



Groupe de Pharmacologie Sociale (GPS)

Service de Pharmacologie, Faculté de Médecine

Université Paul Sabatier (Toulouse III)

September 8th, 2008

“SOCIAL PHARMACOLOGY. OUTLOOK AND TRENDS”

Prof. Dr. José-Luis Alloza (M.D, Ph.D.)

Department of Pharmacology, School of Medicine

The University of Alcalá

Alcalá de Henares, Madrid, Spain.

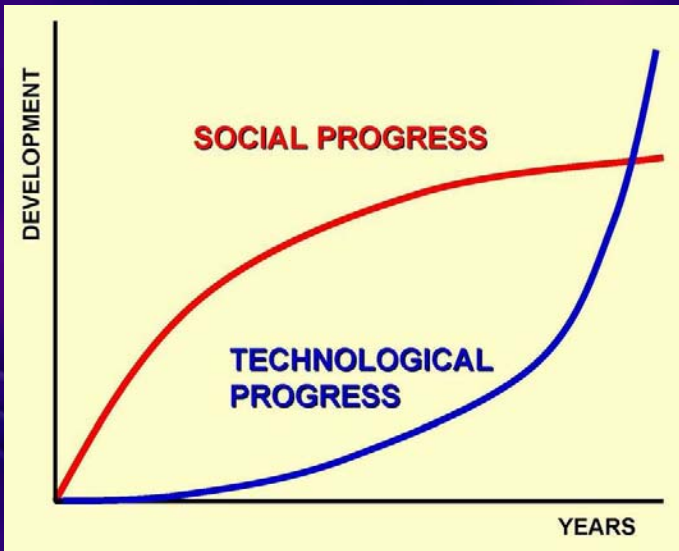


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Social Pharmacology Group**

I. Introduction

Assumptions

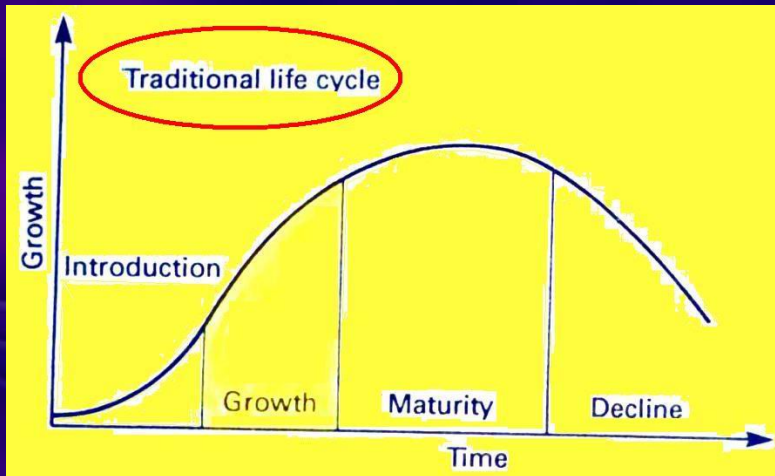


- ❑ Social changes in constant evolution due to scientific progress (technological progress, culture, customs, hygiene) produces in individuals the freedom to take decisions by themselves / with participation of their doctor towards drug consumption, in the current modern and global society.
- ❑ In the arena of marketed drug products which includes - society, individual, Administration and Pharmaceutical Industry- a new discipline has been developed, Social Pharmacology / Sociopharmacology. This arises from Clinical Pharmacology, and deals with different vectors who participate in creating knowledge on marketed drugs. Therefore, there are wide horizons, plural and shared envision among health professionals and other, in benefit of the appropriate drug use, toward maximizing the benefits of therapy while minimizing negative personal and economic consequences.



I. Introduction

Assumptions



- ❑ The Social pharmacology Studies the “*cycle of life*” of any marketed drug product in the *social habitat*, and evaluates the effects of the real environment under circumstances totally different in the process of drug development.
- ❑ Today Social Pharmacology is a well established discipline with a remarkable role in the postmarketing period, when it is possible to develop multitude of pharmacological studies, epidemiological and of public health, oriented to evaluate the impact of the drugs over the individual and the society, to provide alert responses, as well as to propose actions for the *decision taking process*, in a solid scientific basis which relates health professionals, health managers, the Administration and the Pharmaceutical Industry.
- ❑ The scope of “Social Pharmacology” is not covered by the so called “Phase IV” alone.



I. Introduction

Life Span [*Longevity*] (2006)

A DRUG PRODUCT WELL STABLISHED PROVIDES

“ MORE YEARS TO LIFE, AND MORE LIFE TO YEARS “

	F	M
France	83,8	76,7
Spain	83,2	76,7
Eur Union	81,2	75,1

ELDERLY PEOPLE CONSUMES 60 – 70 % OF TOTAL DRUG EXPENDITURES



..... MORE THAN HEALING.
CARE, BEUTY, AND *"ETERNAL YOUTH"*

I. Introduction

Drug Products ... (I)

✿ PREGNANCY CONTROL

ORAL CONTRACEPTIVES: 1953 -Newborn of the "PILL" /
GREGORY PINCUS - Noretinodrel (Enovid®)

✿ POST-COITAL ORAL CONTRACEPTIVES

Erroneous denomination "Emergency Contraception"

200 mcg etinil-estradiol + 2 mg norgestrel ; bid (12 h)

Since May 2008 → "OTC" product in CANADA

✿ SELF-CARE (OTCs) – Non-Prescription Drugs

LOVASTATIN (MEVACOR®) / ORLISTAT (XENICAL®)

(PRESCRIPTION) → OTC (SELF-CARE)

(A) VASCULAR ACCIDENT - PREVENTION

("Statins") Lovastatin (Mevacor®) (MSD->GSK)

(B) OBESITY TREATMENT

Orlistat (Xenical®)

.... MORE THAN HEALING. CARE, BEUTY, AND “*ETERNAL YOUTH*”

✿ ALOPECIA-SCALP

Minoxidil
Finasteride (Propecia®)

✿ MALE ERECTILE DYSFUNCTION

Sildenafil (Viagra®)
Tadalafil (Cialis®)
Vardenafil (Levitra®)

✿ ANORECTIC DRUGS – WEIGHT LOOSS

Sibutramina (Reductil®)
Orlistat (Xenical®)

WHAT IS GOOD, SHOULD NOT
OVERWEIGHT

✿ MOOD ESTABILITY

Benzodiazepes (Valium®)
Selective Serotonin Re-Uptake Inhibitors (SSRIs)
Fluoxetine (Prozac®)

“TAKE A VALIUM...”

✿ ESTHETICAL

Botulinic Toxin (BOTOX, DYSPORT, NEUROBLOC, VISTABEL)
Silicon (implants)
Prothesis
Esclerosant inj / Laser (Varicosities, etc.)

I. Introduction

Drug Products ...(2)



I. Introduction

More News...

http://www.medscape.com/viewarticle/578482_print;
15/08/2008

Sandra Adamson Fryhofer, MD, MACP, FRCP

Medscape Internal Medicine. 2008; ©2008 Medscape

Posted 08/04/2008



Sildenafil in Women taking Antidepressants --A Solution for a Troublesome Side Effect ?

Sildenafil Treatment of Women With Antidepressant-Associated Sexual Dysfunction. A Randomized Controlled Trial.

H. George Nurnberg, MD; Paula L. Hensley, MD; Julia R. Heiman, PhD; Harry A. Croft, MD; Charles Debattista, MD; Susan Paine, MPH

JAMA. 2008;300(4):395-404.

