

# O papel actual da biblioteca na construção de sistemas avançados de suporte à decisão clínica - O exemplo da BC/CDI da FMUL -

Prof. Doutor António Vaz Carneiro, MD, PhD, FACP

Centro de Estudos de Medicina Baseada na Evidência

Biblioteca Central / Centro de Documentação e Informação

Instituto de Formação Avançada

FACULDADE DE MEDICINA DA UNIVERSIDADE DE LISBOA

CENTRO ACADÉMICO DE MEDICINA DE LISBOA



## 2015 — The Future of Medical Libraries

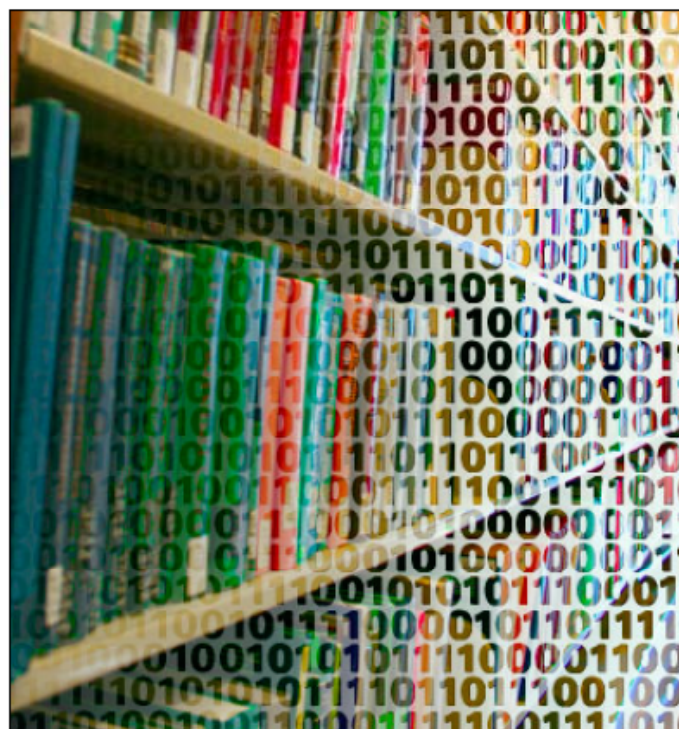
Donald A.B. Lindberg, M.D., and Betsy L. Humphreys, M.L.S.

The past 20 years have witnessed computer and communications revolutions, rapid progress in genetics research, increasing public interest in personal health decisions, and corresponding expansions in the services provided by the National Library of Medicine. These concomitant and linked developments have upset the information marketplace and inspired policy debates about telecommunications, intellectual property, and access to the results of government-funded research. The Internet and the World Wide Web have transformed the way libraries deliver information services and have created perceived alternatives to libraries. What will happen to medical libraries in the post-Google world?

Today, most medical li-

braries and many portable devices support easy teleconferencing and distance education. Everyone craves access to more electronic information, no matter how much is available, but people treasure efficient methods for extracting pertinent information from the fire-hose effect of undifferentiated

electronic text (and unwanted commercial offers). Most clinicians, patients, and healthy people use electronic health records. Like basic researchers, clinical researchers depend on electronic data systems. When using such systems, practitioners and researchers expect instant connection to related knowledge, including guidelines, protocols, clinical alerts, and relevant published  
 and families  
 same information that is



# Esquema da comunicação

1. Para que serve uma biblioteca médica no séc. XXI?
2. Contextos em que é necessária informação científica
3. As necessidades em informação para uma prática clínica baseada na evidência
4. Temos problemas de translação do conhecimento?
5. Onde se encontra a melhor evidência disponível que necessitamos (“puxar”)?
6. Como é que a melhor evidência científica vem ao nosso encontro (“empurrar”)?
7. Um exemplo de um sistema de apoio à decisão clínica

# Contextos em que é necessária informação científica

- **Assistência directa aos doentes**
- **Actualização dos conhecimentos médicos**
- Ensino (pré, pós-graduado e continuado)
- Investigação clínica
- Gestão/administração
- Políticas de saúde.

# Algumas bases de dados...

- Medline
- EMBASE
- CINAHL
- Web of Science
- B&On
- Psycholit
- Aidsline
- Scopus
- Google
- .....
- Cochrane Library
- Health Technology Assessment UK
- NHS Evidence
- EBM digests
- .....

