

# **Evidenced Based Clinical Practice Guideline : Expectations and Challenges**

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# What is EBM – Philosophical Definition

*Conscientious explicit and judicious*  
use of *current best evidence* in  
making decisions about the *care*  
*of individual patients*

( Sackett, BMJ 1996 )

*Avicenna (980-1037) - Canon of Medicine; seven rules to evaluate the effects of drugs in disease - time of action and reproducibility.*



Arabic *Ibn Sina*, 980–1037, Islamic philosopher and physician, of Persian origin, b. near Bukhara. He was the most renowned philosopher of medieval Islam and the most influential name in medicine from 1100 to 1500. His medical masterpiece was the *Canon of Medicine*. His other masterpiece, the *Book of Healing*

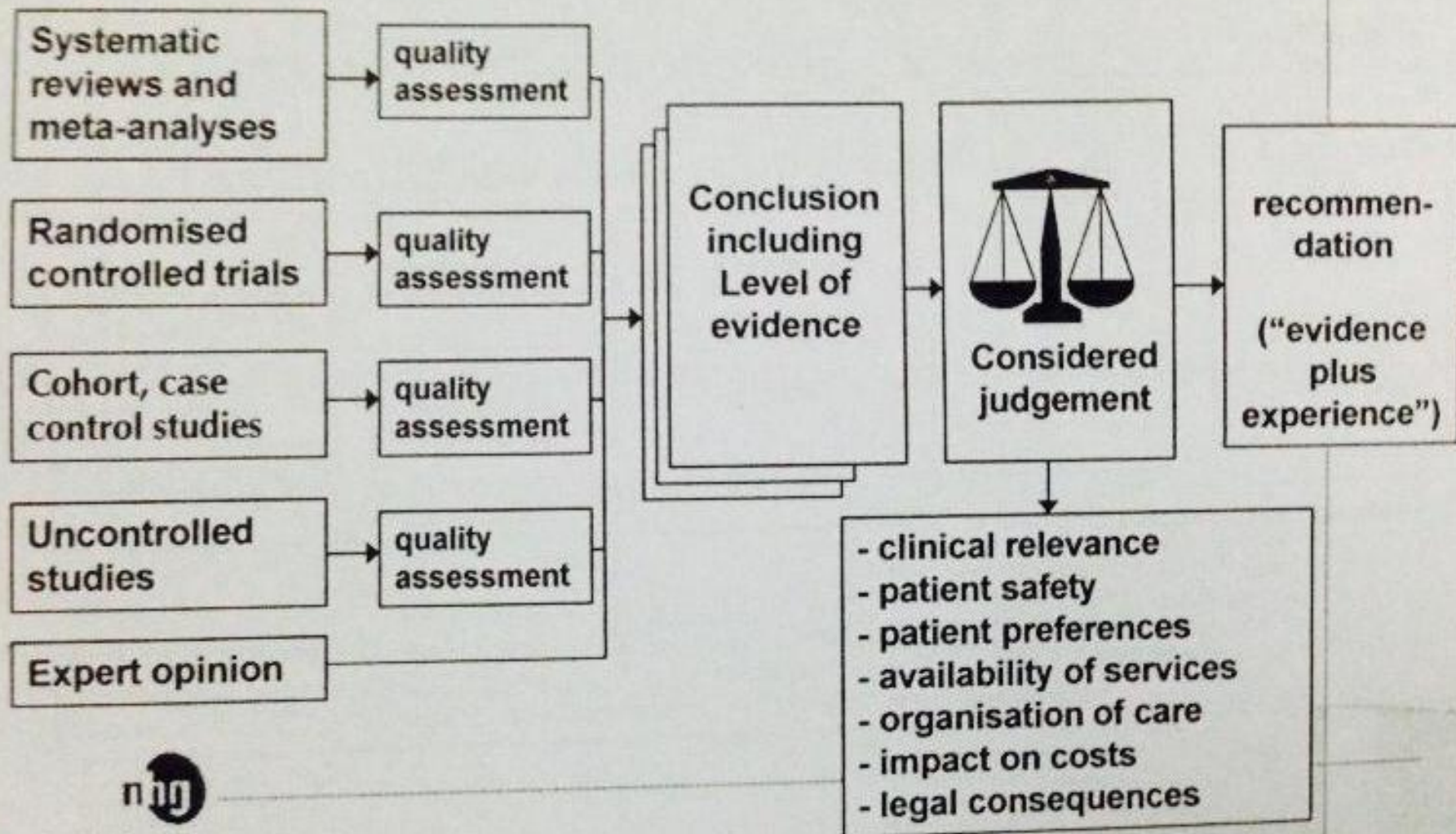


# **What are Clinical Practice Guidelines ?**

“ Clinical Practice Guidelines are statements that include recommendations intended to optimise patients care that are informed by a systematic review of evidence and an assessment of the benefits and harm of alternative care options”