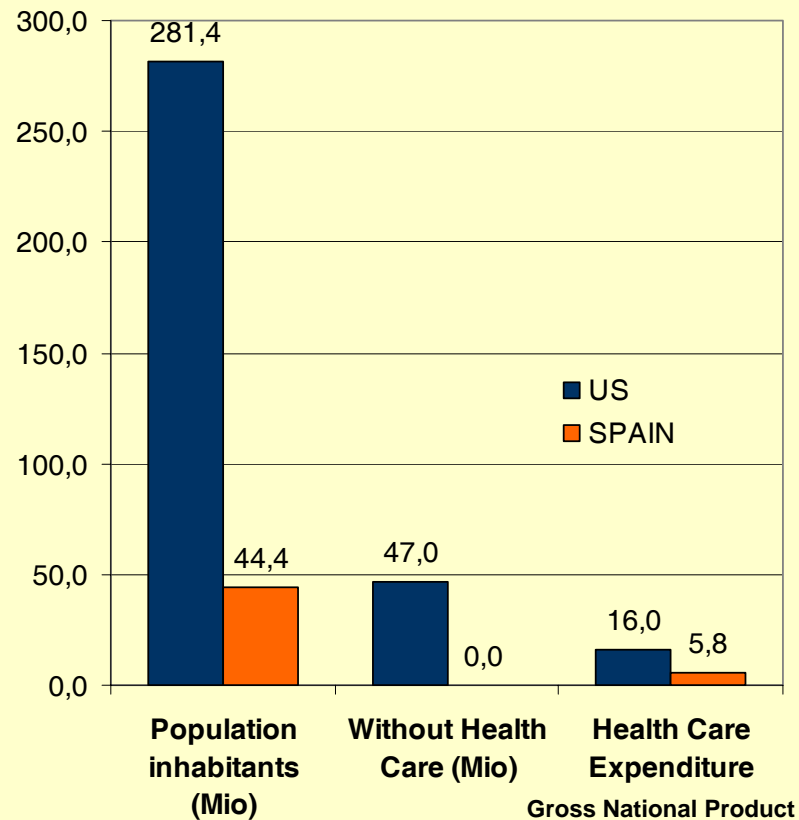
ORIGINAL
ARTICLE



I. Introduction

Cross-Cultural Differences

CULTURAL DIFFERENCES USA / SPAIN



Fuente: V. Navarro. El país, 6.08.2008, 27



OVERMEDICATED SOCIETY

MEDICALIZATION

LIFE STYLE DRUGS

A “PILL” FOR EVERYTHING

Society(I)

TODAY “MEDICINES” MEANS:

- ✓ A DISTINCTION IN THE WESTERN CULTURE
- ✓ AN “ESSENTIAL” IN ANY HOME
- ✓ A POWER IN HANDS OF INDIVIDUALS, TO GET “*AUTHONOMY*”
- ✓ DRUG INFORMATION IS SPLITED ELSEWERE (INTERNET), BUT QUALITY?
- ✓ MASS-MEDIA AND “*HIGH EXPECTATIONS*” ON NEW DRUGS
- ✓ A “SYMBOLIC” MEMORY OF A VISIT TO THE DOCTOR (“*SYMBOLIC TOKEN*”)
- ✓ DOCTORS WRITE A PRESCRIPTION “*JUST IN CASE*”...
- ✓ AND MORE...

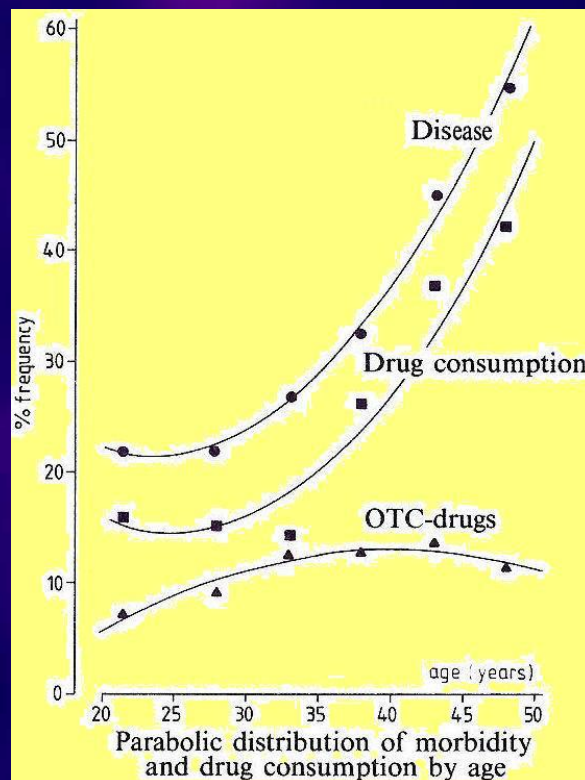


PRELIMINARY STUDIES ON "SOCIAL PHARMACOLOGY"

JL Alloza

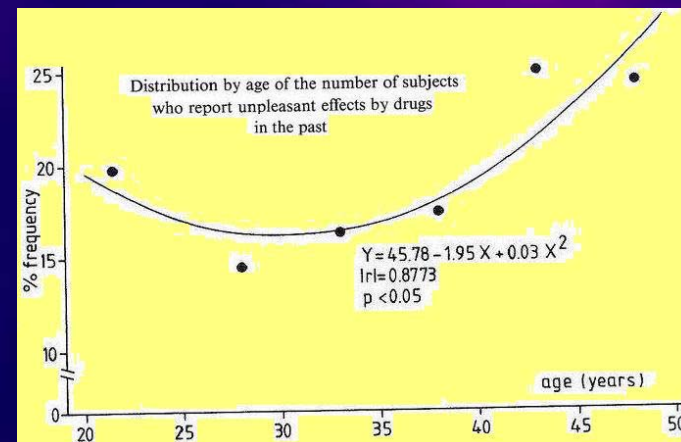
5451 AMBULATORY
PATIENTS
INTERVIEWED
BARCELONA
1978 – 1980

Stratified Survey



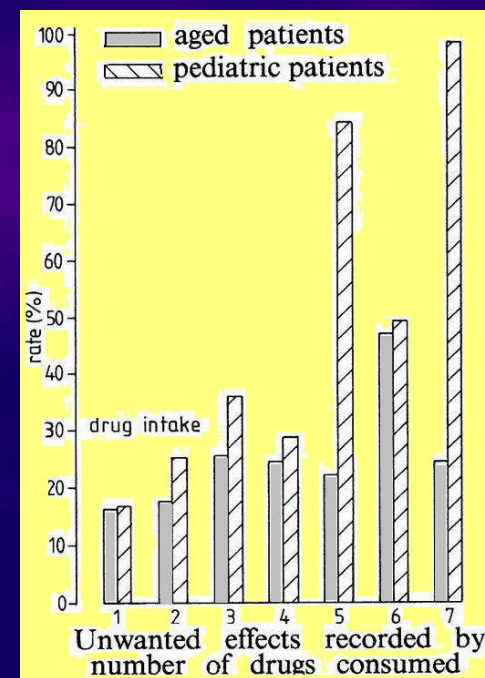
I. Introduction

Society (II)



(% values; absolute numbers in parentheses)	Geriatric (n = 873)	Adults (n = 3353)	Pediatric (n = 1225)
Have medicine cabinet 74 %	60.0 (524) [$\chi^2 = 100.39$; d.f. 2; p < 0.001]	76.5 (2,567)	76.3 (925)
Medicine cabinet is in inappropriate place 16 %	23.7 (124) [$\chi^2 = 12.16$; d.f. 2; p < 0.01]	17.2 (576)	17.4 (163)
Medicine cabinet is in reach of children 13 %	12.4 (65) [$\chi^2 = 32.20$; d.f. 2; p < 0.001]	19.3 (495)	18.4 (167)
Respondents do not verify the expiration date 19 %	23.3 (122) [$\chi^2 = 77.02$; d.f. 2; p < 0.001]	29.5 (757)	16.2 (152)
Respondents recommend their drugs to others 25 %	17.4 (91) [$\chi^2 = 115.75$; d.f. 2; p < 0.001]	35.1 (902)	39.0 (363)