# As necessidades em informação na prática clínica

- tratamento e prevenção
- diagnóstico
- prognóstico e predição clínica
- causalidade
- melhoria da qualidade
- custo-efectividade

**Brian Haynes  
McMaster University  
Canada**

**Investigadores**

**Decisores clínicos**



# Temos problemas de translação do conhecimento?

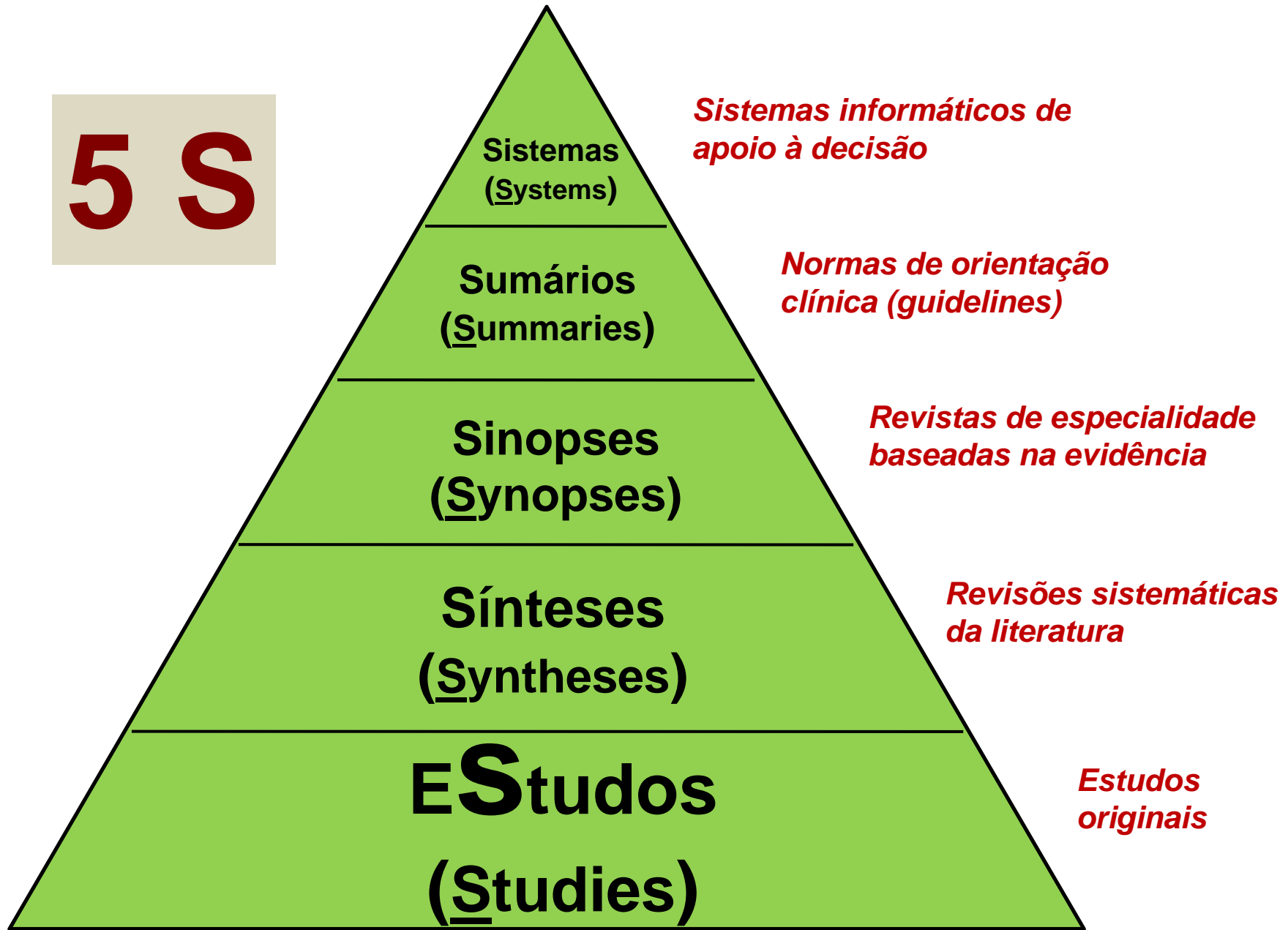
- só 12-15% dos doentes hipertensivos têm a sua tensão arterial controlada
- a grande maioria dos doentes geriátricos não se tratam para a depressão em ambulatório
- só uma percentagem menor de doentes com ICC fazem beta-bloqueantes
- os diabéticos têm a TA mal controlada e a glicémia também



# Tipos de fontes de informação

- as que servem como base de apoio à decisão clínica *real-time*, na presença do doente, que permitem respostas imediatas às questões colocadas no contacto com o doente (“o clínico vai PUXAR a evidência...”)
- as que servem para a actualização e manutenção da informação clínica considerada relevante para a área de prática clínica (“a evidência vai ser EMPURRADA em direcção do clínico...”)

