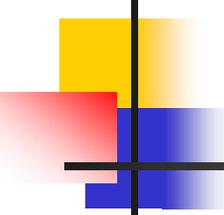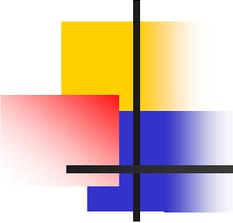# Evidence-based medicine; the way of the future

Dr S Gichuhi

Dept of Ophthalmology

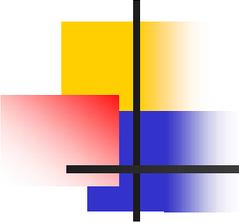University of Nairobi

Introduction

- Evidence-based medicine is a relatively new concept in East Africa

- It is an important development in health care delivery that health care workers and managers need to be aware of.
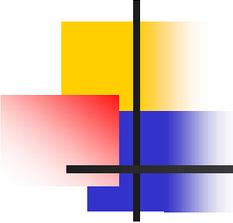
Introduction

- Evidence-guided health care policy and clinical care will help to improve the quality and standards of health care delivery
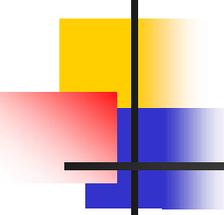
What is evidence-based medicine?

- It is the process of systematically finding and using the most
  - contemporary research findings
  - clinical experience
  - patient values
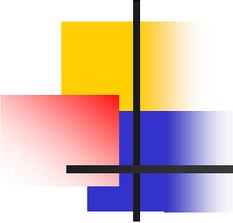- for making clinical decisions.

Drivers of change

1. A diminishing resource base available for health care

2. Greater access to health care information e.g. internet
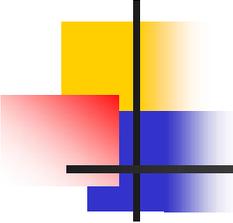
Drivers of change

3. Patients, caregivers and 3rd party payers expectations. Patients are more aware and more vocal about their rights and freedoms.
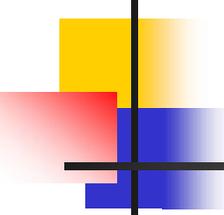
Drivers of change

4. Increased media coverage of health care.

5. Rising number of complaints going to litigation.
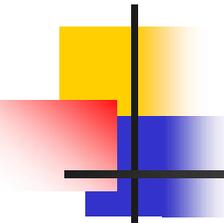
Drivers of change

6. Disparity between clinical experience which increases with time and up-to-date knowledge which diminishes with time.
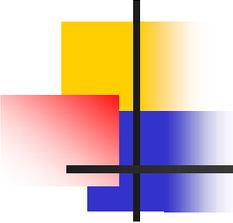
How do you practice evidence-based medicine?

- The 5-step model

Step 1: Asking answerable clinical questions (PICO)

- **P**atient - in a 50 year old man with well controlled type 2 diabetes mellitus that had a recent BRVO.....

- **I**ntervention – would laser photocoagulation of the affected retina...

- **C**omparison – when compared to no intervention...
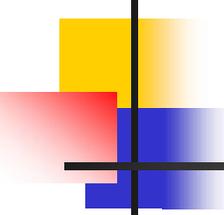
- **O**utcome – lead to better visual outcome?
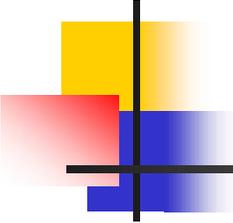
Step 2: Search for the evidence

- Pubmed
- Journals
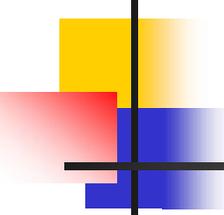- Conference proceedings