Results of some questions about home medicine cabinets



Society

SOCIETY + HEALTH TERMINOLOGY

Social Medicine

Social Pharmacy

Social Epidemiology

Sociochemistry

Social Pharmacology

(or Sociopharmacology)

Social Psychology

Social Anthropology

Social Ecology

Social Marketing

Social Behaviour

Social Gerontology

Social Insurance

Social Security

Social History

Social Statistics

Social Informatics

Social Research

Chronology of Some References Related to Social Pharmacology (I)

- **Lennard HL.** “A Proposed Program of Research in Sociopharmacology”, in *Psychobiological approaches to Social Behaviour*. Leiderman PH, and Shapiro D, eds. (Stanford University Press, 1964), pp. 127-37.
- **Barchas PR, Barchas JD.** “Sociopharmacology”, in *Psychopharmacology: from theory to practice*. Barchas, J.D et al. eds. (Oxford University Press, NY 1977), pp.80-87.
- **Venulet J.** “Aspects of social pharmacology” in *Progress in Drug Research*, vol. 22, Jucker J, ed. (Birkhäuser Verlag, Basel und Stuttgart, 1978), pp. 10-25.
- **Venulet J.** “Towards Social Pharmacology” in *Clinical and Social Pharmacology. Postmarketing Period*, Alloza JL, ed. (Editio Cantor Aulendorf, Germany, 1985), pp. 129-139.
- **McGuire MT, Raleigh MJ, Brammer GL.** Sociopharmacology. *Ann Rev Pharmacol. Toxicol.* **1982**; 22: 643-61.
- **Alloza JL.** Family Medicine, Drug epidemiology and *Social Pharmacology*. *Med Clín (Barc)* **1984**; 82: 124-129



Chronology of Some References Related to Social Pharmacology (II)

- **Alloza JL.** *Clinical and Social Pharmacology. Postmarketing Period*, Ed. (Editio Cantor, Aulendorf, Germany, **1985**).
- **Morgan JP, Zimmer L.** “The Social Pharmacology of Smokeable Cocaine: Not All It’s Craked Up to Be”, in *Crak in America: Demon Drugs and Social Justice*, Reinerman C and Levine HG, eds (The Regents of the University of California, **1997**), chapter 7.
- **Alloza JL.** “Social Pharmacology, a New Discipline” (Tribune), *Diario Médico (Madrid)*, 8 (May 10th, **2000**)
- **Montastruc JL.** La Pharmacologie Sociale: une nouvelle branche de la Pharmacologie Clinique. *Therapie* **2002**; 57: 420-6.
- **Alloza JL.** **Social Pharmacology: Conceptual Remarks.** *Drug Information Journal* **2004**; 38: 321-29.
- **Ngoundo Mbongue TB, Sommet A, Pathak A, Montastruc JL.** “Medicamentation” of society, non-diseases and non-medications: a point of view from social pharmacology. *Eur J Clin Pharmacol* **2005**; 61: 309-13
- **Alloza J.L.** Social Pharmacology and over-drug-regulation. *Med Clín (Barc)* **2005**; 124: 379-82.

Contents



EDITIO CANTOR AULENDORF [1985]

P.O. Box 12 55, D-7960 Aulendorf (FR Germany)

Preface

L. Lasagna (Rochester, N.Y., USA)

Editor's Introduction

J. L. Alloza (Barcelona, Spain)

Section I: Issues in post-marketing surveillance

Conceptual remarks on post-marketing drug surveillance

L. Lasagna (Rochester, N.Y., USA)

Post-marketing surveillance: A description of the U.S. approach and some considerations for a general program of post-marketing surveillance

J. K. Jones (Rockville, MI., USA)

The practicing physician and post-marketing surveillance

J. A. Bannon, J. J. Schrogie, G. T. Foradori (Philadelphia, Pa., USA)

Epidemiological drug surveys in the ambulatory care environment

J. L. Alloza, J. A. Salvá (Barcelona, Spain)

Section II: Techniques to support rational drug therapy

Drug utilization review: guidelines for program development

T. D. Rucker (Chicago, Ill., USA)

A rational patient package insert: nature, notions and needs

P. Joubert (Medunsa, Rep. South Africa)

Drug Formularies: a conceptual and administrative perspective

T. D. Rucker (Chicago, Ill., USA)

Drug information supplied in four national compendia: a comparative study

J. L. Alloza, L. Lasagna (Barcelona, Spain/Rochester, N.Y., USA)

Drugs and pregnancy: documentation, evaluation and recommendations

R. K. Miller (Rochester, N.Y., USA)

Abuse of prescription drugs: State of California Medicaid drug claim analysis

R. F. Maronde (Los Angeles, Ca., USA)

Undertreatment: Causes and Cures

M. Weintraub (Rochester, N.Y., USA)

Section III: Integrating social endeavours

Towards social pharmacology

J. Venulet (Basle, Switzerland)

Notes on the future of clinical drug evaluation

S. Garattini, G. Tognoni (Milan, Italy)

Drug development and regulation in the United States: Prospects for shortening development time by concurrent review and post-marketing surveillance

W. M. Wardell, N. Mattison (Rochester, N.Y., USA)

The role of the pharmacist in the ambulatory environment in the USA

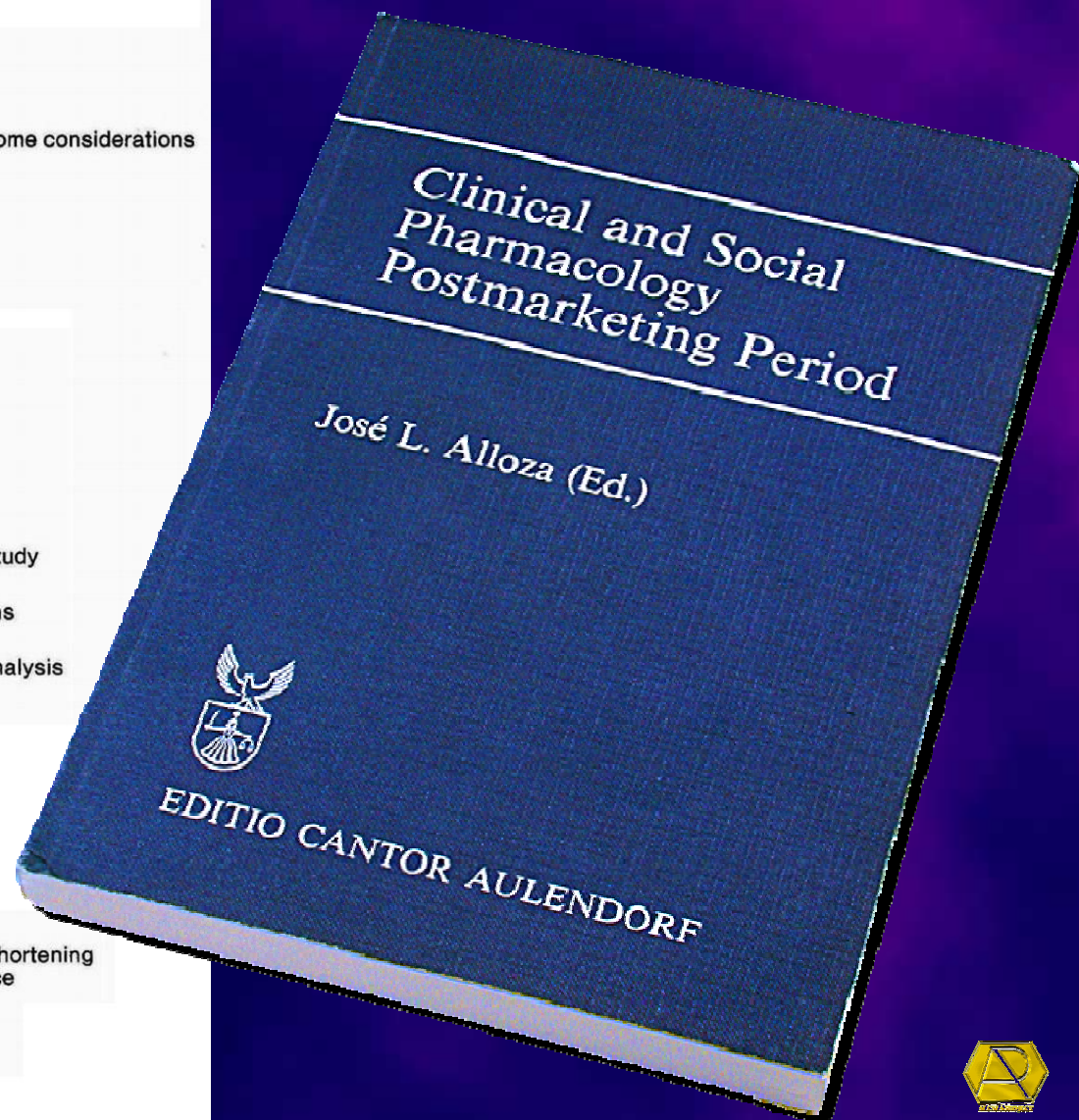
A. Wertheimer, J. Serradell (Minneapolis, Minn., USA)

