workshop objective, followed by 10 minutes of discussion.

1) Propose a taxonomy of the potential harms of screening (including overdiagnosis): a new way of organizing our thinking about harms
2) Summarize findings of a literature review on the published evidence about potential harms of screening, including gaps in the evidence
3) Present ideas for a collaborative action plan to increase awareness of the potential harms of screening among several audiences

In the second hour, break-out groups will meet for 30 minutes, with each beginning to outline an action plan to increase harms awareness among a target audience: 1) the public, 2) healthcare professionals, 3) policy makers, and 4) the media. The focus will be on concrete first steps that participants can make in their communities, with an eye toward collaboration and synthesis of these efforts at future meetings. We will then reconvene for a half hour of discussion about ideas from the small groups.

Presenters:
Russell Harris, MD, MPH; Colleen Barclay, MPH; and Stacey Sheridan, MD, MPH. Presenters have been leaders or organizers of workshops on: research methods and preventive care (UNC MD-MPH Program); communicating benefits and harms of screening (SGIM); critical appraisal of medical literature (UNC medical students and residents); and, appropriate use of clinical preventive services (UNC Research Center for Excellence in Clinical Preventive Services).

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HOW IS WIKIPEDIA HEALTH INFORMATION USEFUL? - WEDNESDAY 11 SEPTEMBER

Lane Rasberry
Wikipedian in Residence
Consumer Reports

Wikipedia is one of the world's most popular websites. To what extent does its popularity apply to the field of health, and why would anyone go to Wikipedia for health information? Join this session for a one-hour introduction to Wikipedia which includes a tour of the health-related Wiki entries, and a case study of the content on overdiagnosis. In the last half hour, people who need coffee are excused while those interested folks with laptops can join a short, hands-on workshop to learn practically how to determine what it would mean to use Wikipedia as a health communication platform.

Here is a breakdown of the session:

20-25 minutes:

1. General description of Wikipedia platform
2. Anatomy of a Wikipedia article - look at article and point out key features (overdiagnosis article)
3. General description of health content on Wikipedia
4. Overview of health content traffic statistics (example - overdiagnosis article)
5. The pitch - "You can edit Wikipedia."
6. Push back - Dissuade people for whom Wikipedia would not be helpful. Give practical reasons why people should not edit Wikipedia to excuse the people who cannot go further.
7. Case study - overdiagnosis article - rather thorough review
8. Review of talk - explain, "You can check article traffic, you can repeat what I did to the overdiagnosis article"

35 minutes
questions and live demonstrations based on questions

5 minutes
Excuse people who do not wish to participate in workshop

25 minutes
Offer assistance in doing 2-3 Wikipedia exercises, including the following

1. checking article traffic

2. generating a citation from a book or article
3. adding content which I have prepared for them to a live article
4. posting a comment to a help board

Abstract #160 - PREVENTING OVERDIAGNOSIS OF BACK PAIN WORKSHOP PROPOSAL

Faculty

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Consumer Editor
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Back pain is the largest cause of disability in the United States for working-age consumers and the second largest cause of physician office visits[1]. The general category of low back pain is a complex mishmash of various conditions that produce pain in the back and/or radiating into the legs. When a patient presents at a primary care office with a new complaint of pure back pain, the prognosis for a quick recovery is good. The primary indicators of potential chronicity causing extended disability are psychosocial rather than physical signs[2]. These low-risk patients are easily identified in a brief physician visit.

Clinicians who consult with these patients have an obligation to educate and support patients without increasing their concerns. Although additional diagnostic tests such as MRI appear to be harmless, in fact the discussion of normal aging signs often raises concerns rather than reassures patients[3]. Any discussion of back injury with these patients is inappropriate because in most cases, back pain cannot be attributed to a specific event[4], but is more likely a hereditary factor[5].

If the patient prognosis can be modified by the physician for better or worse, what should they say to alleviate concerns without appearing to minimize the patient's complaint? In this workshop, leading back pain researchers will present the scientific evidence that back pain often has a favorable prognosis without diagnostic tests or therapy. They will share their individual strategies for brief discussions with back pain patients that maximize their chances of quick, recovery. The cost effectiveness of this approach will be discussed and extrapolated to the savings on a national level that would accrue if back pain is not over-diagnosed.

1. Martin BI, Deyo RA, Mirza SK, et al. Expenditures and health status among adults with back and neck problems. JAMA 2008;299:656–64.
2. Hill JC, Dunn KM, Lewis M, et al. A primary care back pain screening tool: identifying patient subgroups for initial treatment. Arthritis Rheum 2008; 59: 632–41.
3. Chou R, Fu R, Carrino JA, Deyo RA. Imaging strategies for low back pain: systematic review and meta-analysis. Lancet 2009; 373: 463–72.
4. Carragee E, Alamin T, Cheng I, Franklin T, van den HE, Hurwitz E. Are first-time episodes of serious LBP associated with new MRI findings?

5. Battie MC, Videman T, Levalahti E, Gill K, Kaprio J. Heritability of low back pain and the role of disc degeneration. Pain 2007; 131: 272–80.