# 5 S



Adaptado de Haynes RB, ACP Nov-Dec 2006, 145:A8-A9



# Onde se encontra a melhor evidência disponível (“puxar”)?

- **UpToDate**

(<http://www.uptodate.com>)

- **DynaMed**

(<http://www.ebscohost.com/dynamed>)

- **Best Practice**

(<http://bestpractice.bmj.com>)

# Só 12-15% dos doentes hipertensivos têm a sua tensão arterial controlada

The screenshot displays the Best Practice website interface for 'Essential hypertension'. The top navigation bar includes links for 'Sobre Best Practice', 'Literatura para pacientes', 'Minha Best Practice', and 'Best Practice Mobile', along with a language selector set to 'English'. A search bar is present with the text 'Buscar doenças' and 'Search Best Practice'. The main content area is titled 'Essential hypertension' and features a grid of navigation tabs: Highlights, Fundamentos, Prevenção, Diagnóstico, Tratamento, Acompanhamento, and Recursos. Below these tabs is a row of utility buttons: 'Add notes', 'Adicionar a Favoritos', 'Add to Learning plan', 'Share', 'Feedback', 'Imprimir', and 'E-mail'. The main content is organized into three columns: 'History & exam', 'Diagnostic tests', and 'Treatment details'. The 'History & exam' column includes 'Key factors' (presence of risk factors, BP over 140/90 mmHg, retinopathy) and 'Other diagnostic factors' (Hx OCP use, Hx non-steroidal anti-inflammatory use, Hx adrenergic agonist use, Hx herbal medication use, headache, visual changes, palpitations, weight loss, sweating, dyspnoea, chest pain, sensory or motor deficit, laterally displaced point of maximal impact, pulsatile abdominal mass, oedema, decreased/absent lower extremity pulses). The 'Diagnostic tests' column includes '1st tests to order' (ECG, fasting metabolic panel, fasting lipid panel, Hb, urinalysis) and 'Tests to consider' (plasma renin activity (PRA), plasma aldosterone, renal duplex ultrasound/MRA renal arteries, 24-hour urine phaeochromocytoma screen, 24-hour urine free cortisol, TSH, ambulatory BP monitor). The 'Treatment details' column includes 'Ongoing' treatment for 'no co-morbidity (other than osteoporosis): non-pregnant', with 'stage 1 HTN (BP 140 to 159/90 to 99 mmHg)' (thiazide monotherapy + lifestyle modification, ACE inhibitor/angiotensin-II receptor blocker monotherapy + lifestyle modification, beta-blocker monotherapy + lifestyle modification, dihydropyridine CCB monotherapy + lifestyle modification) and 'stage 1 not at goal with monotherapy or stage 2 (BP ≥160/100 mmHg)' (thiazide + ACE inhibitor/angiotensin-II receptor blocker + lifestyle modification, ACE inhibitor/angiotensin-II receptor blocker + dihydropyridine CCB + lifestyle modification).

# A grande maioria dos doentes geriátricos não se tratam para a depressão em ambulatório

The screenshot shows the UpToDate website interface. At the top, there is a search bar with the text 'depression in the elderly' and a 'Search' button. The navigation menu includes 'New Search', 'Patient Info', 'What's New', 'Calculators', 'CME 99,0', and 'My Account'. On the right side, there are links for 'Home', 'Contact us', 'About UpToDate', 'Careers', and 'Help', along with 'LOG OUT' and 'FEEDBACK' buttons.

The main content area is titled 'Diagnosis and management of late-life depression'. It features a 'TOPIC OUTLINE' on the left with sections for INTRODUCTION, EPIDEMIOLOGY, PATHOGENESIS, CLASSIFICATION, DIAGNOSIS, and TREATMENT. The main text includes the following sections:

- Authors:** Randall T Espinoza, MD, MPH; Jürgen Unützer, MD, MPH
- Section Editors:** Thomas L Schwenk, MD; Kenneth E Schmader, MD
- Deputy Editor:** H Nancy Sokol, MD
- Last literature review version 17.2:** Maio 2009 | **This topic last updated:** Maio 26, 2009 (More)
- INTRODUCTION** — Depressive illness in the older population is a serious health concern leading to unnecessary suffering, impaired functional status, increased mortality, and excessive use of health care resources. Late-life depression remains under diagnosed and inadequately treated [1-4]. In the United States, older men and older African Americans and Hispanics are at even greater risk of unrecognized depression [5-7]. The public health consequences of inadequately treated depression in late life will increase over time as the population continues to age. The term late-life depression includes both aging patients whose mood disorder presented in earlier life, and patients whose mood disorder presents for the first time in later life.
- Over 80 percent of mental health treatment for depressed older adults is delivered in the primary care setting. Depression often goes undiagnosed in primary care [8], and is often left untreated, even when diagnosed [9]. Recognition and management of late-life depression is an important responsibility for the primary care clinician.
- This topic will review the epidemiology of late-life depression, diagnostic strategies, and options for treatment in the older adult. Diagnosis and management of depression in the general population are discussed separately. (See "Depression: Clinical manifestations and diagnosis" and see "Initial treatment of depression in adults" and see "Antidepressant medication in adults: SSRIs and SNRIs" and see "Antidepressant medication in adults: MAO inhibitors and others" and see "Antidepressant medication in adults: Tricyclics and tetracyclics" and see "Antidepressant medication in adults: Switching and discontinuing medication").
- EPIDEMIOLOGY** — Depression is not a normal consequence of aging [10,11]. Sadness and grief are normal responses to life events that occur with aging such as bereavement; adjustment to changes in social status with retirement and loss of income; transition from independent living to assisted or residential care; and loss of physical, social, or cognitive function from illness. (See "Grief and bereavement"). Despite these losses, healthy independent community-dwelling elderly in the United States have a lower prevalence rate of clinical depression than the general adult population (show figure 1) [12].
- Rates of depression for community-dwelling older adults range from two percent (for patients in community settings who meet strict diagnostic interview criteria) to about ten percent for patients with minor depression [13]. Cultural factors [14] as well as variations in methods of assessment lead to significant variations in reported prevalence. Rates of depression are higher for older adults with comorbid medical illness and in general medical settings. Hospitalized geriatric populations have prevalence rates of depression over 30 percent, and patients with stroke, myocardial infarction (MI), or cancer have rates over 40 percent (show figure 1) [15-17].
- Although prevalence of depression in the older healthy population is lower than in comparable younger groups, incidence rates may not differ. A cohort study of 5600 community dwelling persons in the Netherlands, aged 56 or older (mean age 70 years at baseline) and followed for eight years, found the incidence of depressive syndromes (major depression and dysthymia) to be 7 per 1,000 person years [18]. Most depressive episodes occurred in persons with a prior history of depression, with a recurrence rate of 25.5 per 1,000 person years. Clinically significant but

# Só uma percentagem menor de doentes com ICC fazem beta-bloqueantes

Find:

Search

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#) [Browse by Category](#)

Beta blockers for heart failure	
Top	You are viewing a DynaMed summary. Use of DynaMed indicates acceptance of <a href="#">DynaMed Terms of Use</a> . Limitations of DynaMed are contained in the <a href="#">DynaMed Terms of Use</a> .
Dosing	<b>Beta blockers for heart failure</b>
Efficacy	Updated 2009 Oct 01 05:10 PM: continuation of beta blockers during hospitalization for acutely decompensated heart failure appears similar to discontinuation of beta blockade (Eur Heart J 2009 Sep) <a href="#">update</a>
Individual drugs	continued peer review effects of nebivolol similar in elderly patients with impaired and preserved left ejection fraction (J Am Coll Cardiol 2009 Jun 9) <a href="#">update</a>
Adverse Effects	<b>Related Summaries:</b>
NYHA Heart Failure Classification	<ul style="list-style-type: none"><li>• <a href="#">Beta blockers</a></li><li>• <a href="#">Bisoprolol</a></li><li>• <a href="#">Carvedilol</a></li><li>• <a href="#">Metoprolol</a></li><li>• <a href="#">Atenolol</a></li><li>• <a href="#">Heart failure</a></li></ul>
References including Reviews and Guidelines	<b>Overview:</b>
Acknowledgements	<ul style="list-style-type: none"><li>• useful in <a href="#">class II, III and IV</a> congestive heart failure (CHF)</li><li>• beta blockers proven effective for heart failure include<ul style="list-style-type: none"><li>◦ bisoprolol, a beta-1 selective blocker</li><li>◦ carvedilol, a nonselective beta-blocker and alpha-1 blocker</li><li>◦ sustained-release metoprolol, a beta-1 selective blocker</li></ul></li><li>• choice of beta blocker not clear<ul style="list-style-type: none"><li>◦ only carvedilol and sustained-release metoprolol FDA approved for CHF</li><li>◦ carvedilol improved survival compared to immediate-release metoprolol in large randomized trial</li><li>◦ 4 small randomized trials have compared carvedilol vs. metoprolol, 2 found no difference, 2 found differences in ejection fraction or left ventricular size favoring carvedilol</li></ul></li><li>• adverse effects include worsening of heart failure, symptomatic hypotension, bradycardia, heart block</li><li>• use not advised in patients with asthma or severe bradycardia</li><li>• starting with low doses and titrating dose based on tolerance can reduce risk of side effects</li></ul>
Send Comment to Editor	<ul style="list-style-type: none"><li>▶ <a href="#">Dosing</a></li><li>▶ <a href="#">Efficacy</a></li><li>▶ <a href="#">Individual drugs</a></li><li>▶ <a href="#">Adverse Effects</a></li><li>▶ <a href="#">NYHA Heart Failure Classification</a></li><li>▶ <a href="#">References including Reviews and Guidelines</a></li><li>▶ <a href="#">Acknowledgements</a></li></ul>