Hospital Pharmacy in Spain

J. M. Suñe-Arbussa (Barcelona, Spain)

II. BACKGROUND

Chronology of Some References Related to Social Pharmacology (III)



III. POSTMARKETING SETTING

Phase IV - Drug Research and Development

- A postmarketing setting is completely different from a drug development setting in which rigorous scientific methods are employed.
- There is a great contrast between ideal clinical research conditions during the drug's clinical development and those of its **new “habitat”** –**the real “jungle”** in which it will be put to use.

III. POSTMARKETING SETTING

Drug Product

CULTURAL BACKGROUND

- Different concepts of health and hygiene
- Different levels of capacity to understand
- Influence of **socio-cultural** and environmental factors
- Patients have false ideas about "**safe and effective medicine**". No drug is completely safe and effective.
- Inter-individual response variability versus "**the mean response**" found in clinical trials

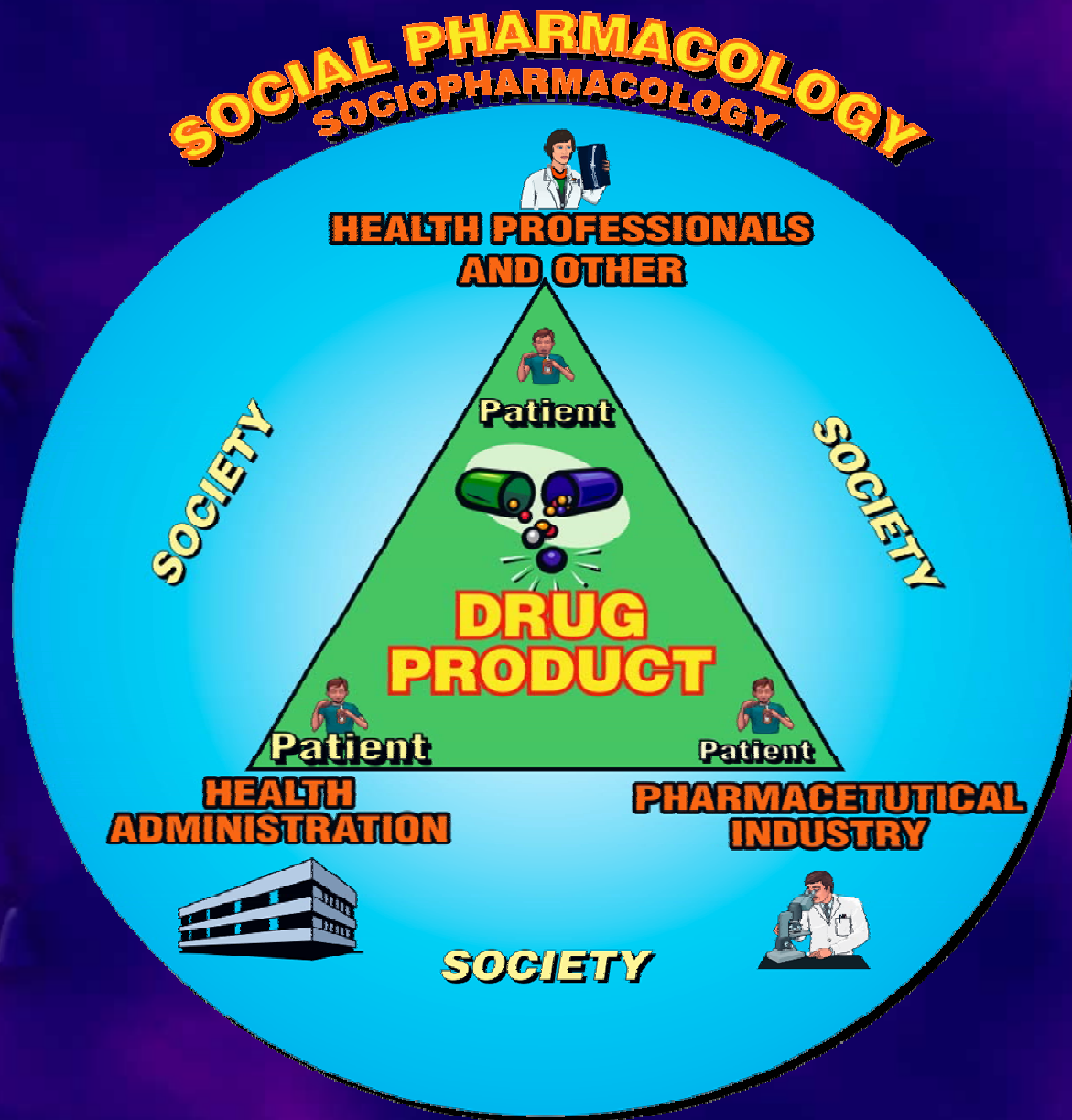


PATIENT & PATIENT COMPLIANCE

The patient:

- May take a drug the doctor did not prescribe.
- May not follow the doctor's instructions
- May take the wrong dose, at the wrong time, and for the wrong period of time
- May take concomitant medication: Herbal medicines, OTC products, ..etc
- May not understand because: is hard of hearing, has impaired vision, lives alone or is old
- May consume alcohol, psychotropic drugs or other drugs of abuse

IV. FOCUS ON "SOCIAL PHARMACOLOGY"



IV. FOCUS ON “SOCIAL PHARMACOLOGY”

PROFESSIONS RELATED TO “SOCIAL PHARMACOLOGY” A Public Health defense

Clinical Pharmacologist	Educator of students	Medical Doctor Especialized	Medical informatics
Ambulatory Care Pharmacist	Legislator	Political scientist	Environmental health specialist
Primary Care Physician	Statistician	Social workers	Lawyer
Veterinary surgeon	Computer-based patient records expert	Biologist	Teacher
Veterinary medicine	Economist	Consumer Organizations	Psychologist
Pharmacologist	Medical community services program coordinator	Public Health Officials	Patient educator
Biometrician	Etnopharmacologist	Hospital pharmacist	Environmental chemist
Academician	Mass media Newspaper, radio and television journalist	Epidemiologist	Pharmaceutical Industry experts
Sociologist		Male & female nurse	
Physicians assistant			



IV. FOCUS ON “SOCIAL PHARMACOLOGY”

IS NOT

- An “**exclusive**” knowledge on drug products restricted to specific professional goals
- Restricted to a “**social pharmacologist**”
(it cannot be)
- Connected with “**social exclusion**” in reference to the concept of poverty
- **Managed Care**
- **Mental health** / Behavioral health