**Institutes of Medicine 2011**

# Evidence-based Guideline Development





# **ADAPTATION OF EVIDENCE-BASED CLINICAL PRACTICE GUIDELINES**

**28 – 30 April 2014**

**Al-Razi Meeting Room, Block E1, Complex E  
Ministry of Health, Malaysia, Putrajaya**

**Organised by:**

**Malaysian Health Technology Assessment Section  
Medical Development Division  
Ministry of Health, Malaysia**

**In collaboration with:**

**World Health Organization**



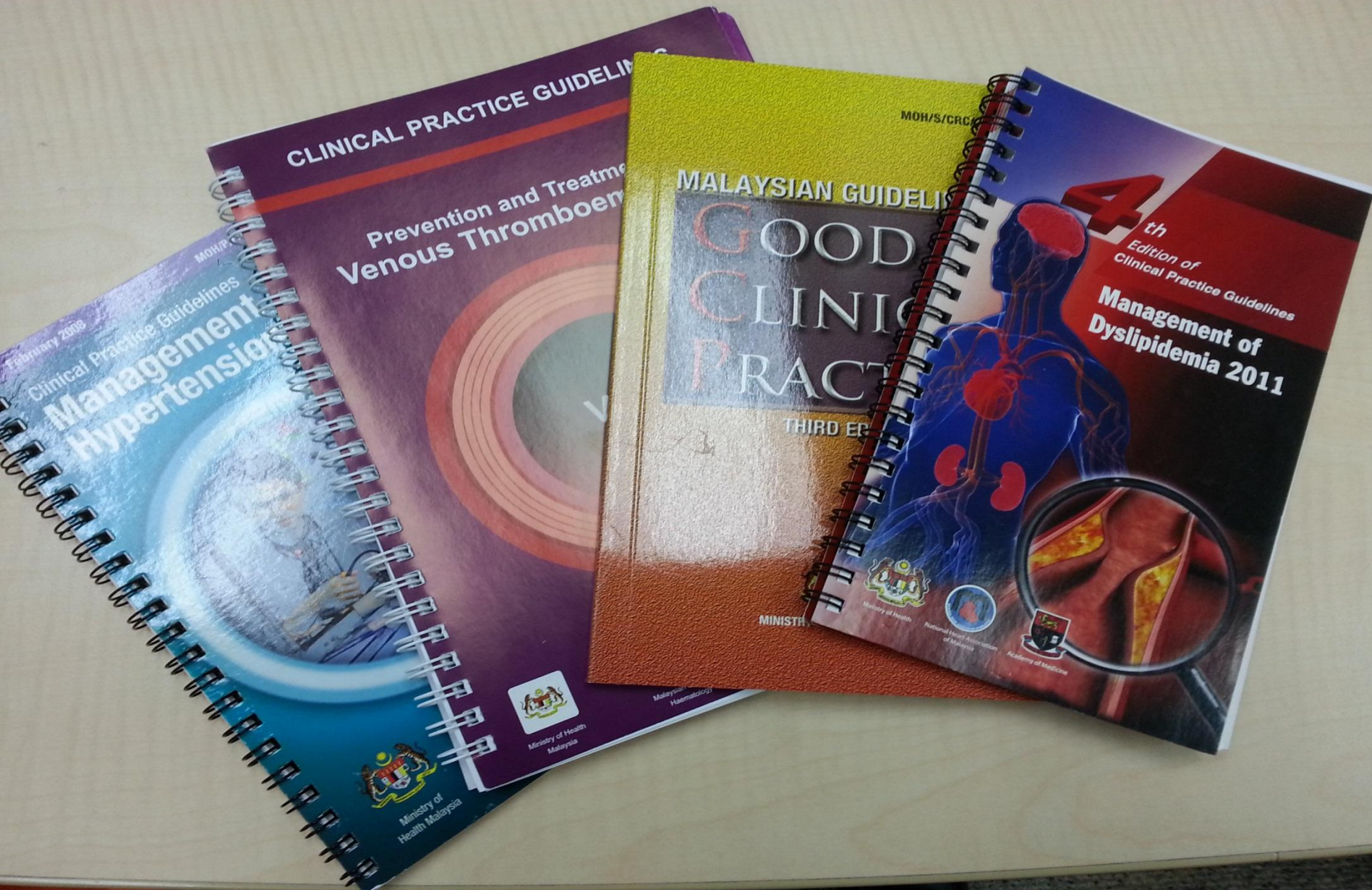
**Guidelines for**

# **CLINICAL PRACTICE GUIDELINES**



**MINISTRY OF HEALTH MALAYSIA  
MEDICAL DEVELOPMENT DIVISION  
2003**

# My involvement with CPGs



# Key Features of Good Guideline

- Credible multidisciplinary committee
- Sound methodology
- Good dissemination and implementation strategy

# Features of Good Guideline

## Credible Committee

- People involved
- Organisation involved
- Target users involved in development ( sense of ownership)
