IETSI EsSalud | INSTITUTO DE EVALUACIÓN DE TECNOLOGÍAS EN SALUD E INVESTIGACIÓN

INTRODUCCIÓN A LA FARMACOEPIDEMIOLOGÍA

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EsSalud

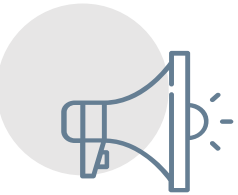
PROCESOS DE LA FARMACOVIGILANCIA

ANÁLISIS DEL RIESGO

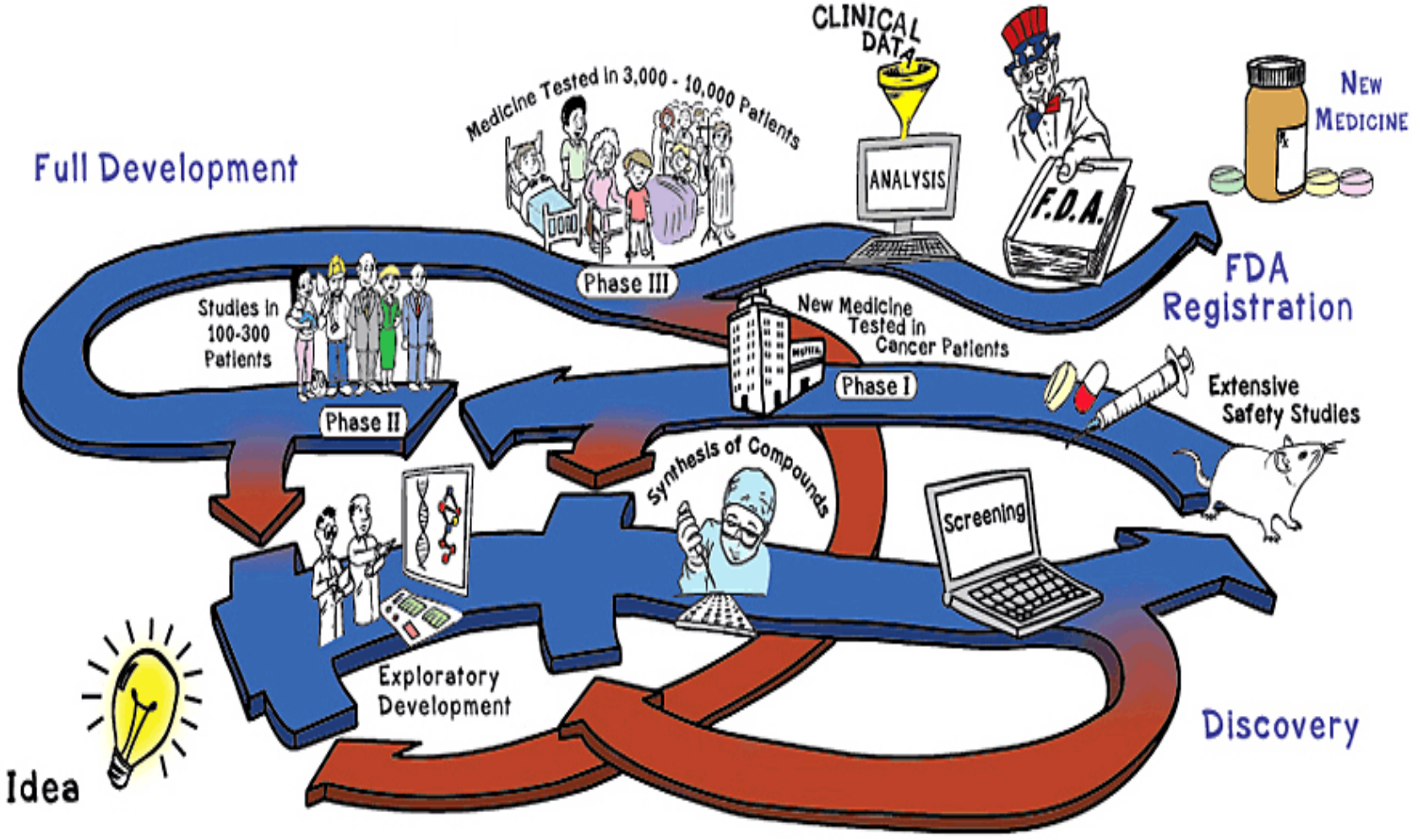
- IDENTIFICACIÓN
- **CUANTIFICACIÓN**
- EVALUACIÓN

GESTIÓN DEL RIESGO

- MEDIDAS ADMINISTRATIVAS
- COMUNICACIÓN DEL RIESGO
- PREVENCIÓN



THE ROAD TO A NEW DRUG



PV / PE

DEFINICIONES DE FARMACOEPIDEMIOLOGÍA

Estudio de las **interacciones entre las drogas y la población.**

Estudio de los **efectos terapéuticos, riesgo** y **uso** de los medicamentos en poblaciones mediante **métodos epidemiológicos.**

Su finalidad es aportar evidencia científica para la toma de decisiones

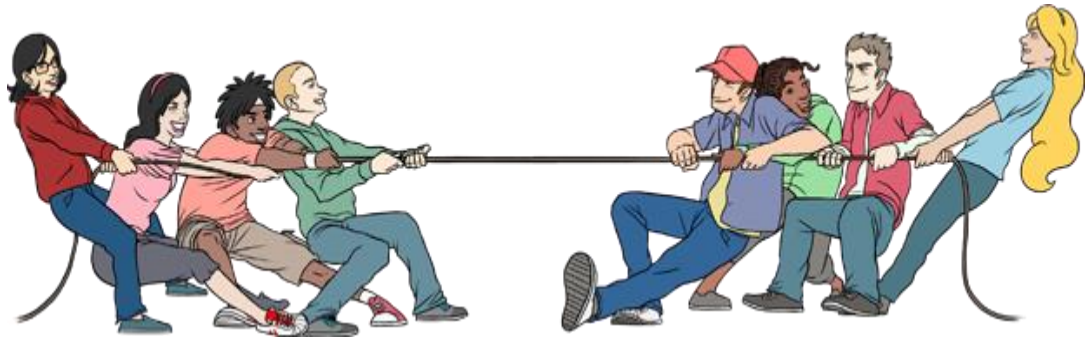
«Lo que el fármaco hace a las poblaciones y lo que las poblaciones hacen a los fármacos»

DEFINICIONES DE FARMACOEPIDEMIOLOGÍA

«En la mayoría de veces los estudios experimentales son preferidos. Sin embargo, la FE describe la «vida real» (riesgos y beneficios en condiciones reales de uso)»

Sammy Suissa PhD

Tira y jala



RCTs

Observational studies

Patients and the public deserve big changes in evaluation of drugs

Silvio Garattini and **Iain Chalmers** argue that ending the secrecy surrounding drug trials would benefit all parties

The drug industry has an image problem, and big changes are needed to restore public confidence. The reasons why it has got itself a bad name are well rehearsed. They include research agendas distorted by priorities that are important to industry but not to patients[1]; inappropriately restricted study populations that exclude patients with multiple health problems[2] and children[3]; uninformative trial designs that fail to assess whether new drugs are better than existing treatment options[4]; outcome measures that ignore the effects of treatments on morbidity and mortality or on

An inevitable tension confronts all governments that try to balance the interests of patients and health services against the interests of industry and national economies. Within the UK, the drug industry currently interacts mainly with the Department of Health rather than with the Department of Trade and Industry. We believe that this is appropriate because drugs are made for patients.