IV. FOCUS ON “SOCIAL PHARMACOLOGY”

IS NOT ONLY

- **Substance abuse**, drug dependence, chemical dependence and the social consequences.
- **Disease management**, that is, a coordinated health care process that seeks to manage and improve the health status of a carefully defined patient population over the entire course of a disease.
(Includes disease prevention, patient management, and appropriate pharmaceutical treatment).
- **Postmarketing surveillance**, exclusively directed towards the systematic screening for adverse drug effects.
- **Pharmacy care**

IV. FOCUS ON “SOCIAL PHARMACOLOGY”

BUT ALSO

- The **evaluation** of the social consequences of an individual's exposure to any marketed drug.
- **Ongoing research** into marketed drugs now being used in the consumer society in order to gain value-added knowledge on these drugs and their use. Issues, which during the clinical and drug development phases, could not be addressed.
- Those **social factors** which could explain why and how drugs are used outside clinical and rational healthcare frameworks.
- A **permanent analysis** of the relationship among the pharmaceutical industry, the health administration, health professionals, and the society.



IV. FOCUS ON “SOCIAL PHARMACOLOGY”

Concept (1)

POST-MARKETING PERIOD

- Investigation (clinical and social)
- “Real life”
- Consequences:
 - Society (patient)
 - Administration
 - Health-care services
 - Drug manufactures

SCIENCE

- Integrative system
- Integrates major determinants of drug use
- In a particular environment, and their relationships



IV. FOCUS ON “SOCIAL PHARMACOLOGY”

Concept (2)

MANAGEMENT OF MARKETING DRUGS

(Health professions and society)

- Maximizing the positive benefits of drug therapy (effectiveness)
- Minimizing the negative personal (safety) and economic consequences.
- Emphasizes the efficiency

OPERATIVE SYSTEM

- Integrates decisive factors in the use of drugs
- Inter-relations: health professionals & other professionals
individual patient & the society

ECONOMICAL ASSESSMENT

- Drug utilization (clinicians, patients, and third parties)

NEW DISCIPLINE

That studies the marketed drug in a pluralistic society within a multidisciplinary framework.

All types of professionals who directly or indirectly participate in healthcare, either by providing a service or improving drug therapy (information, communication, educating, problem solving, etc).



"Drug development is an ongoing process; it does not stop because a drug is registered. Information about a drug is never complete"
(Louis Lasagna, M.D., Sc.D, 1980)

20 % / 80 %

THE LANCET

Volume 366 Number 9480 Pages 95–176 July 9–15, 2005

www.thelancet.com

"If everything has to be
double-blinded,
randomised, and
evidence-based, where
does that leave new
ideas?"

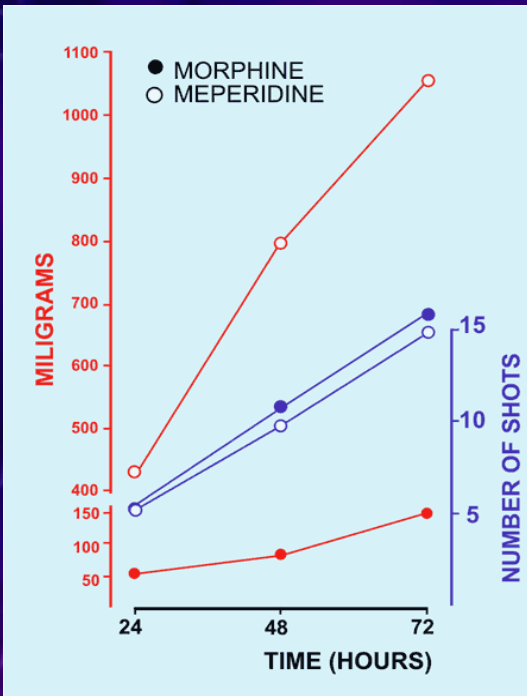
Wu J. Could evidence-based medicine be a danger to progress? Lancet 2005; 366: 122

V. METHODS / STUDIES

Social Pharmacology – Science (1)

METHODS: Conventional studies on the use and consequences of medicinal products

SOCIAL PHARMACOLOGY STUDIES related to:



- **Pharmaco-epidemiological studies**
 - Postmarketing Drug Surveillance: Causality Assessment
 - Therapeutic Risk Management
 - Drug prescription / Drug use
- **Experimental studies** (pragmatic, controlled clinical trials)
- **Observational studies** (analytical): Cohort & Case-control studies
- **"Naturalistic studies"**
- **Longitudinal studies**
- **Postmarketing studies** (safety and efficacy)
 - Incidence and severity of **adverse drug reactions**
 - **over dosage / under-dosage.**
 - **overuse of drugs / underuse of drugs / drug misuse.**

Alloza JL. Estudio "natural" sobre el dolor postoperatorio:
Una comparación entre dos analgésicos narcóticos estándar.
Dolor 1987; 2: 55-61



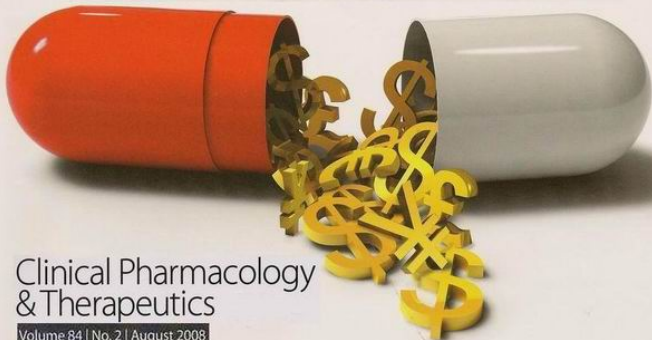
V. METHODS / STUDIES

Social Pharmacology – Science (2)

SOCIAL PHARMACOLOGY STUDIES

- Drug utilization review
- Treatment audits
- Treatment compliance
- Therapy of choice
- Measures / improving the quality prescription, dispensation , follow-up.
- Treatment Formularies / Therapeutic Guidelines / Clinical Practice Parameters / Guidelines for the Patient.
- Drug Formulary construction
- Generic Drugs
- Outcome research / Quality of Life (QOL) / Patient Satisfaction
- Pharmacoeconomic studies

PHARMACOECONOMICS



Clinical Pharmacology
& Therapeutics

Volume 84 | No. 2 | August 2008

Pioneer study on
Pharmacoeconomics

MEDICAL AND ECONOMICAL ANALYSIS



*de Traumatología, Cirugía y Rehabilitación;
Laboral y Deportiva.*

VOLUMEN 15/2
2º Trimestre
1985

Instituto de Traumatología, Cirugía y
Rehabilitación, ASEPEYO, (Barcelona)

Serv. Medicina Preventiva, C.S. "Valle Hebrón",
Barcelona

Análisis médico-económico de la profilaxis anti- trombótica versus no profilaxis en Traumatología. Estudio de 920 casos

J. Torras Barba
A. Pales Argullós
J.M. Güell Fortuny
J.L. Alloza



Social Pharmacology – Science (3)

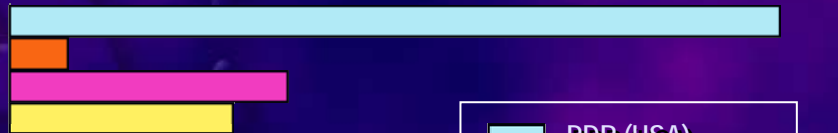
FOUR NATIONAL COMPENDIA COMPARISON DRUG PRODUCT INFORMATION Fifteen Anti-inflammatories

Nr. Items Listed / Category

CONTRAINDICATIONS, WARNINGS, PRECAUTIONS



ADVERSE EFFECTS



DRUG INTERACTIONS



0 100 200 300 400 500 600 700

Alloza JL, Lasagna L. Drug information supplied in four national compendia: A comparative analysis. Alloza JL, ed. **Clinical and Social Pharmacology: Postmarketing Period**. Aulendorf (Germany): Editio Cantor, 1985; 85-101.