- Balanced multidisciplinary group
- Patient involvement

# Hypertension CPG Development Group

- A. Rashid Abdul Rahman

- Sunita Bavanandan

- Chua Chin Teong

- Ghazali Ahmad

- Azhari Rosman

- Khoo Kah Lin

- Khalid Yusoff

- Robaayah Zambahari

- Feisul Idzwan Mustafa

- Mimi Omar

- Chia Yook Chin

- Khoo Ee Ming

- Zaleha Abdullah Mahdy

- Md. Hanip Rafia

- Yau Weng Keong

- Wan Jazilah Wan Ismail

- Yap Piang Kian

- Faridah Aryani Md. Yusof

# Features of Good Guideline

## Methodology

- Systematic review of the literature
- Combining evidence linkage and expert consensus
- External peer review
- Formal update procedure
- Use of quality criteria for guideline development

# External Reviewers

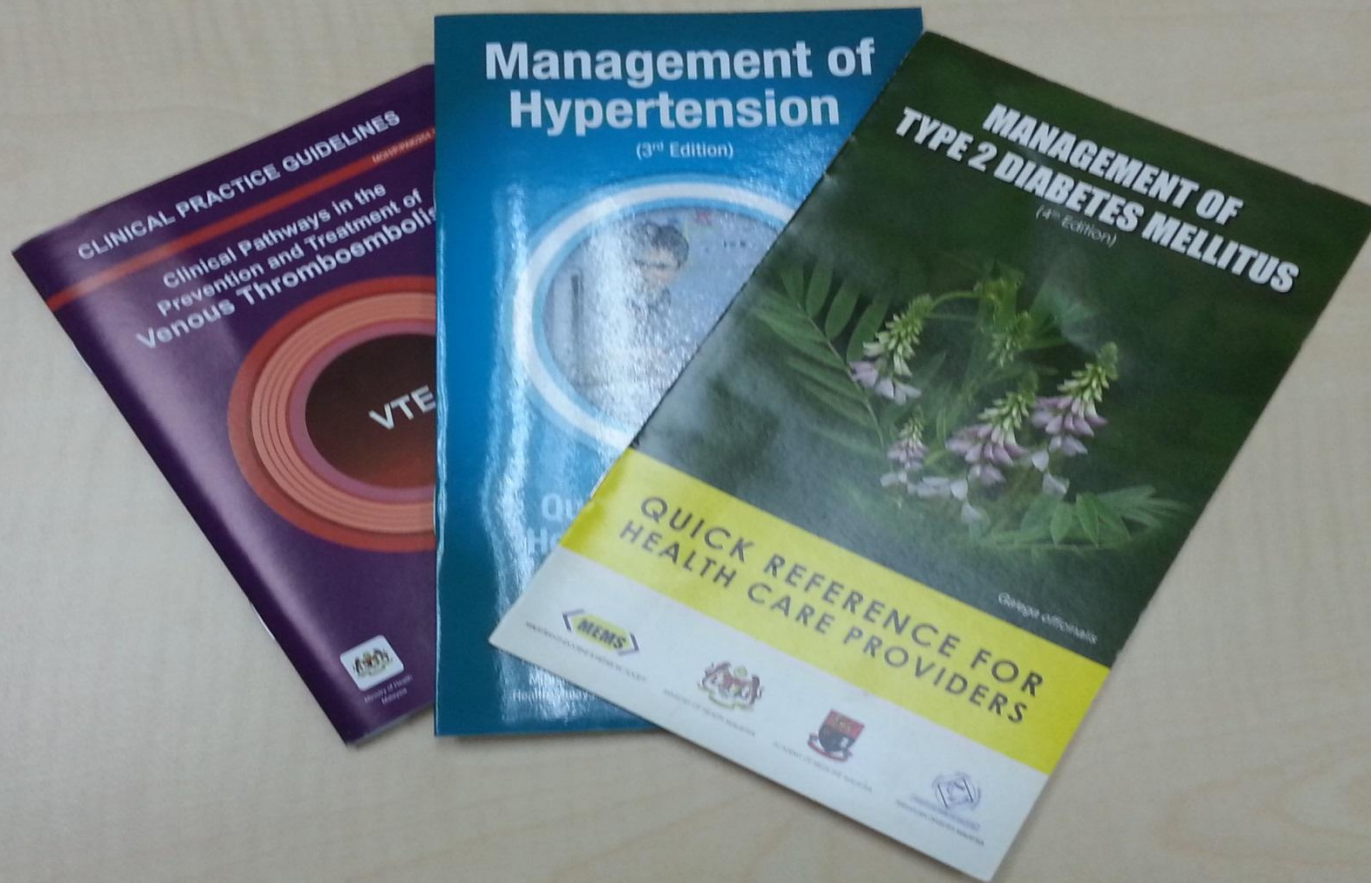
- J Ravichandran Jeganathan
- Ho Bee Kiau
- Husni Hussain
- Goh Lee Gan
- Adina Abdullah
- Wan Azman Bin Wan Ahmad
- Hamidon Basri
- Brian Tomlinson
- Tariq Abdul Razak