However, the European Medicines Evaluation Agency (EMEA) is answerable to the Directorate General for Enterprise and Industry

port in favour of patients and health services:

involving patients in shaping the therapeutic research agenda, making transparency in drug evaluation a legal requirement, requiring and resourcing independent evaluation, and requiring proof of added value for all new drugs.

Involve patients in shaping the therapeutic research agenda

The people who have most to lose from industry's dominance in drug evaluation are patients and those caring for them. The changes that

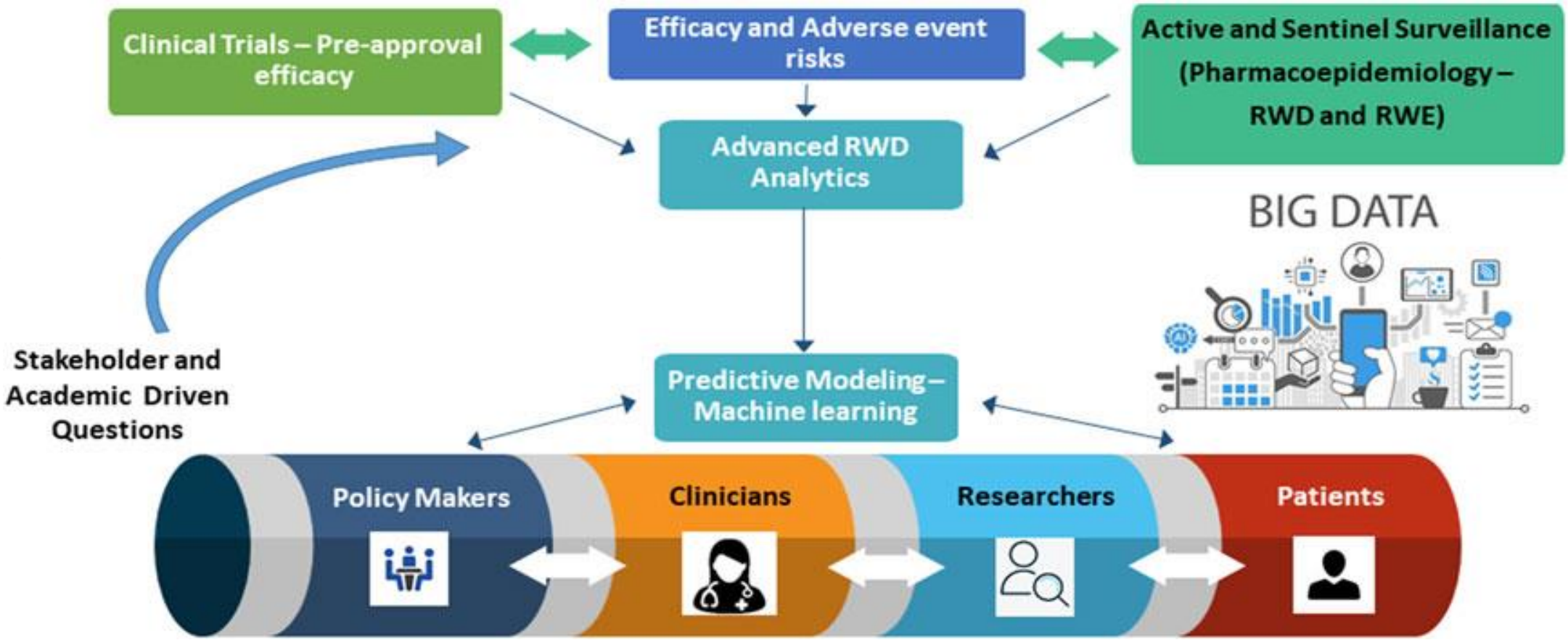
n Defense of Pharmacoepidemiology — nbracing the Yin and Yang of Drug Research

vorn, M.D.

The past decade has not been kind to observational studies of medications. The damage gan in 1998 with the publication of the Heart and Estrogen– stin Replacement Study, a nized controlled trial showing hormone replacement d the risk of cardiac mong postmenopausal with heart disease. Like many physicians, I had been teaching the gospel that estrogen use prevented heart disease — an idea based on observational studies[1] showing that postmenopausal women who regularly of patients. A heavier blow came in 2002 with publication of an even larger randomized trial from the Women's Health Initiative (WHI), demonstrating that women without preexisting heart disease who were given estrogen also had an increase in cardiac events — along with expected increases in breast cancer, thrombophlebitis, stroke, and pulmonary emboli. Other WHI trial data refuted the conclusions of observational studies that estrogen users were less likely than nonusers to develop dementia, depression, or incontinence.

treated with statins really had higher cancer rates didn't pan out either. Next, clinicians, policymakers, and families were alarmed by the contention — based on a limited number of cases and so far unsubstantiated — that children given stimulants for attention-deficit disorder are at increased risk for potentially fatal heart disease. In January 2007, the *BMJ* ran an article arguing that, as its headline stated, "Observational studies should carry a health warning," on the grounds that analyses in such studies can produce unreliable findings. In

FARMACOEPIDEMIOLOGÍA



FARMACOEPIDEMIOLOGÍA Y SU ROL

Table 1.1 Potential contributions of pharmacoepidemiology

A. Information that supplements the information available from premarketing studies—better quantitation of the incidence of known adverse and beneficial effects
   a. Higher precision
   b. In patients not studied prior to marketing, e.g., the elderly, children, pregnant women
   c. As modified by other drugs and other illnesses
   d. Relative to other drugs used for the same indication
B. New types of information not available from premarketing studies
   1. Discovery of previously undetected adverse and beneficial effects
      a. Uncommon effects
      b. Delayed effects
   2. Patterns of drug utilization
   3. The effects of drug overdoses
   4. The economic implications of drug use
C. General contributions of pharmacoepidemiology
   1. Reassurances about drug safety
   2. Fulfillment of ethical and legal obligations

- «Mundo real» en poblaciones grandes
- Complementar la información de los ECAs
- Dar solución a las principales limitaciones de los ECAs.
- Confirma «señales» evidenciadas a través de la farmacovigilancia
- Proveer datos de efectividad comparativa
- Proveer información sobre uso de medicamentos en mundo real

FINALIDAD DE LA FARMACOEPIDEMIOLOGÍA

Optimizar la utilización de los medicamentos
Reportar nuevas indicaciones/ nuevos usos en poblaciones especiales
Evidenciar los efectos reales tras el uso crónico
Prevenir eventos adversos
Desarrollar guías de deprescripción
Brindar información Farmacoeconómica