SOCIAL PHARMACOLOGY STUDIES

- **Acute drug toxicity evaluation**
- **Drug interactions:** food, nutraceuticals, functional foods, probiotics, drug-drug interactions
- **Prevention of iatrogeny**
- **Drug response variability** (Pharmacogenetics, drug resistance)
- **Habituation and dependence** ("drug abuse", "drug addiction")
- **Adjusting dosage** (chronotherapeutic)
- **Clinical evaluation / Risk populations**
- **Compassionate use of drugs** (product development)
- **Errors** (prescription, dispensation, formulation).
- **Counterfeit** (fraudulent drugs, fake)

FRAUDULENT DRUGS

IT IS NOT A MEDICINE: KILL PEOPLE

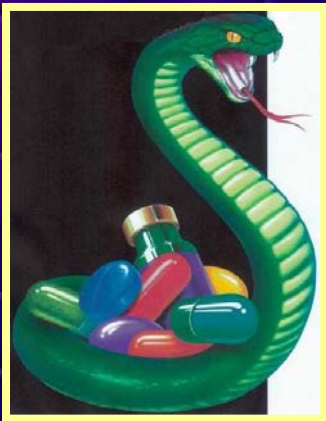
COUNTERFEIT

Sixteen different types of counterfeit artesunate tablets in SE Asia

24/02/2008 -Dear Colleagues, In the late 1990s counterfeits of artesunate, a vital life-saving antimalarial drug, were discovered circulating in SE Asia. Surveys have suggested that **38%-53%** of shop-bought artesunate in mainland SE Asia are fake..../..

2005 3 WOMEN DIE IN ARGENTINA

✿ **WHO: PROGRAM “IMPACT”** (ie, Good Distribution Practices –GDP)



<http://www.pharmacyboardkenya.org/index.php?id=36>

✿ **EMA** -- Europe “Life Style Drugs” (INTERNET)

✿ **IFPMA** - INTERNATIONAL FEDERATION OF PHARMACEUTICAL MANUFACTURERS ASSOCIATION



Social Pharmacology – Science (4)

SOCIAL PHARMACOLOGY STUDIES

- **Magisterial formula** or compounding
- **Self-medication / Self care**
OTCs , phytotherapy (herbal medicines).
- **Dietetic and dermopharmacy products**
- **Concomitancy of medicinal products** human and veterinary use, herbicides and pesticides home hygiene products
- **Interactions among scientific medicine,** encroachment, quack-remedies, "alternative medicine".
- **Consumer associations** (Patient-centred attention, Therapeutic Patient Guides)
- **Patient interaction** (health professionals / pharmaceutical industry).
- **Quality of therapeutic and health information.**
- **Drug Information / Means to provide information** (appropriate use of medicinal products)
- **Promotion of health education and advice to the patient**

Alloza JL

I. A study on Social Pharmacology about the consumption and the opinion of the cold drug products by the consumer and the pharmacist in the Community of Madrid.

II. Minor aches and pains of people in the Community of Madrid and their treatment with OTCs and other drugs products .

Meth Find Exp Clin Pharmacol 2002; 24 (Supl A): 124-5.

SELF-CARE DRUGS

Trátate a ti mismo: "Consulta a..."

**ESTUDIO EPIDEMIOLÓGICO
POBLACIONAL DE LAS
ESPECIALIDADES FARMACÉUTICAS
PUBLICITARIAS (EFPs) EN
LA COMUNIDAD DE MADRID:
EL FARMACÉUTICO Y EL USUARIO
COMO DESTINATARIOS**

Diseño: Estudio observacional de farmacología social, descriptivo, transversal:

- 90 Farmacias de la Comunidad de Madrid
- 611 Usuarios de la Farmacia, adultos.

Grupo de trabajo y Estudio de Campo: GRUPO DE FARMACOLOGIA SOCIAL (médicos, farmacéuticos, biólogos - Universidad de Alcalá)

Representa: Comunidad de Madrid (100%)

Periodo: Invierno: 2001 (W01, Centralizado en Oficina Farmacia) / 2002 (W02, Libre)

Grupo farmacológico: Todos los "Anticatarrales / Antigripales" comercializados.

Objetivos:

- ✓ Evaluación de la información necesaria para el cuidado de la salud con las EFPs.
- ✓ Grado de aceptación de los productos farmacéuticos publicitarios por el usuario y farmacéutico de la oficina de farmacia.



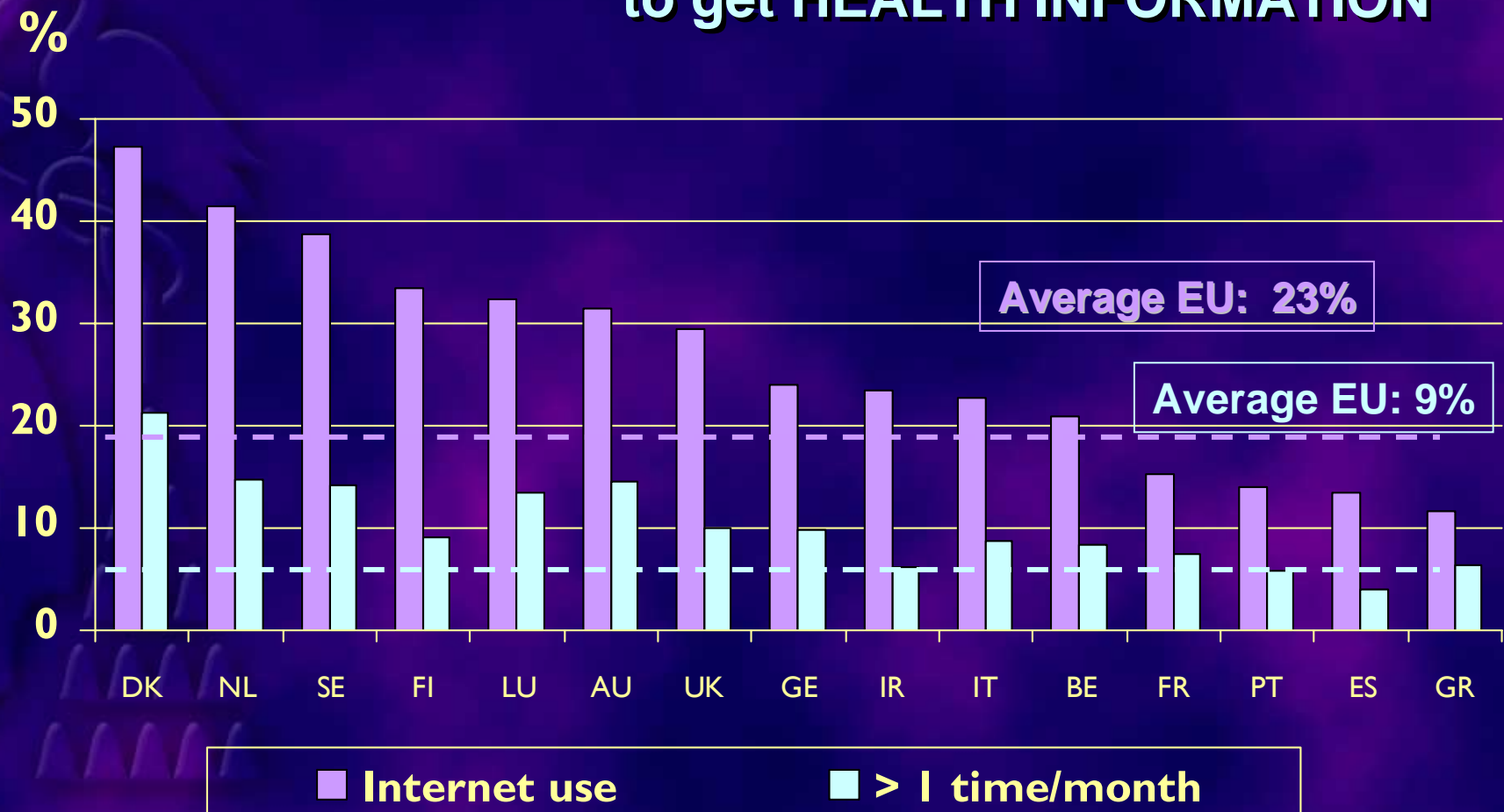
Social Pharmacology – Science (5)