# Features of a Good Guideline

Dissemination and implementation strategy

- Production of different guideline formats, including patient version and tools for application
- Use of the internet
- Multiple implementation strategy

# QUICK REFERENCE VERSION



# Implementation strategies for Hypertension CPG 2014

- Launching on the 17<sup>th</sup> of January 2014 at the Malaysian Society of Hypertension Annual Scientific Meeting
- Road shows will be organised throughout 2014 under the auspices of the MSH
- A Quick Reference will be made available in the first quarter of 2014
- Currently available Training Module will be updated
- Patient Information Leaflet will be made available by first quarter of 2014
- A short paper summarising the changes will be published in the Med J Malaysia or the Academy of Family Medicine Journal
- An audit of Hypertension Management will be proposed to the Institute of Health Management, MOH other Health facilities

# Evidenced Based CPG

## Expectations

- They are truly evidenced based quoting the best available current evidence
- They are well accepted
- They are easily implemented
- Compliance will lead to better clinical outcome
- It is an integral part of quality care

# **The Expectation**

- A paradigm shift
- From current practice of purely professional autonomy to Future Practice of Guideline adherence

# **Expectation in the implementation of CPGs**

- Continuous Professional education and development**
- Portfolio learning and problem based learning**
- Patient empowerment, shared decision making**
- Organisational development, disease management , integrated care models**
- Accreditation and certification**
- Public reporting, pay for performance**
- Knowledge management, computer decision support**
- Team and leadership development**

# Challenges-1

- Evidence based Guidelines are not necessarily Evidenced Based
- Some recommendations are 'Eminence Based' or 'Industry Influenced'
- Some are more consensus statements
- 'Experts' look at the same evidence and come out with different recommendations

# Challenges-2

- Evidence based Guidelines are not followed well in practice
- Organisational changes are often needed to ensure successful implementation of guidelines
- Change in culture and attitude is required to engage professionals in quality improvement
- Teamwork and collaboration between managers and healthcare professionals increase the likelihood of success

# The Science of Best Evidence

Quality of Evidence ( Lawrence RS, JAMA 1987 )