Pharmacoepidemiology Research-Real-World Evidence for Decision Making


Anick Bérard[1,2,3]*

[1]Faculty of Pharmacy, University of Montreal, Montreal, QC, Canada
[2]Faculty of Medicine, Université Claude Bernard Lyon 1, Lyon, France
[3]CHU Sainte-Justine, Montreal, QC, Canada

Introduction

Pharmacoepidemiology is the study of the utilisation and effects of medications in large human populations, and it is a bridge science spanning both clinical pharmacology and epidemiology. Over the years, pharmacoepidemiology has benefited from its ability to synergize multiple disciplines including epidemiology, pharmacology, medicine, biostatistics, and social sciences. Real-World Evidence (RWE) in pharmacoepidemiology is the clinical findings on usage, benefits and risks of a medication generated from the analysis of real world data (RWD) (Leveraging Real World Evidence in Regulatory Submissions of Medical Devices, 2021). The real-life clinical impact of a medication might be more clearly demonstrated through RWD and RWE given that controlled clinical trials often cannot evaluate all applications of a drug in clinical practice across the full range of potential users. Indeed, clinical trials often have very strict inclusion and exclusion criteria, measure standardize outcomes, have short and strict follow-up rules, and can randomize medication exposures among study subjects, making them the design of choice to quantify the efficacy of a medication (Scandinavian Simvastatin Survival Study Group, 1994; Evans, 2010). Clinical trial efficacy results remain the main indicators on which decisions are usually made to determine whether drugs are available at bedside or as outpatient treatments. However, they do not directly predict clinical effectiveness since medications

FUENTES DE INFORMACIÓN PARA HACER FE

Bases automatizadas

Usadas hace más de 30 años y contienen información de las atenciones médicas (ambulatorias y hospitalarias)

«Claim Databases»	«Automated Databases» (medical record DB)
Información de la atención al paciente utilizada para el pago de seguros de salud.	Información completa de la atención médica (emergencia, salud mental, datos de laboratorio, radiografías, todos los medicamentos recibidos (incluso OTC y terapias alternativas)

Bases automatizadas

- TM grande (para FE utilizamos 10 000 obs.)
- Países de alta vigilancia sanitaria disponen de estas BD
- Información completa de cada diagnóstico, prescripción, dispensación, seguimiento farmacoterapéutico, etc. para evitar Evitamos sesgos de información
- Permite recopilar información de otras DB
- La información es constantemente actualizada

Algunas bases automatizadas

www.cnodes.ca

CNODES: the Canadian Network for Observational Drug Effect Studies

Samy Suissa, David Henry, Patricia Caetano, Colin R. Dormuth, Pierre Ernst, Brenda Hemmelgarn, Jacques LeLorier, Adrian Levy, Patricia J. Martens, J. Michael Paterson, Robert W. Platt, Ingrid Sketris, Gary Teare; for the Canadian Network for Observational Drug Effect Studies (CNODES)

Características de CNODES

Site	Total population (000s)	Prescription drug data: patient groups covered; period covered	Frequency of updates	Vaccine data	Emergency department encounters	Outpatient laboratory data	Cancer registry	Time to access data
British Columbia	4573	All; from 1996	Weekly	Partial	No	No	No	Weeks
Alberta	3779	Age ≥ 65; from 1994	Monthly	Yes	Yes	No	No	Days
Saskatchewan	1058	All; from 1996	Quarterly	No	No	No	No	Days
Manitoba	1251	All; from 1995	Quarterly	Yes	Yes	Partial (public health)	Yes	Days
Ontario	13373	Age ≥ 65, receiving social assistance; from 1997	Bimonthly	No	Yes	No	Yes	Days
Quebec	7980	Age ≥ 65, receiving social assistance; from 1983	Monthly	No	Yes	No	Yes	Months
Nova Scotia	945	Age ≥ 65, receiving social assistance / Family Pharmacare; from 1989	Quarterly	No	Yes	No	Yes	Days
CPRD	11829	All; from 1988	Monthly	Yes	No	Yes	Yes	Immediate

CNODES = Canadian Network for Observational Drug Effect Studies, CPRD = [United Kingdom] Clinical Practice Research Datalink
*All sites have access to data on demographic characteristics, vital statistics, dispensed outpatient prescriptions, physician encounters and hospital admissions.

Algunos estudios publicados a partir de la base de CNODES

Use of high potency statins and rates of admission for acute kidney injury: multicenter, retrospective observational analysis of administrative databases

OPEN ACCESS

BMJ

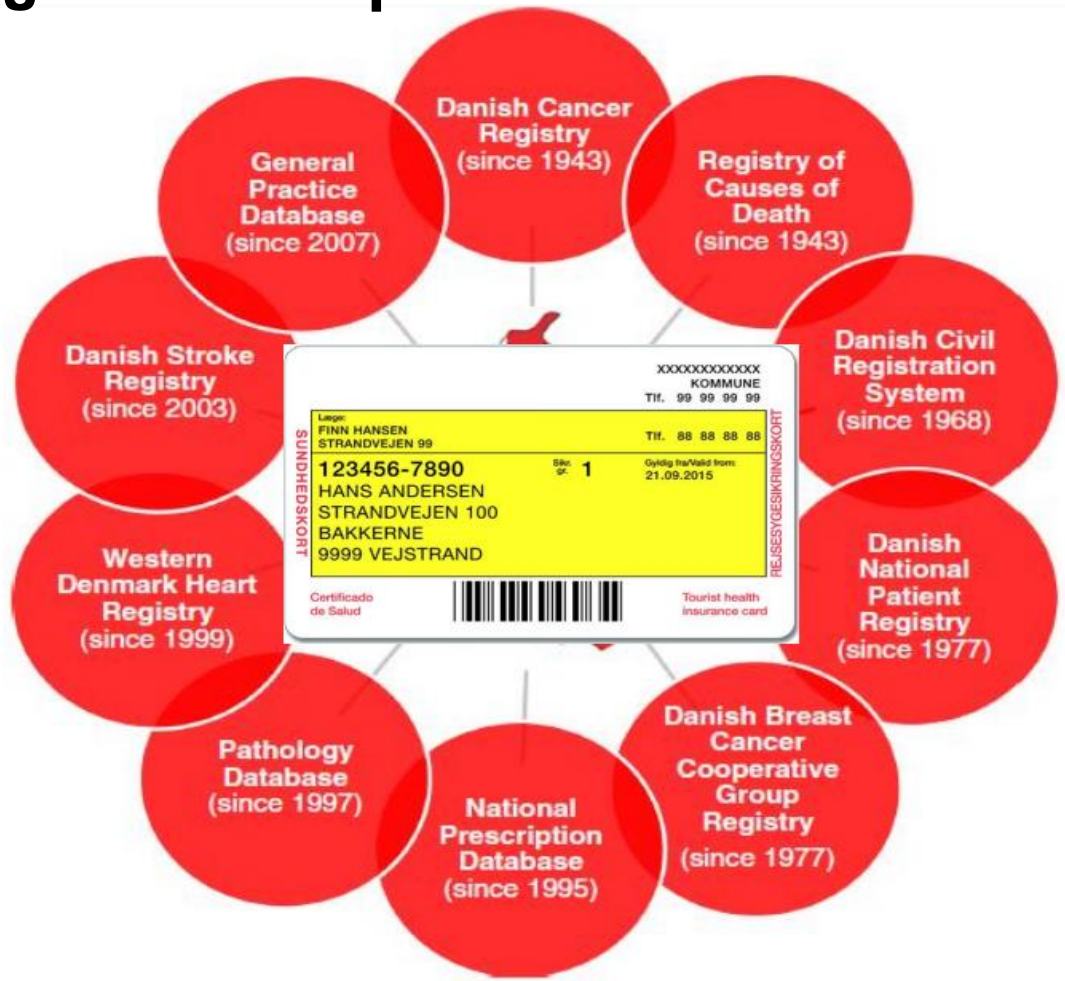
Colin R Dormuth *assistant professor*[1], Brenda R Hemmelgarn *associate professor*[2], J Michael Paterson *scientist*[3], Matthew T James *assistant professor*[2], Gary F Teare *director of quality management and analysis*[4], Colette B Raymond *research scientist*[5], Jean-Philippe Lafrance *assistant professor*[6], Adrian Levy *head*[7], Amit X Garg *professor of medicine*[8], Pierre Ernst *professor of medicine*[9], Canadian Network for Observational Drug Effect Studies (CNODES)