SOCIAL PHARMACOLOGY STUDIES

- **News media** (television, radio, newspapers, internet, etc).
- **Internet and other mass media** (quality of information)
- **Social impact of new drugs**
- **Interprofessional communication**
- **Pharmaceutical drug promotion.**
- **Use of drugs for** non-medical purposes, in non approved indications
- **Health insurance plans regulations** (rational drug therapy)
- **Quantification and impact of legal regulations** (Illegal approval, Over-regulation)
- **Health interventions** (Administration policies)
- **Electronic-computer-based medical records**
- **Ethical issues / Written informed consent.**

INTERNET

↑ 23% europeans search INTERNET
to get HEALTH INFORMATION

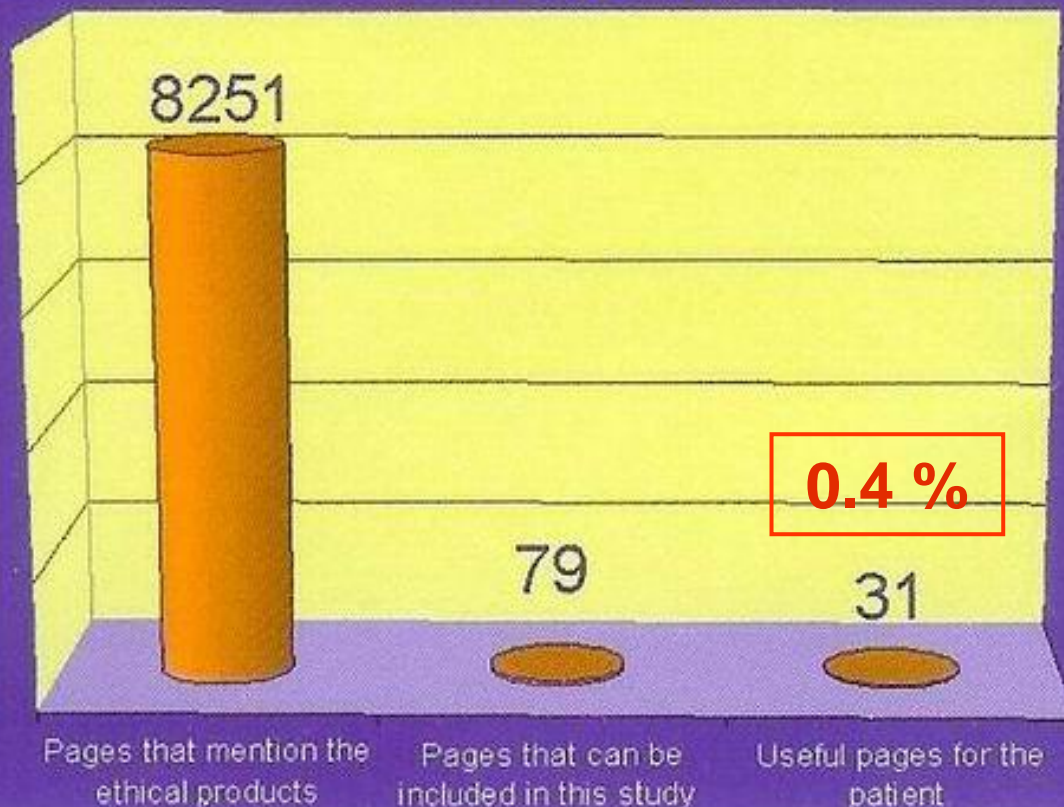


SOCIAL PHARMACOLOGY OF THE INFORMATION OF ETHICAL PRODUCTS ON THE INTERNET

INTERNET

THE RELATIONSHIP BETWEEN FOUND-PAGES AND USEFUL PAGES

FOR THE PATIENT



- The Internet has become the most common form of searching for information about medical matter.
- In 2001, JAMA published a monograph on the subject. In it emphasized the current medical impact of the Internet and in the relation between the doctor-patient.
- We have not found any studies that value the quality of the drug information that can find a non-professional health worker who looks for information with non-specific finders of free access on the Internet.
- This study was designed to analyze with complete accuracy and completeness of the information of ethical products for non-professional users.
- This study belongs to the horizons of the discipline of Social Pharmacology.

Google	Google®
altavista	Altavista®-spanish
ubbi	Buscador Ubbi®
fast	Fast search®
hispanavista	Hispanavista®
LYCOS	Lycos®
MIVA	MIVA®
msn	MSN® en España
TEOMA	Teoma®
terra	Terra®
todocl	Todo Cl®
YAHOO!	Yahoo!® España

Alloza JL, Formigós JA

Information about prescription drugs in Spanish language websites on the internet is incomplete.

Clin Pharmacol Ther 2007; 81 (Suppl. 1): S67.

