



Investigação em Cuidados Farmacêuticos

O contributo do *Pharmaceutical
Care Network Europe* (PCNE)

Research in PhCare – The contribution of PCNE

Filipa Alves da Costa, Chairperson

Jornadas ISCSEM, Caparica. May 2009

Pharmaceutical Care

...the care a patient requires and receives to ensure a safe and rational use of drugs.

Mikael *et al* 1975

... responsible provision of drug therapy with the purpose of achieving specific outcomes that improve the patient's quality of life.

Hepler & Strand 1990

...the practical component of practice around medicines that comprises a direct interaction with the patient, aiming to satisfy his health-related needs."

Strand, Cipolle & Morley 1992



Pharmaceutical Care

“ A practice in which a practitioner takes responsibility for a patient’s drug related needs and holds him or herself accountable for meeting these needs.”

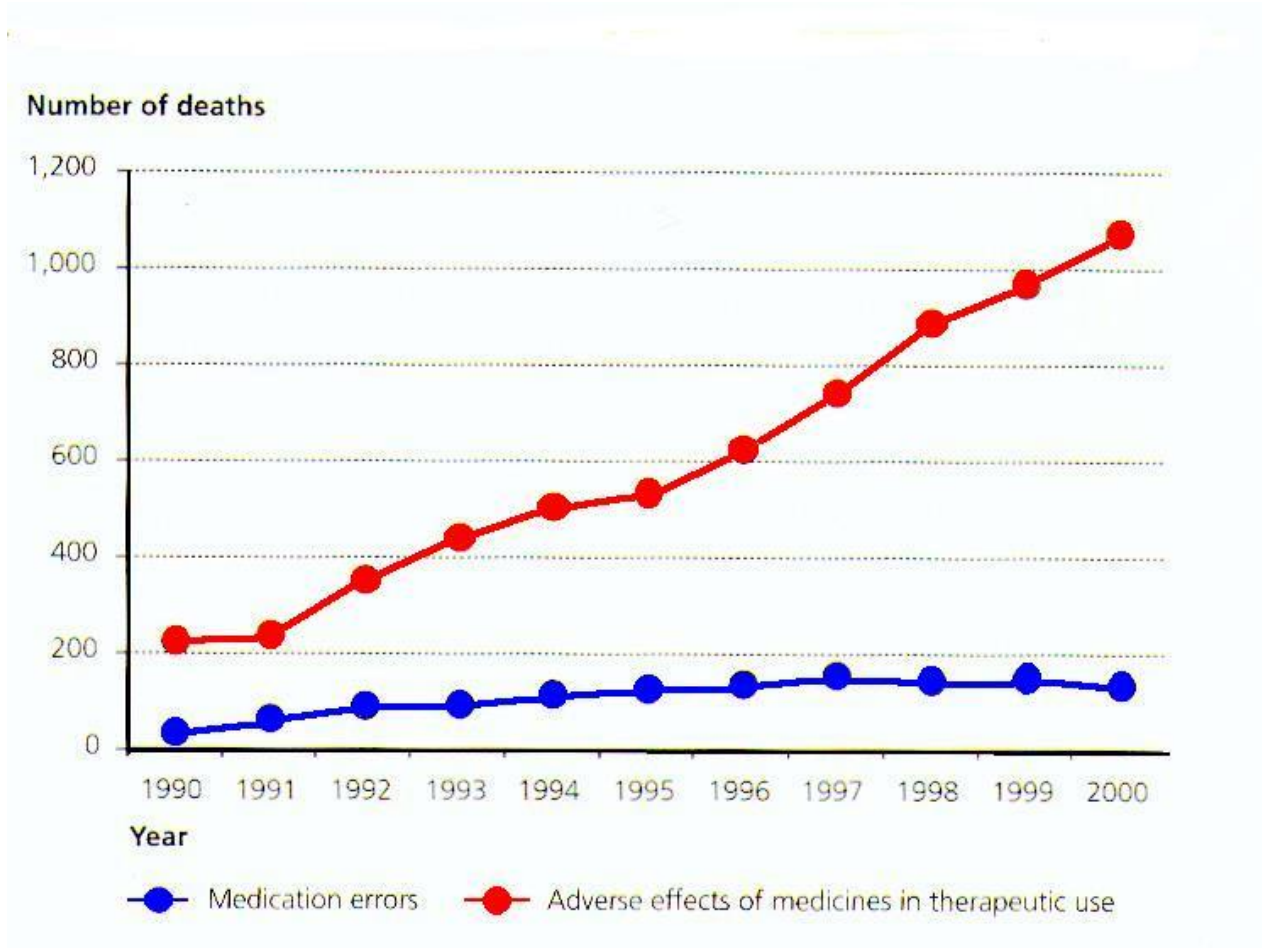
- Linda Strand 1997



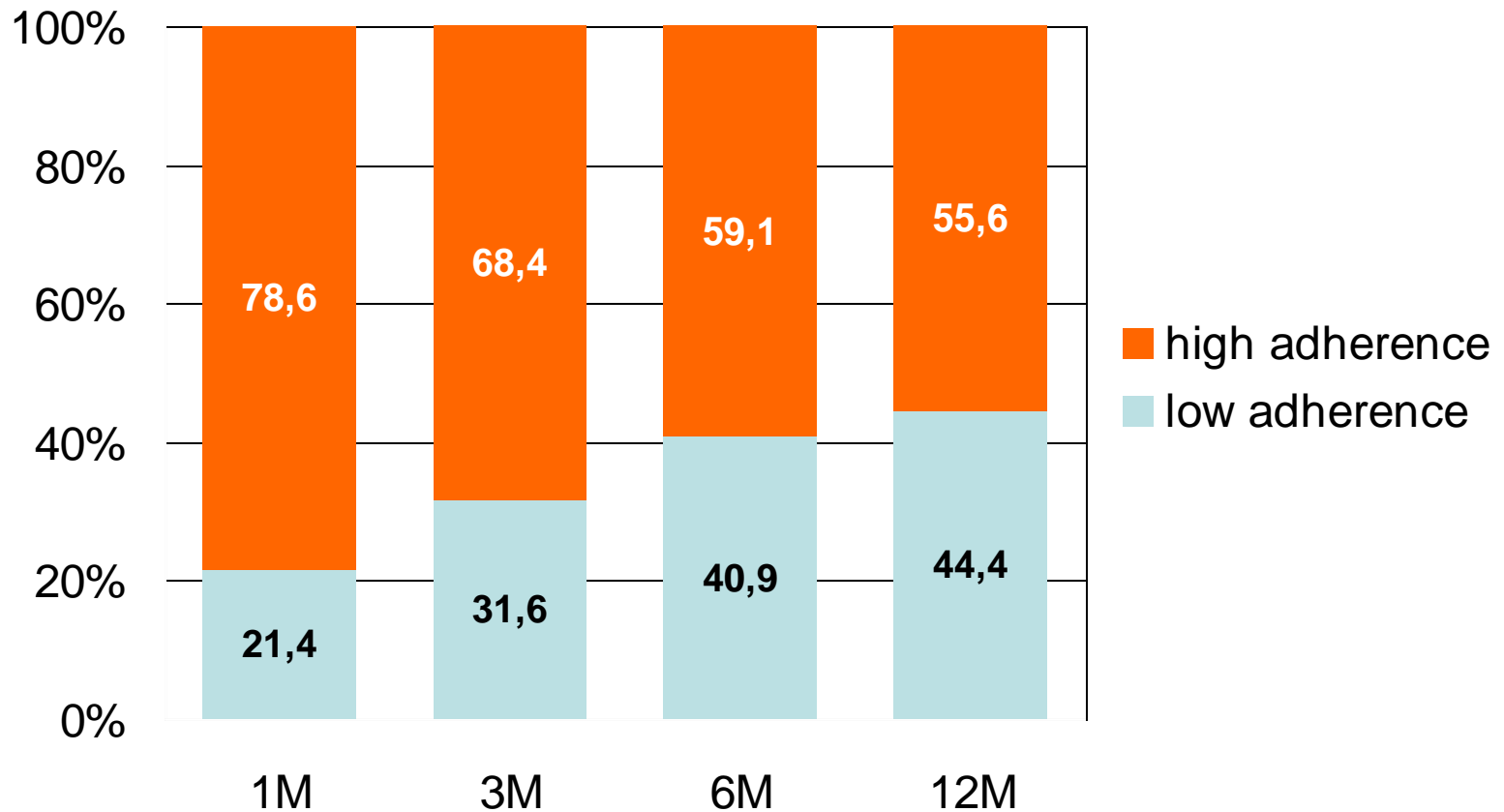
Objectives of Pharmaceutical Care

- To identify potential or actual drug-related problems;
- To solve actual drug-related problems;
- To prevent potential drug-related problems.

Need for Pharmaceutical Care

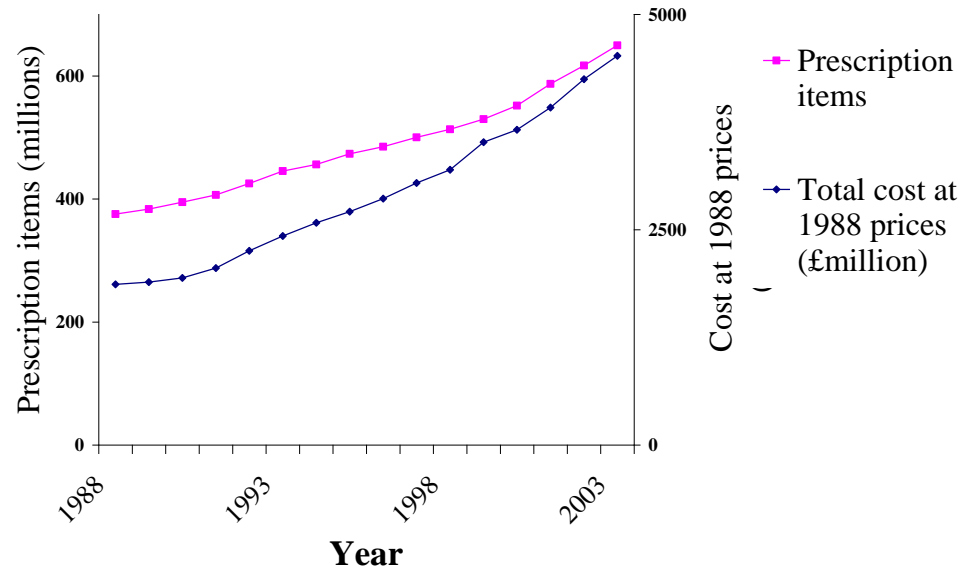
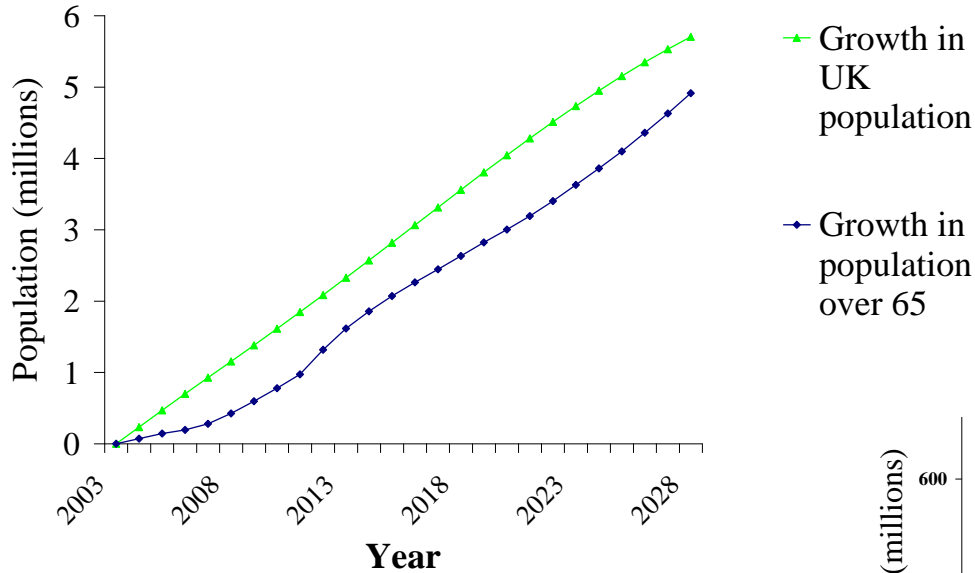