Step 3: Critical appraisal of the evidence

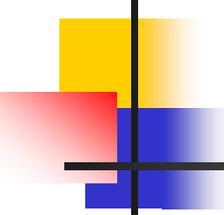- Validity
- Relevance

Validity of RCTs

- was there a clearly defined research question?
- Were the groups randomized?
- Were all patients accounted for at its conclusion?
- Was there intention-to-treat analysis?
- Were the research participants blinded?
- Were the groups treated equally throughout?
- Did randomization produce comparable groups at the start?
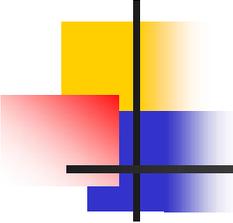
Step 4: Make a decision

- By integrating the evidence with your clinical experience and the patient's values

Step 5: Evaluate your perfomance

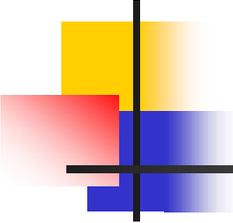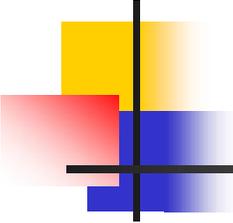- Clinical audit

Benefits of EBM

- To the individual clinician
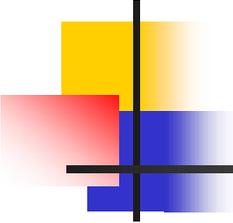- To the hospital or health institution
- To the nation

To the clinician

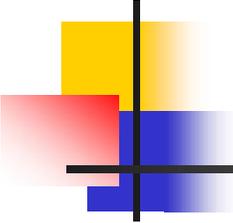- upgrades their knowledge base routinely

To the clinician

- improves understanding of research methods and makes you more critical of published data.
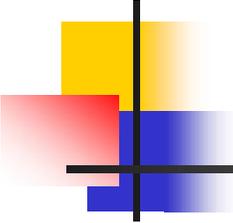
To the clinician

- improves confidence in management decisions.

To the clinician

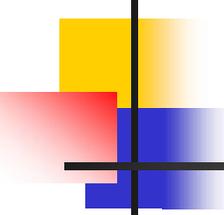- improves computer literacy and data searching techniques.

To the clinician

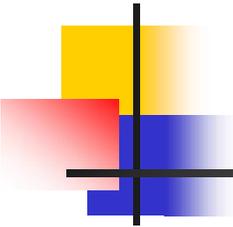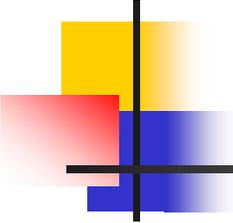- improves reading habits and promotes professional life-long education.

To the hospital

- you can evaluate the clinical effectiveness of health interventions
- better communication with patients about the rationale behind clinical decisions.
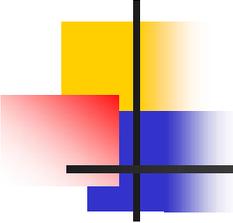- greater patient satisfaction

To the nation

- higher standards and quality of care

To the nation
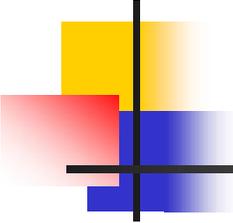
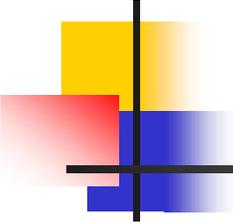- cost effective health system (more efficient use of resources)

To the nation

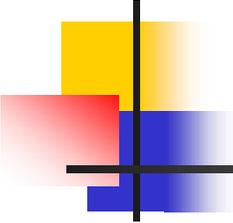- better stewardship and accountability to tax payers

Challenges & barriers

- It takes time to learn
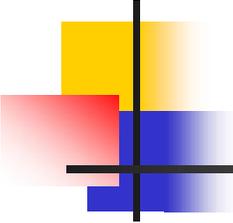- Expensive infrastructure e.g. computers, internet

Challenges & barriers

- Available databases are not comprehensive enough. (a lot of African research does not get published)

Challenges & barriers

- It exposes knowledge gaps which may be uncomfortable for clinicians and patients.

Challenges & barriers

- Pharmaceutical industry sponsorship of research and CME has potential to compromise rational decision making.