Gut

Proton pump inhibitors and the risk of hospitalisation for community-acquired pneumonia: replicated cohort studies with meta-analysis

Kristian B Filion,[1] Dan Chateau,[2] Laura E Targownik,[3] Andrea Gershon,[4] Madeleine Durand,[5] Hala Tamim,[6] Gary F Teare,[7] Pietro Ravani,[8] Pierre Ernst,[1] Colin R Dormuth,[9] the CNODES Investigators

Registros de pacientes en Dinamarca



Tomado de la presentación del Dr. Anton Pottergard – Introducción a la FE

DSFE

News The Society Education Research Position Papers

Danish Registries

www.DSFE.dk

Overview of Danish Registry Reviews

With the *Overview of Danish Registry Reviews*, the Danish Society for Pharmacoepidemiology aims to provide a recommendation on which reviews that most accurately describe the main Danish registries and their use for pharmacoepidemiological research.

Most Danish registries have previously been reviewed. However, reviews may become outdated with time for several reasons. Thus, the registries or the methods for which they can be used in research are often improved over time. The application procedures may also change. Finally, validation of the registry data with new information about the quality of the data may also justify updates of existing reviews.

There is therefore a consistent need to stay updated on which reviews that best describe each registry. To facilitate this information to individual researcher and to create a common platform where researcher easily can check if new reviews have been published, the Society have made the overview below.

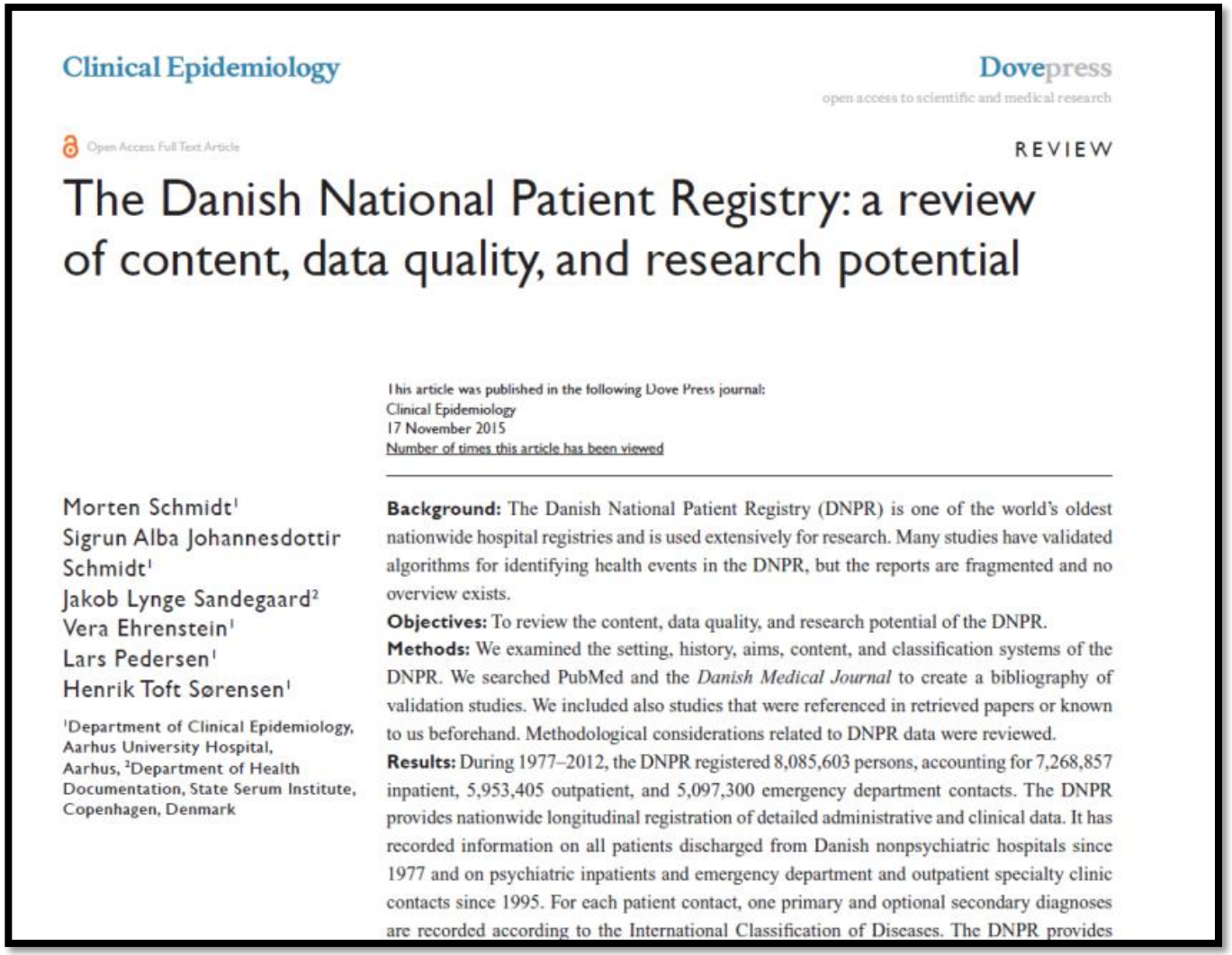
Comments or suggestions for updates are welcome and can be mailed to morten.schmidt@clin.au.dk.