Como é que a melhor evidência científica vem ao nosso encontro (“empurrar”)?

- **Evidence Based Medicine**  
(<http://ebm.bmj.com>)
- **Essential Evidence Plus**  
([www.essentialevidenceplus.com](http://www.essentialevidenceplus.com))
- **Evidence Updates**  
(<http://plus.mcmaster.ca/EvidenceUpdates>)

VOLUME 5 NUMBER 5

SEPTEMBER/OCTOBER 2000

# Evidence-Based Medicine



ACCP American College of Physicians  
ASIM American Society of Internal Medicine

BMJ Publishing Group

VOLUME 2  
NUMBER 3  
PAGES 115-170  
ISSN 1363-8524



## Evidence-based ONCOLOGY

A journal to assist clinicians in identifying, evaluating and applying the best evidence in clinical practice

Editors  
John C. Ruckdeschel  
Benjamin Djulbegovic  
Gary Lyman

### IN THIS ISSUE

- High-dose epirubicin prolongs survival for women with poor prognosis node-positive breast cancer
- Adjuvant chemotherapy does not prolong survival more than radiotherapy in people with high-grade astrocytoma
- Structured exercise programs can improve physical functioning of women with stage I or II breast cancer
- Preoperative chemoradiation has no survival benefit for people with locoregional esophageal cancer
- Zoledronic acid is more effective than pamidronate for hypercalcemia of malignancy
- Three course chemotherapy is as effective as six courses for non-small-cell lung cancer



CHURCHILL LIVINGSTONE  
A Harcourt Health Sciences Company

VOLUME 4  
NUMBER 3  
PAGES 55-78  
SEPTEMBER 2000  
ISSN 1367-2611



## Evidence-based CARDIOVASCULAR MEDICINE

A journal for the practicing clinician

### IN THIS ISSUE

- Absolute risk of CHD varies among men in different locations
- Snoring is associated with an increase in CVD risk in women
- Clinically unrecognized MI accounts for a significant proportion of MIs in the elderly
- One-third of MI patients present to hospital without chest pain, and are at increased risk of in-hospital mortality
- There was no difference in major cardiac events among PTCA patients receiving either iodixanol or ioxaglate
- Ace-inhibitors lowered rates of mortality, reinfarction, and hospital readmission in patients with heart failure or LVD

CHURCHILL LIVINGSTONE  
A Harcourt Health Sciences Company

## ACP JOURNAL CLUB

EVIDENCE-BASED MEDICINE FOR BETTER PATIENT CARE



PUBLISHED BY THE  
AMERICAN COLLEGE  
OF PHYSICIANS -  
AMERICAN SOCIETY  
OF INTERNAL  
MEDICINE

NOVEMBER/DECEMBER 2000 - VOLUME 133, NUMBER 3

**THERAPEUTICS**

Advance Directives in Nursing Homes Reduced Health Services Utilization ..... 85

Dominin Increased Adverse Events More Than Did Cilastatidone in Hypertension ..... 86

Losartan Was Tolerated Better Than Captopril in Symptomatic Heart Failure ..... 87

Amiodarone Was Better Than Sotalol or Propafenone for Atrial Fibrillation ..... 88

Physiologic and Ventricular Timing Had Similar Effects ..... 89

Review: Aspirin Lowers the Risk for Primary Prevention of MI but Not for Stroke ..... 90

Arterid Improved Functional Status in Patients with Acute Ischemic Stroke ..... 91

Angioplasty Was No Better Than Medication for Renal Artery Stenosis ..... 92

Invasive Diagnosis for Ventilator-Associated Pneumonia Reduced Mortality ..... 93

Rifampin and Pyrazinamide for 2 Months Prevented TB in Patients with HIV ..... 94

Review: Antimicrobial Therapy Does Not Reduce Relapse in Crohn Disease ..... 95

Review: Intravascular Catheter-Related Infections Can Be Prevented Simply ..... 96