- 1 At least 1 RCT
- 2a Non randomised CT
- 2b Cohort of case –control studies  
( preferably > 1 center )
- 2c Multiple case series  $\pm$  intervention  
Dramatic results in uncontrolled  
experiments
- 3 Opinion based on clinical experience  
Descriptive studies  
Reports of expert committees

# HOW LOW SHOULD WE LOWER BP IN A PATIENT WITH HYPERTENSION AND DIABETES?

| Guideline | Year | BP level   |
|-----------|------|------------|
| NICE UK   | 2011 | 140/80mmHg |
| ESC/ESH   | 2013 | 140/85mmHg |
| Canadian  | 2013 | 130/80mmHg |
| AHA/ACC   | 2013 | 140/90mmHg |
| ASH/ISH   | 2013 | 140/90mmHg |
| JNC 8     | 2013 | 140/90mmHg |
| Malaysian | 2014 | 140/80mmHg |

# HYPERTENSION AND DIABETES- THE EVIDENCE

| Trial   | Year | BP difference     | Outcome  |
|---------|------|-------------------|----------|
| UKPDS   | 1998 | 154/ 88 vs 144/82 | POSITIVE |
| ADVANCE | 2007 | 140/77 vs 135/75  | POSITIVE |
| ACCORD  | 2010 | 134/71 vs 119/ 64 | NEGATIVE |

## Table 10. Drug Combinations in Hypertension: Recommendations

Preferred (based on outcome trials)<sup>86-93</sup>

ACEI /thiazide or thiazide like

ARB/ thiazide

ACEI /CCB

B-Blocker /thiazide

Thiazide diuretics/K<sup>+</sup> sparing diuretics

Acceptable( no outcome trial evidence yet )

ARB/CCB

B-Blocker/ thiazide like

DRI/diuretic

ARB = angiotensin receptor blocker

ACE = angiotensin-converting enzyme

CCB = calcium channel blocker

DRI = direct renin inhibitor

# Key Messages ( New )

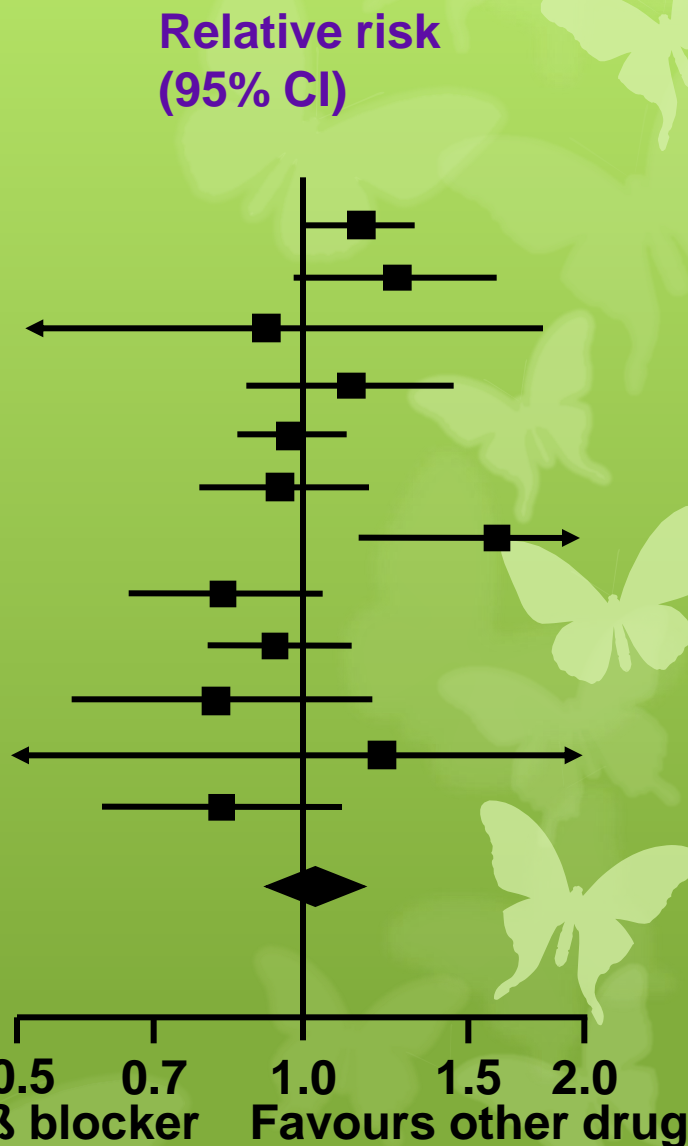
In patients with newly diagnosed uncomplicated hypertension and no compelling indications, choice of first line monotherapy includes ACEIs, ARBs, CCBs, diuretics and beta blockers. Beta blockers is now recommended based on evidence from newer meta analysis since the last edition