Morten Schmidt, MD, PhD

Overview of the timeline for the initiation Danish registries (*Clin Epidemiol* 2015;7:449–90)

1870: Danish Twin Registry
1925: Danish Registry of Cerebral Paresis
1937: Registry of Tuberculosis
1943: Danish Cancer Registry; Registry of Causes of Death
1949: Danish Multiple Sclerosis Registry; Military Conscription Registry
1968: Danish Civil Registration System; Cytogenetic Register
1969: Central Psychiatric Registry

Tomado de la presentación del Dr. Anton Pottergard – Introducción a la FE



Clinical Epidemiology

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REVIEW

The Danish National Patient Registry: a review of content, data quality, and research potential

This article was published in the following Dove Press journal:
Clinical Epidemiology
17 November 2015
Number of times this article has been viewed

Morten Schmidt[1]
Sigrun Alba Johannesdottir Schmidt[1]
Jakob Lynge Sandegaard[2]
Vera Ehrenstein[1]
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Background: The Danish National Patient Registry (DNPR) is one of the world's oldest nationwide hospital registries and is used extensively for research. Many studies have validated algorithms for identifying health events in the DNPR, but the reports are fragmented and no overview exists.

Objectives: To review the content, data quality, and research potential of the DNPR.

Methods: We examined the setting, history, aims, content, and classification systems of the DNPR. We searched PubMed and the *Danish Medical Journal* to create a bibliography of validation studies. We included also studies that were referenced in retrieved papers or known to us beforehand. Methodological considerations related to DNPR data were reviewed.

Results: During 1977–2012, the DNPR registered 8,085,603 persons, accounting for 7,268,857 inpatient, 5,953,405 outpatient, and 5,097,300 emergency department contacts. The DNPR provides nationwide longitudinal registration of detailed administrative and clinical data. It has recorded information on all patients discharged from Danish nonpsychiatric hospitals since 1977 and on psychiatric inpatients and emergency department and outpatient specialty clinic contacts since 1995. For each patient contact, one primary and optional secondary diagnoses are recorded according to the International Classification of Diseases. The DNPR provides

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Y en LATAM?

Title:
Data Sources for Drug Utilization Research in Latin American countries – a cross-national study: DASDUR-LATAM Study:

Running Title:
DASDUR-LATAM Study

Table 3 – Data sources for DUR by LatAm countries

Countries	Argentina	Brazil	Chile	Colombia	Ecuador	Mexico	Nicaragua	Peru	Uruguay	TOTAL
Characteristics of the datasources	31	37	9	12	4	11	4	7	9	124
Acessibility*										144
Publicly and conveniently accessible	4	17	2	8	0	3	0	1	2	37
Restricted pre-authorized protocol-only access	0	1	4	3	3	3	2	0	0	16
Access limited to or dependent on country-specific legislation	1	19	6	0	0	0	0	0	4	30
Available only researchers working in the institution (It is only people that is from the institution that provide the database)	29	6	1	1	0	5	2	0	0	44
The process for obtaining data is not clear, without general regulation	0	0	2	0	1	0	0	6	0	9
Not accessible any way/ Data not available for public use	0	6	0	0	0	0	0	0	2	8
Geographic granularity (data)										124
National data without further granularity	1	1	1	6	0	1	1	4	4	19
National data with further granulatiry	6	29	8	6	4	10	3	3	5	74
Regional data (with or without) further granularity	24	7	0	0	0	0	0	0	0	31
Sector of data source (data source)										124
Public health system	29	20	4	1	3	9	2	5	3	76
Private sector	0	1	0	2	0	0	0	0	0	3
Both	2	16	5	9	1	2	2	2	6	45
Data source generate by (data source)										124
Wholesaler	2	0	3	2	0	0	0	0	2	9
Pharmacy records	27	10	0	0	1	1	1	2	4	46
Patient records	2	5	6	1	1	3	0	0	0	18