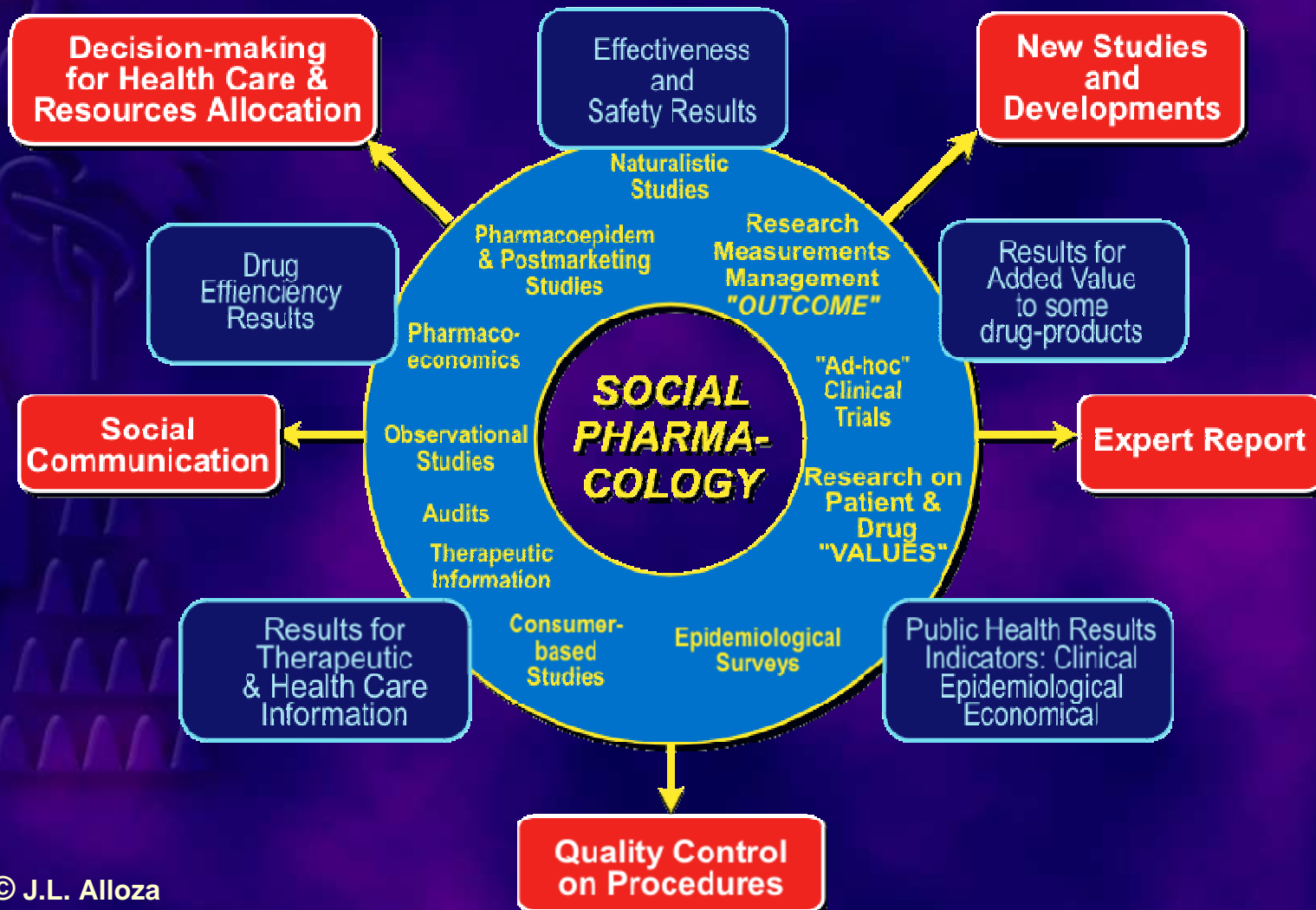


SOCIAL PHARMACOLOGY:

- ✓ It is interdisciplinary.
- ✓ It responds to new demands / alert mechanisms
- ✓ It encourages pharmacological research ("*real life*")
- ✓ It interprets "*the life cycle of the drug in its habitat*"

VI. CONCLUSIONS

Missions of Social Pharmacology



WELCOME TO OUR “SCHOOL OF MEDICINE”



<http://www.uah.es>

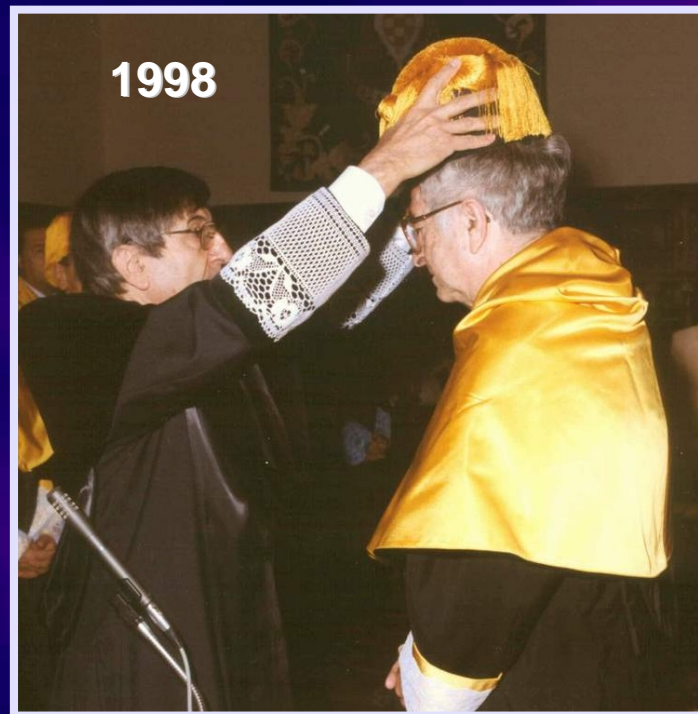


**Alcalá de Henares - World Heritage City
(UNESCO)**

*The first City to be designed and built solely
as the seat of a University*

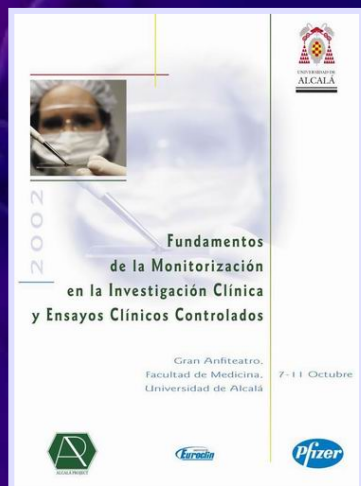
SEMINARS OF “SOCIAL PHARMACOLOGY”

IN MEMORIAM OF PROFESSOR
LOUIS LASAGNA, M.D., D.Sc.



Doctor “Honoris Causa”, The University of Alcalá.

SEMINARS OF “SOCIAL PHARMACOLOGY”



“Jornadas sobre Diagnóstico in vitro en el Laboratorio Clínico”

Directores Prof. Dr. J.L. Alloza (Alcalá Project, Departamento de Farmacología de la Universidad de Alcalá) y Dr. Gonzalo Palacios (Departamento Científico, Abbott Diagnósticos). Facultad de Medicina, Universidad de Alcalá, del 19 al 23 de Noviembre de 2001

“Jornadas sobre Fundamentos de la Monitorización en la Investigación Clínica y Ensayos Clínicos Controlados”. Directores Prof. Dr. J.L. Alloza (Alcalá Project, Departamento de Farmacología de la Universidad de Alcalá) y Dr. Gonzalo Hernández (Director Médico, Laboratorios Pfizer, S.A.). Facultad de Medicina, Universidad de Alcalá, del 7 al 11 de Octubre de 2002).



III Seminario “Progresos en Farmacoepidemiología y Farmacovigilancia”. Cursos de Pregrado y Postgrado en Farmacología Social. En Memoria de Louis Lasagna, Doctor “Honoris Causa” por la Univ. de Alcalá. Directores Prof. Dr. J.L. Alloza (Depto de Farmacología, Universidad de Alcalá) y Dra. M^a José Sánchez (Jefe de la Unidad de Seguridad de Medicamentos ; Dirección Médica, Roche Farma S.A.) Facultad de Medicina, Universidad de Alcalá, del 29 septiembre al 3 de octubre de 2003.





SEMINARS OF “SOCIAL PHARMACOLOGY”

IV Seminario “La información sobre medicamentos a través de los medios de comunicación.” Cursos de Pregrado y Postgrado en Farmacología Social. En Memoria de Louis Lasagna, Doctor “Honoris Causa” por la Univ. de Alcalá Directores Prof. Dr. J.L. Alloza (Depto de Farmacología, Universidad de Alcalá) y D. Vicente Fisac (Country Communication Manager y Director de Información al Día y azprensa.com de AstraZéneca). Facultad de Medicina, Universidad de Alcalá. Del 10-14 Enero de 2005.

V Seminario “El autocuidado de la salud en la farmacología social.” Cursos de Pregrado y Postgrado en Farmacología Social. En Memoria de Louis Lasagna, Doctor “Honoris Causa” por la Univ. de Alcalá. Directores Prof. Dr. J.L. Alloza (Depto de Farmacología, Universidad de Alcalá) y Dra. M^a Gloria Pueyo (Depto. Médico, División Consumer Care. Bayer Health Care. Facultad de Medicina, Universidad de Alcalá, Del 21-25 Noviembre de 2005.

VI Seminario “Farmacoeconomía y farmacología social” Cursos de Pregrado y Postgrado en Farmacología Social. En Memoria de Louis Lasagna, Doctor “Honoris Causa” por la Univ. de Alcalá Directores Prof. Dr. J.L. Alloza (Depto de Farmacología, Universidad de Alcalá) y Dr. José Antonio Sacristán (Director, Depto. Médico. Lilly España SA.). Salón de Actos. Edificio del Rectorado. Universidad de Alcalá. Alcalá de Henares, Madrid. 25 de noviembre de 2006.