Review: Twice-Daily Penicillin V Is Effective for Strep Throat ..... 97

Pyrimethamine-Sulfadiazine Plus Artesunate for Acute Malaria in Children ..... 98

Risk for Mother-to-Child HIV-1 Infection Was Increased by Breast Feeding ..... 99

CT Scanning Before Bronchoscopy Improved the Accuracy of Cancer Detection ..... 100

Tiotropium Improved Lung Function More Than Did Ipratropium in COPD ..... 101

Review: Oral but Not Inhaled Corticosteroids Improve Pulmonary Steroids ..... 102

Weight Loss in Obese Patients with Asthma Improved Lung Function ..... 103

Review: Brief Primary Care Interventions Increase Physical Activity ..... 104

Verapamil Reduced Attacks and Use of Abortive Agents in Cluster Headache ..... 105

Hormone Replacement Therapy Increased Venous Thromboembolism and DVT ..... 106

Review: "Distant Healing" Often Improves Patient Outcomes ..... 107

Pink, Two Recollections Reduced Incontinence after Radical Prostatectomy ..... 108

Methadone Maintenance Was Better Than Psychosocially Entitled Detoxification ..... 109

Review: Drugs Are Better Than Alternatives for Hyperactivity Disorder ..... 110

Metformin Plus Rosiglitazone Was Better Than Metformin in Type 2 Diabetes ..... 111

**DIAGNOSIS**

Symptoms Did Not Accurately Detect Polysomnopathy in Type 2 Diabetes ..... 112

Review: Papatosilone and Wis-Monon Smarten Have Low Sensitivity but High Specificity for Detecting Vaginal Trichomoniasis ..... 113

Tamoxifen in General Practice Could Assess the Risk for Left Heart Failure ..... 114

Clinical Examination Could Not Accurately Predict Normal Jointline ..... 115

**PROGNOSIS**

Review: Hypertension after MI Increases the Risk for Death ..... 116

The Recurrence Rate of Venous Thromboembolism Was High ..... 117

**ETIOLOGY**

Review: Breast Implants Do Not Increase the Risk for Connective Tissue Disease ..... 118

Review: High-Volume Hospitals Had Lower Hospital Mortality for Coronary Artery Disease ..... 119

**ECONOMICS**

Hospitalization after Thrombolysis for Uncomplicated Myocardial Infarction ..... 120

**DIFFERENTIAL DIAGNOSIS**

A Simple Algorithm Improved the Diagnosis of the Cause of Syncope ..... 121

**Contents**

Editorial: A New Annual Evidence-based Differential Diagnosis ..... 122

Reviews: Career ..... 123





# Revista EBM

- são analisados 60.000 artigos por ano de 120 revistas
- aplicados filtros de avaliação crítica
- são seleccionados  $\pm$  3.000 artigos/ano (>95% de redução de “ruído”)
- aplicação de filtros de relevância clínica (MORE)
- restam  $\pm$  150 artigos/ano para o clínico individual (99,95% de redução de “ruído”)

Therapeutics

Antihypertensive therapy with indapamide and perindopril reduced mortality in patients  $\geq 80$  years

STUDY DESIGN

Design: randomised placebo controlled trial (Hypertension in the Very Elderly Trial [HYVET]).  
Allocation concealment: {concealed}\*.  
Blinding: blinded (patients, clinicians, and outcome adjudication committee).<sup>†</sup>

STUDY QUESTION

Setting: 195 centres in Europe, China, Australasia, and Tunisia.  
Patients: 3845 patients  $\geq 80$  years of age (mean age 84 y, 60% women) with persistent hypertension (mean sitting blood pressure [BP] 173/91 mm Hg). Exclusion criteria included accelerated or secondary hypertension, haemorrhagic stroke in the past 6 months, heart failure, gout, and dementia.  
Intervention: sustained-release indapamide, 1.5 mg/day, with perindopril, 2 or 4 mg/day, added if needed to reach targets of systolic BP  $< 150$  mm Hg and diastolic BP  $< 80$  mm Hg (n = 1933) or placebo (n = 1912).  
Outcomes: stroke, heart failure, any cardiovascular event, and death from any cause, cardiovascular cause, cardiac cause, or stroke.  
Follow-up period: median 1.8 years.  
Patient follow-up: 99.6% (intention-to-treat analysis).

MAIN RESULTS

Antihypertensive treatment reduced risks of heart failure, any cardiovascular event, and death from stroke or any cause (table). At 2 years, target BP was achieved by 48% of the antihypertensive treatment group and 20% of the placebo group.

CONCLUSION

In patients  $\geq 80$  years of age with persistent hypertension, antihypertensive therapy with indapamide and perindopril reduced all-cause mortality.