DISEÑOS EPIDEMIOLÓGICOS USADOS EN FE

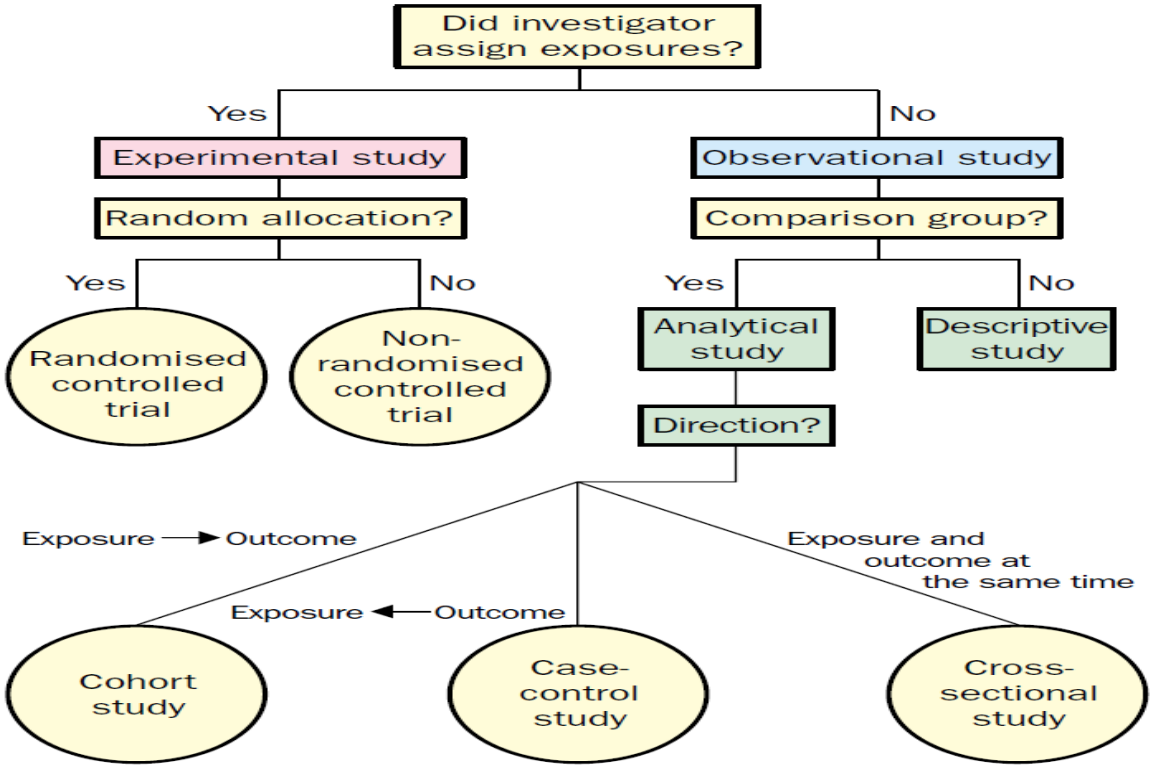


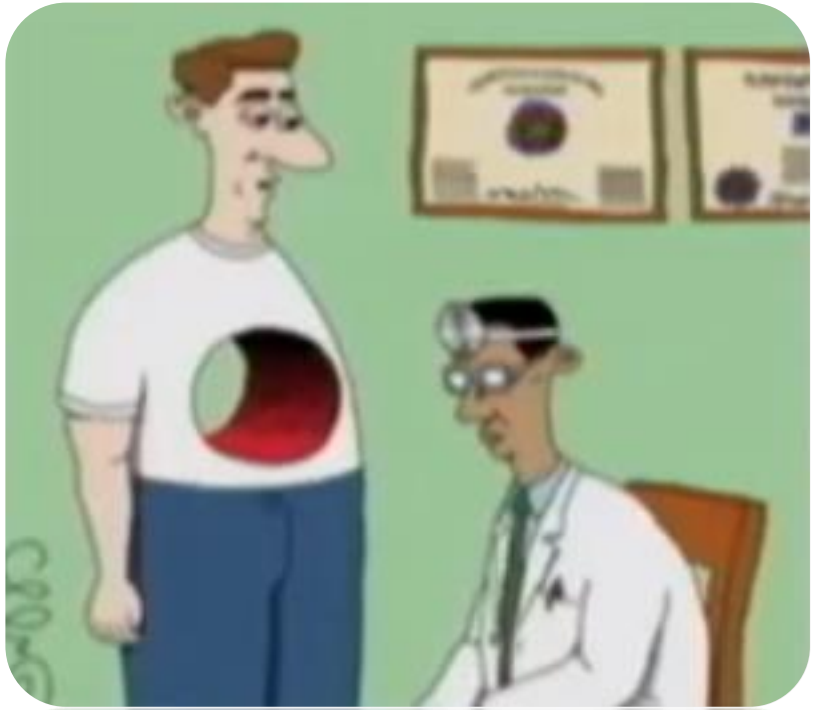
Figure 1: **Algorithm for classification of types of clinical research**

Grimes DA, Schulz KF. An overview of clinical research: the lay of the land. The Lancet, 2002;359(9300):57–61.

Caso de FE - VIOXX

VIOXX

Sin embargo, los AINES pueden producir…



Frente a este problema…

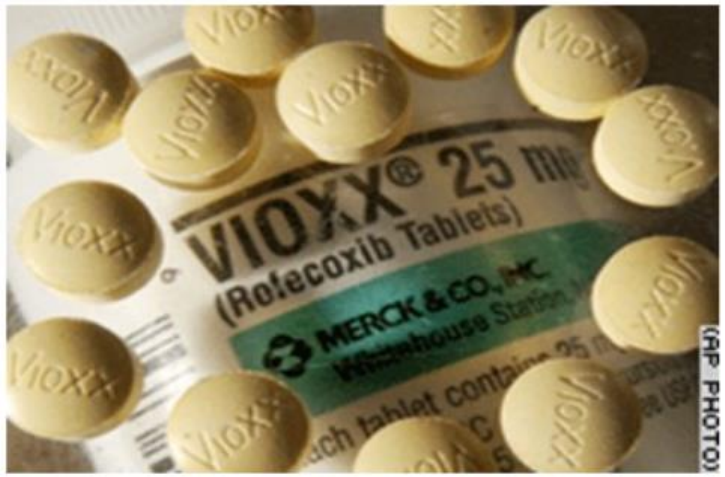
¿Qué pasó con VIOXX?

Monday, November 15, 2004 Posted: 1516 GMT (2316 HKT)

CNN INTERNATIONAL .com

HEALTH

WASHINGTON (Reuters) -- Pharmaceutical giant Merck & Co Inc. had evidence by 2000 that its painkiller Vioxx , which was pulled off the market on Sept. 30 (2004) , was not safe, a heart specialist told CBS News program "60 Minutes" on Sunday.

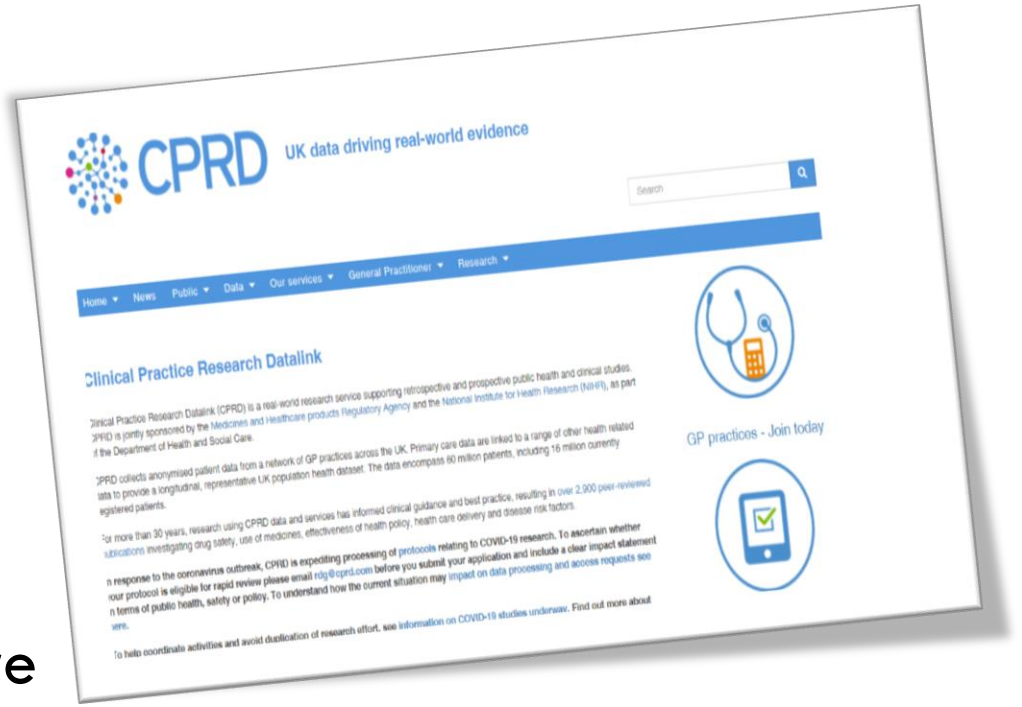


CNODES
CANADIAN NETWORK FOR OBSERVATIONAL DRUG EFFECT STUDIES

Frente a este caso…surgió la duda ¿Producirán IMAs y strokes estos medicamentos de la misma clase?

Se planteó realizar un estudio post-marketing de seguridad de estos productos

- CPRD: UK Clinical Practice Research Datalink
- > 1000 registro de médicos
- 10 millones de pacientes
- 1990-hoy
- Diagnósticos, test de laboratorio, exámenes adicionales
- Prescripciones médicas, seguimiento ambulatorio y durante la hospitalización, entre otras



¿Dónde se realizó el estudio?

UK

QUEBEC

Epidemiology

Use of First- and Second-Generation Cyclooxygenase-2–Selective Nonsteroidal Antiinflammatory Drugs and Risk of Acute Myocardial Infarction

Frank Andersohn, MD; Samy Suissa, PhD; Edeltraut Garbe, MD, PhD

Objetivo: Evidenciar si los inhibidores de COX-2 de segunda generación (etoricoxib y valdecoxib) también incrementan el riesgo de IMA.

Metodología: Estudio caso-control anidado en una cohorte de 486 378 personas con al menos una prescripción de AINE entre 01/06/2000 al 31/17/2004. Se identificaron 3643 casos de IMA (aprox 4 controles x caso). Se estimaron RR de IMA asociado al uso de inh COX-2 de segunda generación.