Need for Pharmaceutical Care

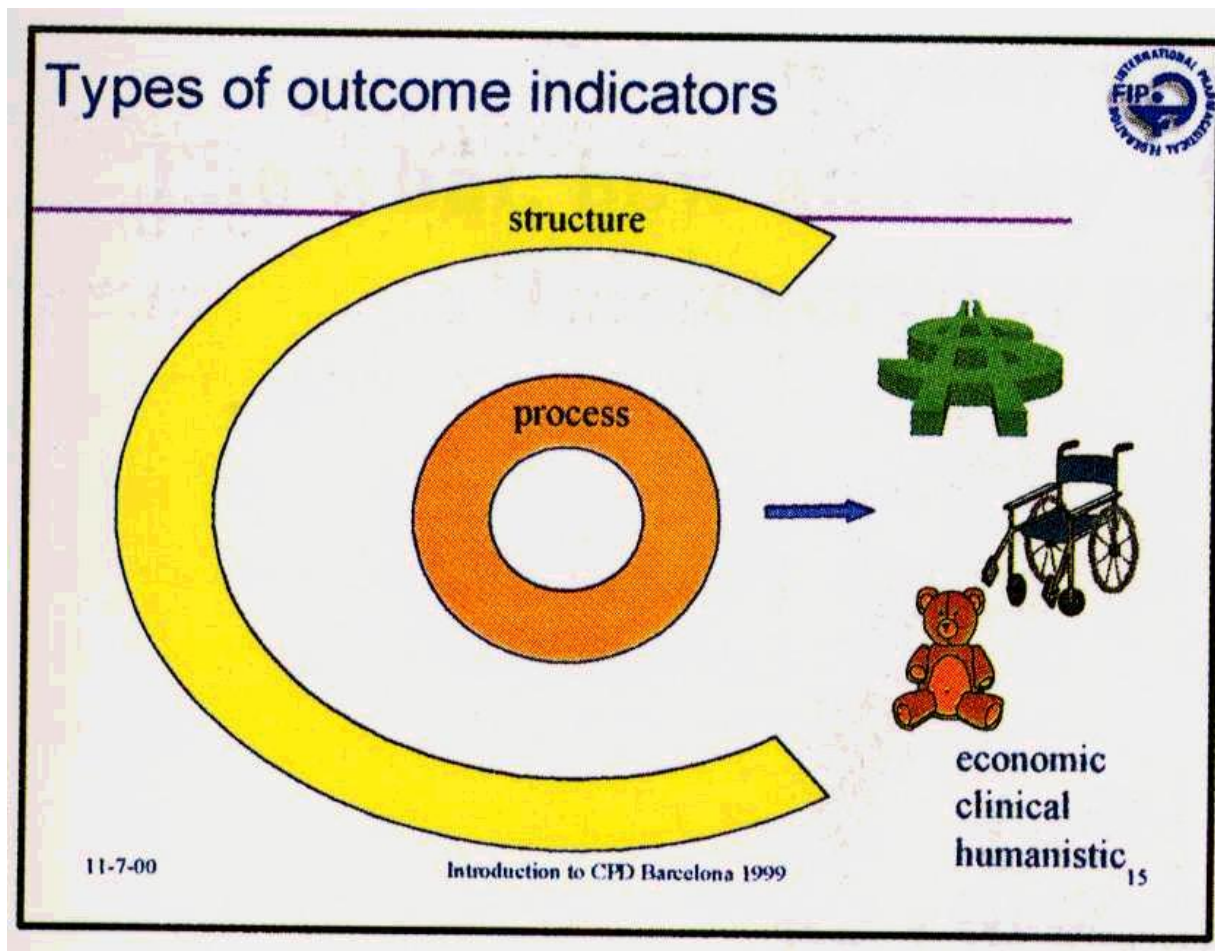


n=120 accepting HAART (Horne et al *JAIDS*.2007;45{3}:334-341) Significant increase in the number of participants reporting low adherence over follow-up (Cochran's Q =39.9, df = 3, p<0.001)

Need for Pharmaceutical Care



Evaluation in Pharmaceutical Care





What is PCNE?

- PCNE aims to contribute to the development of pharmacy through the provision of Pharmaceutical Care (PhC).
- To do so, its main aim is to “establish a communication platform for PhC researchers in Europe”.
- To achieve this, the specific objectives are:
 - to stimulate research around PhC in Europe;
 - to foster the development of implementation projects undertaken simultaneously in various countries;
 - to organize a biannual working conference dedicated to research in pharmacy practice and in PhC;
 - to develop other activities that may contribute to the association’s main aim.



Represented countries

1. Germany
2. Belgium
3. Denmark
4. Slovenia
5. Spain
6. Finland
7. Holland
8. Hungary
9. England
10. Ireland
11. Northern Ireland
12. Iceland
13. Malta
14. Norway
15. Portugal
16. Czech Republic
17. Serbia
18. Sweden
19. Switzerland
20. Nigeria
21. USA



Working Conferences

- 1. Outcomes measurement**
- 2. Quality issues**
- 3. The next generation**
- 4. Beyond the pharmacy perspective**
- 5. Overcoming the barriers**
- 6. Innovation**



Best oral communication WC2009: Tenni *et al.* Clinical Interventions in Australian Community Pharmacies (The PROMISe Project)

Types of Problems Detected

Category	Subcategory	Number	% of Total		