\*Bulpitt C, Fletcher A, Beckett N, et al. *Drugs Aging* 2001;18:151-64.

<sup>†</sup>See glossary.

Abstract and commentary also appear in "ACP Journal Club: The Best Evidence for Patient Care" in *Annals of Internal Medicine*.

ABSTRACTED FROM

Beckett NS, Peters R, Fletcher AE, et al. Treatment of hypertension in patients 80 years of age or older. *N Engl J Med* 2008;358:1887-98.

Correspondence to: Dr N S Beckett, Imperial College, London, UK; n.beckett@imperial.ac.uk

Source of funding: British Heart Foundation and Institut de Recherches Internationales Servier.

► Clinical Impact Ratings: Cardiology 7/7; GPRP/Primary care 6/7; IMA/Ambulatory care 6/7; Geriatrics 6/7

Antihypertensive therapy v placebo in patients  $\geq 80$  years of age with persistent hypertension\*

Outcomes at median 1.8 years	Rate per 1000 person-years		RRR (95% CI)	NNT (CI)
	Antihypertensive	Placebo		
Stroke	12	18	30% (-1 to 51)	Not significant
Heart failure	5.3	15	64% (42 to 78)	106 (87 to 162)
Cardiovascular event <sup>†</sup>	34	51	33% (18 to 46)	60 (43 to 113)
Death from all causes	47	60	20% (5 to 34)	82 (49 to 346)
Death from stroke	6.5	11	39% (1 to 62)	241 (151 to 9396)
Death from cardiovascular cause	24	31	23% (-1 to 40)	Not significant
Death from cardiac cause	6.0	8.4	29% (-19 to 58)	Not significant

\*Abbreviations defined in glossary. RRR, NNT, and CI calculated from data in article.  
<sup>†</sup>Stroke, myocardial infarction, heart failure, or death from cardiovascular cause.

COMMENTARY

HYVET found that antihypertensive treatment in the very old decreased mortality and the incidence of heart failure, with benefits seen within the first year. Although the reduction in some outcomes did not reach statistical significance, perhaps because the trial was stopped early, the results are impressive.

An earlier meta-analysis of randomised trials on the same topic found a decrease in stroke but not mortality.<sup>1</sup> The HYVET authors speculated that the discrepancy in mortality results may be related to differences in treatment regimens, particularly the use of an angiotensin-converting enzyme inhibitor rather than a  $\beta$ -blocker. The finding of a mortality benefit needs to be replicated.

Of note, the target BP in HYVET and the trials included in the INDANA meta-analysis<sup>1</sup> was higher

than that recommended by current treatment guidelines.<sup>2</sup> This disparity raises the question of whether additional value would be provided in this age group by further lowering BP beyond the target pressure of 150/80 mm Hg, especially considering that this approach may increase adverse effects.

An important question about HYVET is whether the results are generalisable to most elderly people. The study sample was a relatively healthy group with low prevalence of diabetes mellitus and coronary artery disease. Patients with heart failure or dementia and those requiring nursing care were excluded. The relative benefits and risks of treating frail elderly people with multiple comorbid conditions were not addressed by this trial and may never be known. However, because heart failure is the most common reason for hospital admission in this population and

strokes can be life-altering events even to the very frail, antihypertensive treatment in moderation may be the best way to prevent these outcomes. Being 80 years of age or older should not preclude antihypertensive treatment.

William W Hung, MD, MPH  
Rosanne M Leigrip, MD, PhD  
Mount Sinai Medical Center  
New York, New York, USA

1. Guayffier F, Bulpitt C, Biloel JP, et al. Antihypertensive drugs in very old people: a subgroup meta-analysis of randomised controlled trials. INDANA Group. *Lancet* 1993;353:769-8.
2. Chobanian AV, Bakris GL, Black HR, et al. Seventh report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure. *Hypertension* 2003;42:1206-52.





POEMs Archive

EE+ Online

Product Tour

Support


Downloads

Contact Us

LOE

Recommend Essential  
Evidence Plus to your  
institution's library

> VIEW THE FORM

 **POEM of the Week  
Podcast**

Episode 60: *Diabetes and  
home monitoring*

Dr. Ebell and Dr. Wilkes  
discuss the POEM titled  
"Self-monitoring ineffective in  
patients with diabetes  
(ESMON)"

> MORE INFO

## High dose statin reduces cardiac events in pts with high CRP (JUPITER)

### Clinical Question:

In patients with normal LDL cholesterol but elevated C-reactive protein, is a high dose statin effective for primary cardiovascular prevention?