Resultados

Etoricoxib estuvo asociado a 2.09 veces el riesgo de IMA (IC 95% 1.10 – 3.97) en comparación a aquellos que no recibieron AINES durante el primer año.

Rofecoxib (RR=1.29; IC95% 1.02 a 1.63)

Celecoxib (RR=1.56; IC95% 1.22 a 2.00)

Diclofenaco (RR= 1.37; IC95% 1.17 a 1.59)

Valdecoxib (RR= 4.60; IC95% 0.61 a 34.51)

TABLE 2. Risk of AMI Associated With Current NSAID Use

	Cases (n=3643)	Controls (n=13 918)	Adjusted RR (95% CI)*	Multivariate RR (95% CI)†
Nonuse‡	795 (21.8)	3265 (23.5)	1	1
First-generation COX-2–selective NSAIDs				
Rofecoxib	120 (3.3)	397 (2.9)	1.33 (1.06–1.67)	1.29 (1.02–1.63)
Celecoxib	111 (3.1)	306 (2.2)	1.56 (1.23–1.98)	1.56 (1.22–2.00)
Second-generation COX-2–selective NSAIDs				
Etoricoxib	16 (0.4)	34 (0.2)	2.02 (1.08–3.80)	2.09 (1.10–3.97)
Valdecoxib	2 (0.1)	2 (0.0)	4.26 (0.60–30.27)	4.60 (0.61–34.51)
Nonselective NSAIDs				
Diclofenac	393 (10.8)	1292 (9.3)	1.36 (1.17–1.58)	1.37 (1.17–1.59)
Ibuprofen	201 (5.5)	875 (6.3)	1.00 (0.83–1.21)	1.04 (0.86–1.25)
Naproxen	59 (1.6)	224 (1.6)	1.16 (0.86–1.58)	1.15 (0.84–1.58)
Other NSAIDs	354 (9.7)	1302 (9.4)	1.19 (1.02–1.39)	1.14 (0.98–1.22)

Values are numbers (percentages) unless stated otherwise.
*Adjusted for use of the other NSAIDs.
†Adjusted for use of the other NSAIDs, CHD, cerebrovascular disease, hyperlipidemia, hypertension, diabetes, rheumatoid arthritis, smoking, and body mass index.
‡Nonuse of any NSAID during the year before the index date.

Impacto del estudio PE en la regulación farmacéutica

Relación entre la FV y FE

La farmacovigilancia consiste en un sistema para monitorizar la seguridad de los fármacos en las poblaciones.

Generación de señales

↓

Detección temprana

↓

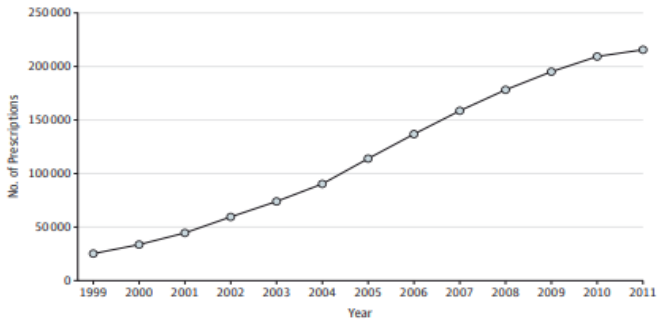
Confirmación de la señal

→ Farmacoepidemiología

FV Y FE

- Tramadol es un analgésico opioide débil de uso masivo mundialmente.

Figure 1. Prescribing Trends of Tramadol Hydrochloride in the United Kingdom Clinical Practice Research Datalink Between 1999 and 2011



- Reportes espontáneos de FV describen problemas de hipoglicemia en pacientes expuestos al producto.
- Se realizó un estudio de FV intensiva, encontrando casos de hipoglicemia que ocurrían dentro de los 10 días post-exposición al producto.

Original Investigation

Tramadol Use and the Risk of Hospitalization for Hypoglycemia in Patients With Noncancer Pain

Jean-Pascal Fournier, MD, PhD; Laurent Azoulay, PhD; Hui Yin, MSc; Jean-Louis Montastruc, MD, PhD; Samy Suissa, PhD

IMPORTANCE Tramadol is a weak opioid analgesic whose use has increased rapidly, and it has been associated with adverse events of hypoglycemia.

OBJECTIVE To assess whether tramadol use, when compared with codeine use, is associated with an increased risk of hospitalization for hypoglycemia.

DESIGN, SETTING, AND PARTICIPANTS A nested case-control analysis was conducted within the United Kingdom Clinical Practice Research Datalink linked to the Hospital Episodes Statistics database of all patients newly treated with tramadol or codeine for noncancer pain between 1998 and 2012. Cohort and case-crossover analyses were also conducted to assess consistency of the results.

Resultados

Table 1. Baseline Characteristics of Cases Hospitalized for Hypoglycemia and Matched Controls of the Primary Nested Case-Control Approach (continued)

Baseline Characteristic	Cases (n = 1105)	Controls (n = 11 019)
Type of pain and pain-related events, No. (%)[d]		
Headache	46 (4.2)	432 (3.9)
Neuralgia	16 (1.5)	78 (0.7)
Abdominal and pelvic pain	84 (7.6)	633 (5.7)
Musculoskeletal pain	343 (31.0)	3790 (34.4)
Other pain	100 (9.0)	909 (8.3)
Injury and/or trauma	82 (7.4)	704 (6.4)
Surgery	185 (16.7)	1354 (12.3)

[a] Cases and controls were matched on these variables, along with duration of follow-up.

[b] Calculated as weight in kilograms divided by height in meters squared.

[c] Measured in the year before cohort entry.

[d] Measured in the 90 days before cohort entry.

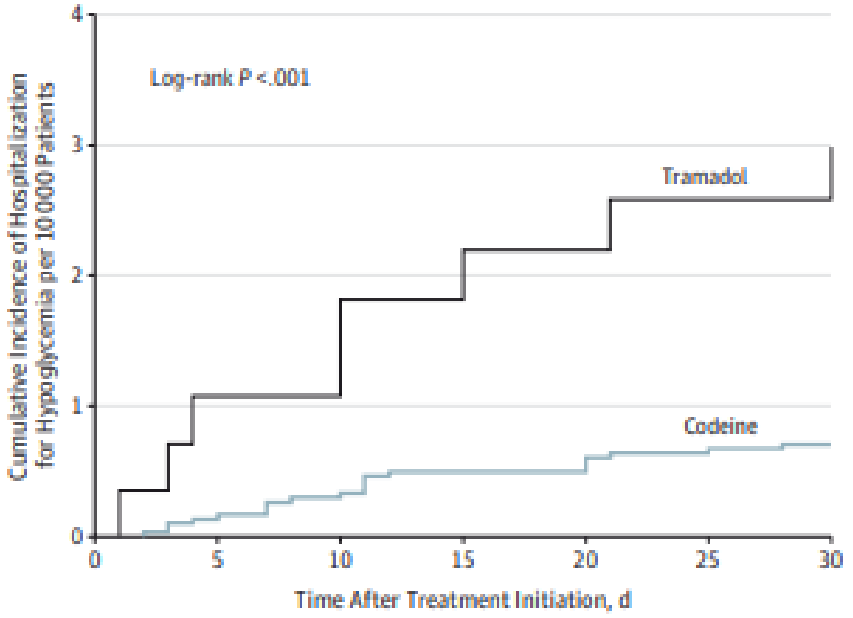
[e] Cells with fewer than 5 events are not displayed, in accordance with confidentiality policies of the Clinical Practice Research Datalink.