D	Drug selection	Duplication	83	3.46%	22.7%
	Drug selection	Drug interaction	58	2.42%	
	Drug selection	Wrong drug	120	5.01%	
	Drug selection	Wrong dosage form	98	4.09%	
	Drug selection	Other drug selection problem	186	7.76%	
O	Over or underdose prescribed	Dose too high	178	7.43%	19.4%
	Over or underdose prescribed	Dose too low	169	7.05%	
	Over or underdose prescribed	Other Dose Problem	118	4.92%	
C	Compliance	Taking too little	117	4.88%	11.5%
	Compliance	Taking too much	48	2.00%	
	Compliance	Intentional drug misuse	12	0.50%	
	Compliance	Difficulty using dosage form	44	1.84%	
	Compliance	Other Compliance Problem	54	2.25%	
U	Untreated indications	Condition not adequately treated	97	4.05%	15.9%
	Untreated indications	Preventive therapy required	266	11.10%	
	Untreated indications	Other Untreated indication Problem	19	0.79%	
M	Monitoring	Laboratory Monitoring	15	0.63%	2.0%
	Monitoring	Non-Laboratory monitoring	23	0.96%	
	Monitoring	Other Monitoring Problem	9	0.38%	
E	Education or Information	Patient drug information request	87	3.63%	17.4%
	Education or Information	Confusion about therapy	120	5.01%	
	Education or Information	Demonstration of device	62	2.59%	
	Education or Information	Disease management or advice	89	3.71%	
	Education or Information	Other Education or Information Problem	60	2.50%	
N	Non Clinical (see elsewhere)				
T	Toxicity or Adverse reaction	Toxicity caused by dose	17	0.71%	11.0%
	Toxicity or Adverse reaction	Toxicity caused by drug interaction	87	3.63%	
	Toxicity or Adverse reaction	Toxicity evident	129	5.38%	
	Toxicity or Adverse reaction	Other Toxicity/Adverse Effect problem	31	1.29%	
Total		2396	100%	100%	