### Bottom Line:

In this study of patients with normal LDL and elevated CRP, use of a high dose statin reduced the risk of death over a 2 year period (NNT = 180). At a cost of approximately \$1200/year for rosuvastatin, the cost per life saved is about \$216,000. This study raises many questions. What is the long term safety of lowering LDL cholesterol to 55 mg/dl in otherwise healthy persons? What is the impact of the apparent increase in diabetes on the long-term benefit of this drug? Can less expensive statin drugs, perhaps at lower doses, provide a similar benefit with less risk? (LOE = 1a)

### Reference:

[Ridker PM, Danielson E, Fonseca FAH, et al. Rosuvastatin to Prevent Vascular Events in Men and Women with Elevated C-Reactive Protein. N Engl J Med 2008; 359: 2195-207.](#)

### Study Design:

Randomized controlled trial (double-blinded)

### Funding:

Industry

### Setting:

Outpatient (any)

### Allocation:

Concealed

### Synopsis:

The Air Force/Texas Coronary Atherosclerosis Prevention Study found that statins may be effective in patients with normal cholesterol but elevated levels of C-reactive protein, a measure of inflammation. In this study, the authors identified adults with LDL cholesterol < 130 mg/dl and C-reactive protein > 2.0 mg/L. Nearly 90,000 men over age 50 years and women over age 60 years were screened for enrollment in the trial, and the vast majority were excluded due to an elevated LDL (37,611), low CRP (25,993), withdrawal of consent (3948), diabetes (957), hypothyroidism (349), or other reasons. Patients with preexisting heart disease or who had ever taken a statin or hormone replacement therapy were ineligible, as were patients with elevated creatine kinase, creatinine, or hepatic transaminases at baseline. The remaining 19,323 took placebos for 4 weeks to assess their compliance, and those taking less than 80% of the study drug were excluded. This of course has the effect of making the study drug look more effective than it is in the real world of clinical practice. The remaining 17,802 patients (62% male, 75% white, mean age 66 years) were randomized to rosuvastatin (Crestor) 20 mg once daily or matching placebo. At each of the annual follow-up visits, the LDL in the rosuvastatin group was approximately half that of the placebo group (55 vs 110 mg/dl) and the CRP was also significantly lower (~2.0 vs 3.5 mg/L).

# EvidenceUPDATES

FROM THE BMJ EVIDENCE CENTRE

Dear Prof. Vaz Carneiro

**Coming soon!** [bmjupdates+](#) will be upgraded with added features and renamed as **EvidenceUpdates** on **November 12, 2008**. (You will be switched automatically to **EvidenceUpdates**.)

**New articles:** colleagues in your discipline have identified the following article(s) as being of interest:

Article Title	Discipline	Relevance	News-worthiness
<a href="#">Blood pressure lowering efficacy of angiotensin receptor blockers for primary hypertension.</a> Cochrane Database Syst Rev	Internal Medicine	6	6
<a href="#">A meta-analysis of the vascular-related safety profile and efficacy of alpha-adrenergic blockers for symptoms related to benign prostatic hyperplasia.</a> Int J Clin Pract	Internal Medicine	6	6

Just click on the title to review the abstract and/or PubMed record.

Best wishes from [bmjupdates+](#)

\*Note: if you are unable to access your alert by clicking on the article link, please login directly to [bmjupdates+](#) at <http://bmjupdates.mcmaster.ca> and access the article under 'Alerts' which is listed in the top panel of the BMJ PLUS system. If you continue to experience difficulties, please contact [bmjplus@mcmaster.ca](mailto:bmjplus@mcmaster.ca) for further assistance.

Don't want to receive any more alerts? [Click here to disable them](#)

[bmjupdates+](#) c/o  
1200 Main Street West, Room 3H7  
Hamilton, Ontario, Canada, L8N 3Z5  
Tel: 905-525-9140 x22255  
Fax: 905-546-0401



# Sistema de informação para apoio à decisão clínica

**DynaMed**  
Powered by EBSCOhost

Evidence Based **Medicine**  
for Primary Care and Internal Medicine

**UpToDate.**  
ONLINE 16.2

ESSENTIAL  
EVIDENCE  
**PLUS**

**BestPractice**

**EvidenceUPDATES**  
FROM THE BMJ EVIDENCE CENTRE

**PUXAR**

**EMPURRAR**



# António Vaz Carneiro

Centro de Estudos de Medicina Baseada na Evidência

Faculdade de Medicina de Lisboa

Centro Académico de Medicina de Lisboa

Av. Prof. Egas Moniz

1649-028 Lisboa

Telefs: 217 985 135 / 217 940 424

avc@fm.ul.pt – [www.cembe.org](http://www.cembe.org)