Table 2. Crude and Adjusted Odds Ratios of Hospitalization for Hypoglycemia Comparing Use of Tramadol With Codeine in the Primary Nested Case-Control Approach

Use[a]	No. (%)		Crude OR[b]	Adjusted OR (95% CI)[c]
	Cases (n = 1105)	Controls (n = 11 019)		
Codeine	192 (17.4)	1454 (13.2)	1.00	1 [Reference]
Tramadol hydrochloride	48 (4.3)	151 (1.4)	2.07	1.52 (1.09-2.10)
Time since first tramadol prescription, d[d]				
≤30	19 (1.7)	32 (0.3)	3.20	2.61 (1.61-4.23)
>30	29 (2.6)	119 (1.1)	1.68	1.17 (0.78-1.75)

Resultados

Figure 2. Cumulative Incidence of Hospitalization for Hypoglycemia in Patients Newly Treated With Tramadol Hydrochloride and Codeine in the First 30 Days After Treatment Initiation



RESULTS The cohort included 334 034 patients, of whom 1105 were hospitalized for hypoglycemia during follow-up (incidence, 0.7 per 1000 per year) and matched to 11 019 controls. Compared with codeine, tramadol use was associated with an increased risk of hospitalization for hypoglycemia (OR, 1.52 [95% CI, 1.09-2.10]), particularly elevated in the first 30 days of use (OR, 2.61 [95% CI, 1.61-4.23]). This 30-day increased risk was confirmed in the cohort (HR, 3.60 [95% CI, 1.56-8.34]) and case-crossover analyses (OR, 3.80 [95% CI, 2.64-5.47]).

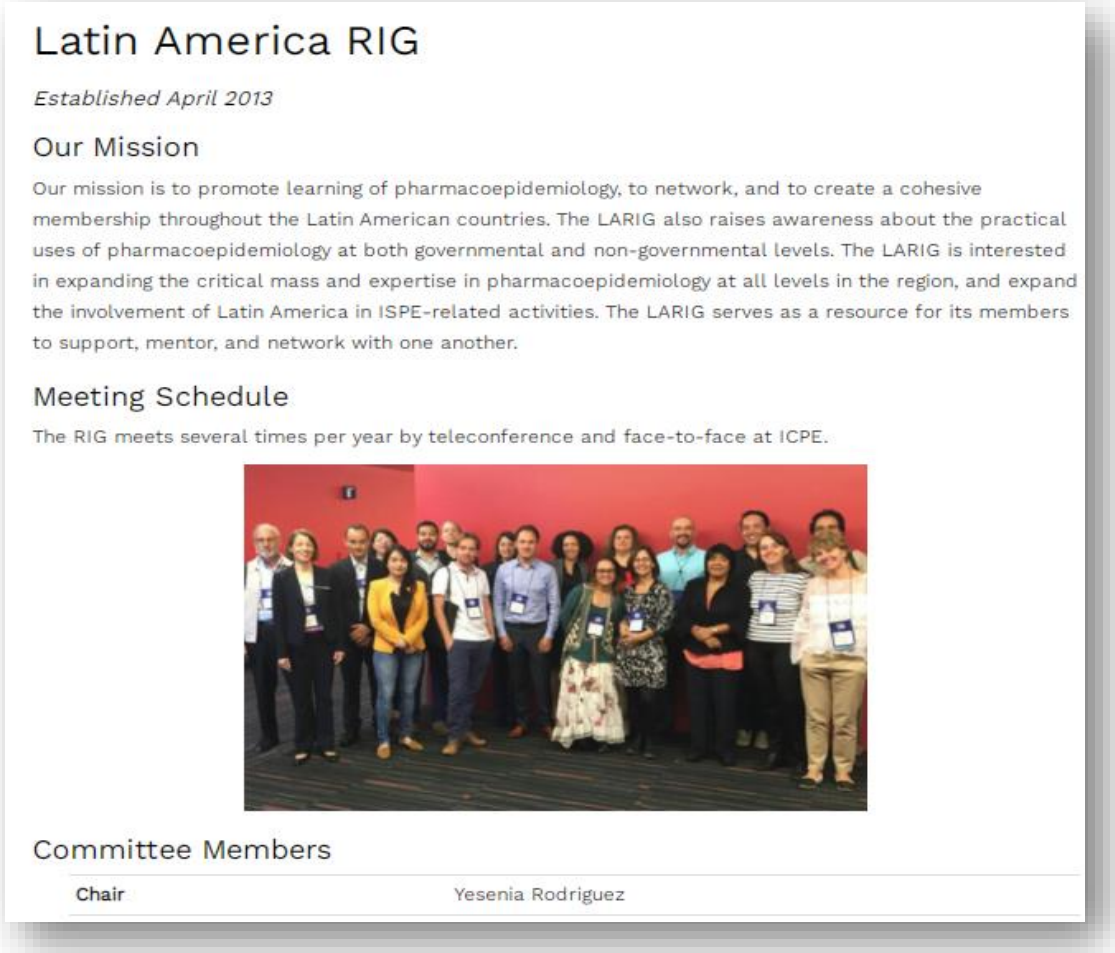
CONCLUSIONS AND RELEVANCE The initiation of tramadol therapy is associated with an increased risk of hypoglycemia requiring hospitalization. Additional studies are needed to confirm this rare but potentially fatal adverse event.

Futuro de la Farmacoepidemiología

- Aspectos cuantitativos es “challenging”
- Disciplina en crecimiento que integra la academia, industria y el gobierno
- Seguir contribuyendo con los pacientes en cuanto la seguridad y efectividad de los fármacos.
- Mejorar el uso racional de medicamentos, la adherencia al tratamiento, entre otras
- Incrementar la calidad de prescripción médica

ispe International Society for Pharmacoepidemiology

Latin American Regional Interest Group (LARIG)



Latin America RIG

Established April 2013

Our Mission

Our mission is to promote learning of pharmacoepidemiology, to network, and to create a cohesive membership throughout the Latin American countries. The LARIG also raises awareness about the practical uses of pharmacoepidemiology at both governmental and non-governmental levels. The LARIG is interested in expanding the critical mass and expertise in pharmacoepidemiology at all levels in the region, and expand the involvement of Latin America in ISPE-related activities. The LARIG serves as a resource for its members to support, mentor, and network with one another.

Meeting Schedule

The RIG meets several times per year by teleconference and face-to-face at ICPE.

Committee Members

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