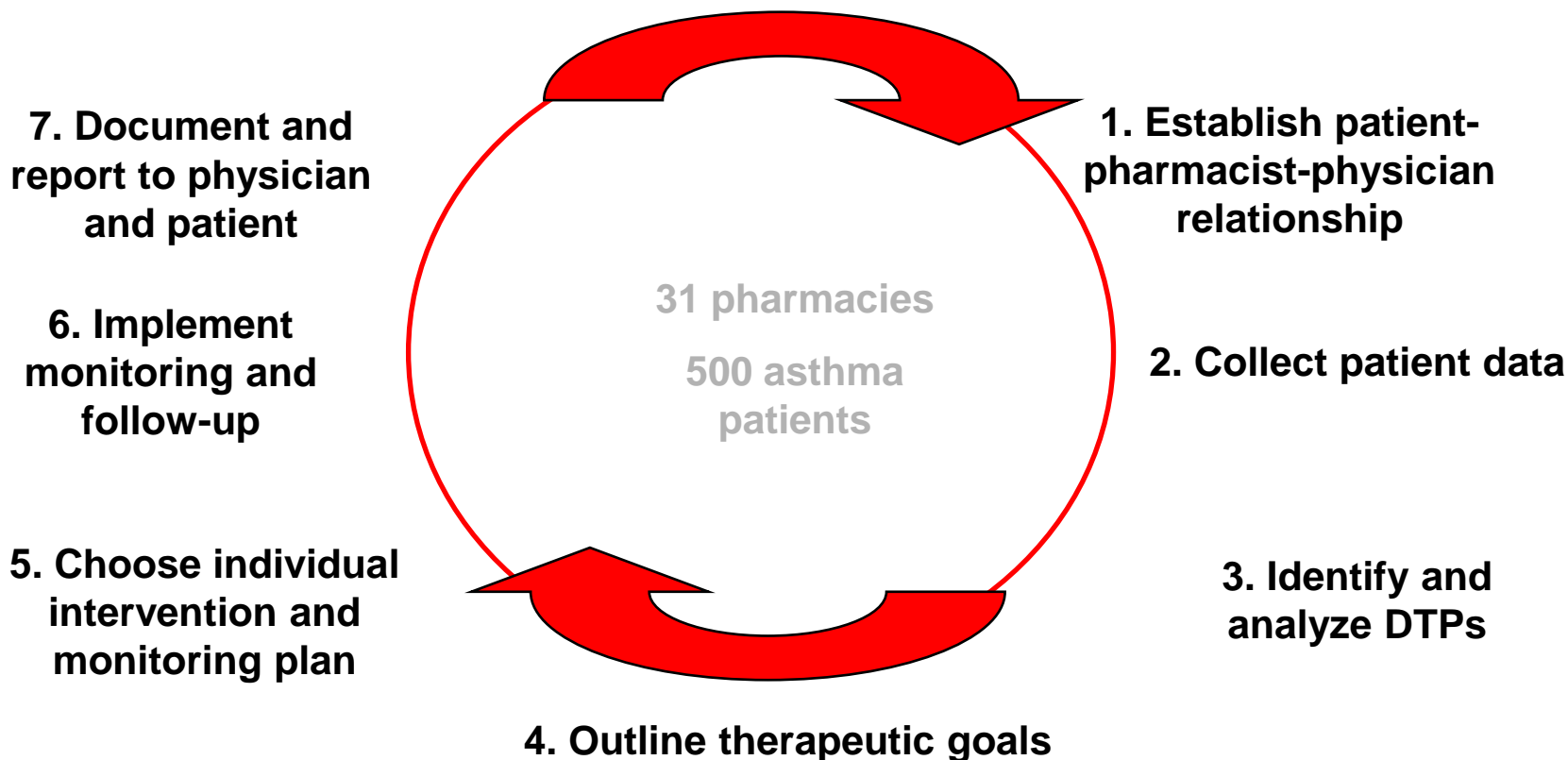
- Clinical Interventions occur in community pharmacies (Australia) at a frequency > 1/200 Rx
- Drugs commonly involved in interventions are antidiabetic agents, drugs for COPD and anti-inflammatory agents
- The value of these activities is estimated at ~\$1M per day, at the current level of interventions