# All beta-blockers vs. other active drugs

## Myocardial infarction

| Study        | β blockers<br>(n/N) | Other drugs<br>(n/N) |
|--------------|---------------------|----------------------|
| ASCOT-BPLA   | 444/9618            | 390/9639             |
| CONVINCE     | 166/8297            | 133/8179             |
| ELSA         | 17/1157             | 18/1177              |
| HAPPHY       | 132/3297            | 116/3272             |
| INVEST       | 441/11309           | 452/11267            |
| LIFE         | 188/4588            | 198/4605             |
| MRC Old      | 80/1102             | 48/1081              |
| NORDIL       | 157/5471            | 183/5410             |
| STOP-2       | 154/2213            | 318/4401             |
| UKPDS        | 46/358              | 61/400               |
| Yurenev      | 7/150               | 6/154                |
| MRC          | 103/4403            | 119/4297             |
| <b>Total</b> | <b>1935/51963</b>   | <b>2042/53882</b>    |

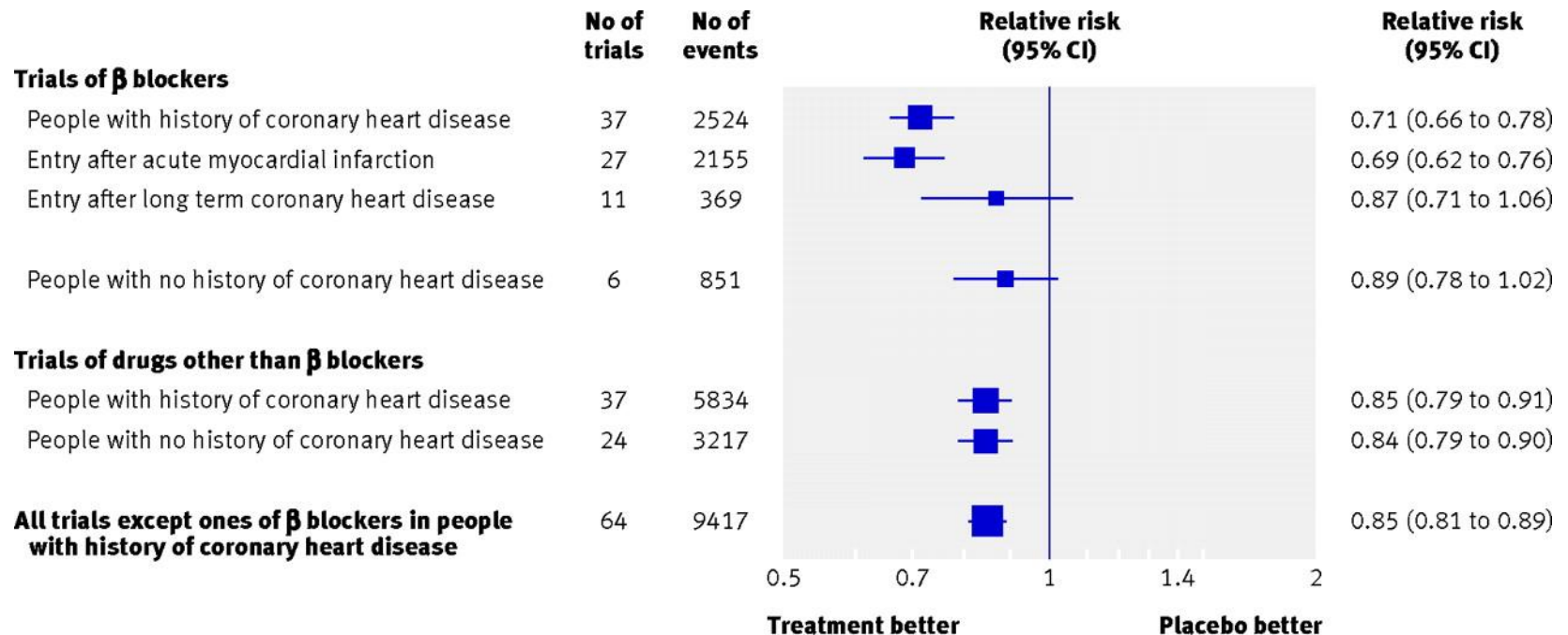
**Relative Risk 1.02 (0.93 to 1.12)**



# Other meta analysis which cast doubt on beta blockers

- Khan N,McAlister FA Re examining the efficacy of beta-blockers for the treatment of hypertension: a meta-analysis *CMAJ* 2006 Jun 6;174(12):1737-42
- Bradley HA,Wiysonge CS, Volmink JA et al . How strong is the evidence for the use of beta-blockers as first-line therapy for hypertension? Systematic review and meta-analysis *J Hypertens* 2006 Nov;24(11):2131-41
- Wiysonge CS, Bradley HA,Mayosi BM et al . Beta Blockers for Hypertension.*Cochrane Database Syst Rev* 2007 Jan 24;(1): CD002003

# Newer Meta analysis after 2008



- Relative risk estimates of CHD events in single drug blood pressure difference trials according to drug
- $\beta$ -blockers were shown to exert effects beyond BP lowering:
  - secondary prevention of coronary artery disease (CAD)
  - Protective effect when administered after myocardial infarction (MI)

# More Recent Meta analysis on Beta Blockers post 2008

- Wright JM, Musini VM. First –line drugs for hypertension . *Cochrane Database Syst Rev* 2009 Jul 8; (3): CD001841
- Wiysonge CS, Bradley HA,Volmink J. Beta Blockers for Hypertension. *Cochrane Database Syst Rev* 2012 Nov 14;11: CD002003
- Chrysant SG,Chrysant GS. Current status of beta blockers for the treatment of hypertension:an update . *Drugs Today* 2012 May;48(5):353-66

# Challenges – 3

Guidelines not followed

( *Cabana MD JAMA 1999* )

3 barriers

- Knowledge