Joint projects

- **Therapeutic Outcome Monitoring (TOM)**
- **Elderly Medication Analysis (OMA)**
- **Self-care**
- **Barriers and Facilitators to the Dissemination of PhC**
- **Behavioral Pharmaceutical Care Scale (BPCS)**

Therapeutic Outcome Monitoring (TOM)



Results: TOM pharmacies' pts had beneficial effects in asthma symptoms status, days of sickness and HRQoL; knowledge, inhalation errors and DTPs. β_2 -agonists' use decreased 12% (vs 1%) and inhaled corticosteroids increased > 50% (vs 9%).

Elderly Medication Analysis (OMA)

Sweden, Portugal, Northern Ireland, Ireland, Denmark, Germany, The Netherlands

IG

CG

104 intervention pharmacies

86 control pharmacies

1290 intervention patients

1164 control patients

To study the effect of PhC in the elderly (>65) using 4 or more different drugs and living independent

DRPs: compliance, knowledge, ADRs, interactions and suboptimal regimens

Interventions: pt education, compliance enabling strategies, rationalising & simplifying regimens with GP

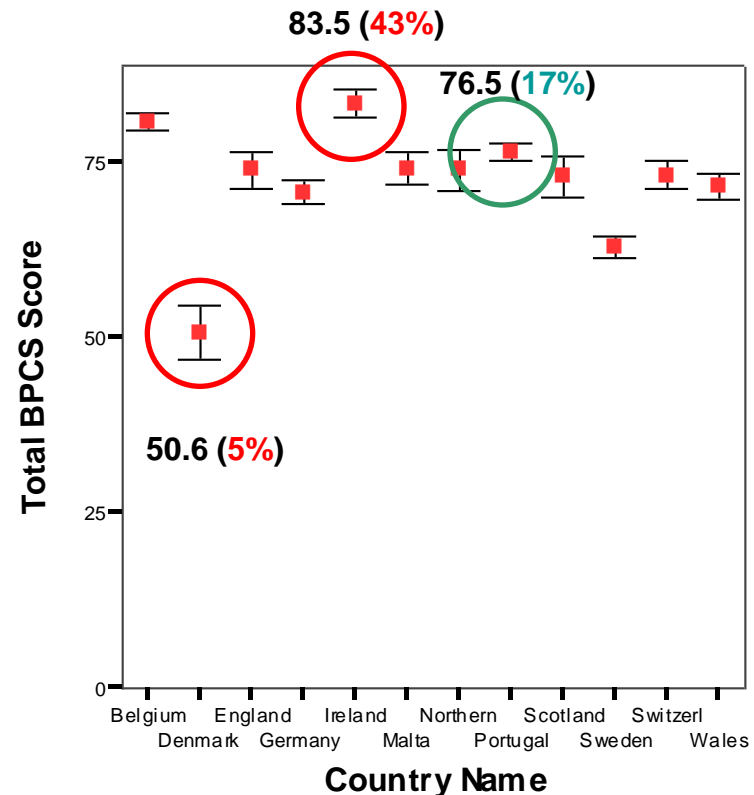
Outcomes: HRQoL, # hospital admissions, symptom control, pt satisfaction

Results: better control of signs and symptoms in IG; more compliant pts in IG

Behavioral and Pharmaceutical Care Scale (BPCS)

This study aimed to evaluate the current provision of PhC by community pharmacies in 13 European countries. Measured by a scale mailed to a sample of pharmacies in each country so that the level of implementation of PhC could be compared.

Activity	Portugal	Min-max
Health screening	76%	5-96%
Health promotion	81%	10-96%
Domiciliary visiting	12%	0-53%
Pt monitoring	45%	0-76%
Multidisciplinary meetings	13%	9-35%
Information from GP	31%	31-81%
Consultation area	86%	18-86%





Want to know more?

www.pcne.org