- Attitude
- Behaviour

# Barriers to Implementation

Knowledge ( or the lack of it )

- Not aware of guideline
- Guideline is too large
- Guideline too complicated
- Disagree with content

# Barriers to Implementation

## Attitude

- Why change ? If it is ain't broken, don't fix it
- Guideline is 'cook book medicine'
- Guideline threatens professional autonomy
- No confidence in the guideline development organisation

# Barriers to Implementation

## Behaviour

- Individual patients preferences
- Lack of time
- Lack of skills
- External barriers: availability of facilities, organisation and costs

# Challenges - 4

## Implementation

- **'Knowing is not enough, you must apply'**
- **'Willing is not enough, you must do'**

*Johan Wolfgang von Gothe*

- **Evidence – based development should be followed by evidence- based implementation “**

*Richard Grol*

- **Lives are literally being lost because of inertia in the system to move promising research quickly enough to the patient need**

*Rosenberg RN JAMA 2003*

# Evidence – based implementation

- Systematic approach to managing the quality of health care
- Use various dissemination and implementation strategies in combinations
- Consider professional, organizational, financial, regulatory incentives and disincentives
- Consider barriers and facilitators at both national and local levels ( targeted implementation )

# **Bridging the Gap Between Expectation and Challenges**

- Designing intervention programme
- Professional intervention
- Patients intervention
- Organizational intervention
- Financial intervention
- Regulatory intervention

# Types of Intervention

## **Professional**

- *Educational meetings/ outreach visits*
- *Local opinion leaders*
- *Audit and feedback/ reminders*

## **Patient**

- *Individual/ group/ mass media*

## **Organizational**

- *Provider/ structural*

## **Financial**

- *Provider/patients*

## **Regulatory**

- *NSR etc*

# **A Culture of Change is Required**

- Build and sustain a receptive context for putting evidence into practice
- Create a culture that emphasizes learning, team work and patient focus is crucial
- Supportive organizational culture is needed
- Encourage readiness to change

# Conclusion

## Towards Effective CGPs

- Specific and concrete recommendation
- Supported with scientific evidence
- Easily followed, not too complex
- No new skills needed
- No change in routine and habits needed
- Compatible with norms and value in practice
- Attractive, with tools for application