EURO DURG bulletin

No. 8 January 2000

EUROPEAN DRUG UTILIZATION RESEARCH GROUP

Editors. *This issue was prepared by the following members of the Executive Committee of EURO DURG: Morten Andersen and Marit Rønning.*

EURO DURG in year 2000 and beyond – a summary of the planned activities

CPT 2000/EURO DURG joint symposium in Florence, July 2000

During the CPT 2000 (combined VII World Conference on Clinical Pharmacology and Therapeutics and 4th Congress of the European Association for Clinical Pharmacology and Therapeutics) in Florence, Italy, July 2000, there will be a joint symposium with EURO DURG (contents announced on page 6). Most important, the deadline for abstracts to the conference has been extended from January to February 15. Abstracts can be submitted electronically using the web.

EURO DURG General Assembly and joint session with ISPE in Barcelona, August 2000

The EURO DURG general assembly will be held on Sunday 20 August from 12:00 to 15:00 at the venue of the conference. An important issue will be the election of the Executive Committee. See the report of the Nominating Committee on page 6. The agenda of the general assembly will be published in the next bulletin.

The joint ISPE/EURO DURG day is on August 21. It will be possible to register for participation on this day only. The deadline for abstracts is February 25. It is recommended to make a note on the abstracts if they are intended for the joint session.

EURO DURG Scientific Meeting in the Czech Republic, 2001

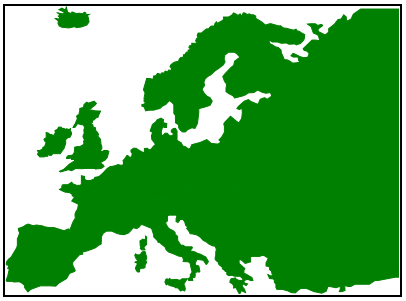
The Czech DURG has offered to host and organise the EURO DURG scientific meeting in 2001, in the last week of May or the first week of June. In contrast to earlier meetings, this one is not in conjunction with other scientific organisations (EACPT or ISPE). The meeting will be in Prague or in Hradec Kralove. In the next bulletin, exact dates, place and more details will be given.

EACPT/EURO DURG joint session in Odense, 2001

At the 5th Congress of the EACPT taking place in Odense, Denmark, September 12-15, 2001, sessions with the topics *quality indicators in drug use* and *drug use in the pediatric population in Europe* have been proposed.

The extensive and very interesting report from the EURO DURG meeting in Israel (page 2-5) makes it evident that the meeting was a success. The activities described above indicate that drug utilisation research will be a very active field also in the new millennium. Best wishes for year 2000 from the editors and the executive committee!

Morten Andersen



IN THIS ISSUE

Report from the EURO DURG Annual Meeting, Israel, 1-3 October 1999

Session 1. Clinical and Administrative Databases of Drug Use: Limitations in Content and Purposes.

Chair: Joerg Hasford, Germany
Reporter: Almar Grímsson, Iceland

Different Versions of ATC/DDD – Are Drug Utilisation Data comparable?

This presentation, by Marit Ronning from the WHO Collaborating Centre for Drug Statistics Methodology in Oslo focused on the importance of documenting clearly in publications which ATC codes and DDDs were used in the respective study. A review of 75 articles on drug utilisation revealed that 42 articles (56 %) gave no reference to which DDDs were used. There have been made important changes in drug groups during the last decade like for ACE inhibitors, lipid lowering agents and antidepressants. It was felt necessary to feed back to editorial boards of scientific journals the information on the fact that there are occasional modifications in ATC and DDD so they would be better aware when reviewing articles for publications.

Primary Care Prescribing of Lipid Lowering Drugs

John J. Ferguson from the Prescription Pricing Authority, United Kingdom presented figures from the UK estimating that the total cost of Coronary Heart Disease is about 2.5 % of the total budget of the National Health Service (NHS). Prescriptions for cardiovascular drugs are 5.8 % of the total number while they amount for 21 % of the total costs. Lipid lowering drugs account for 4 % of the total drug bill and the statins represent about 90 % of this amount.

There is quite a wide variation (2-fold) across the 100 Health Authorities in England in statin spending. However there seems to be no correlation between the CHD mortality and statin usage. There are also reported large variations between countries in Europe and as an example was mentioned a comparative study between an area in Italy and the island of Funen in Denmark.

Nonsteroidal Anti-inflammatory Drug Use and Colorectal Cancer

Frantisek Perlik from the Czech Republic presented a collaborative study between 7 European countries which has shown that the highest use of NSAIDs was in Finland and Austria but lowest in Hungary and the Czech Republic. In discussing the inhibitory effect of NSAIDs the Czech study group examined data on the mortality of Colon Carcinoma which indicate an increase in both Hungary and the Czech Republic. The authors claim that there is partial correlation between NSAID utilization and this increase. It was questioned whether the use of death rates as an end point was appropriate and also pointed out that there are too many variables to draw a conclusion from NSAID use patterns in this respect.

What predicts the Number of Different Drugs prescribed in General Practice

Lars Bjerrum from Odense University in Denmark described the Odense Pharmacoepidemiological Database (OPED) briefly. It covers the prescriptions of approximately 300 General Practitioners serving 470.000 inhabitants and covers only reimbursed drug prescriptions. The overall prescribing scenario is that there are available around 8000 diferent drug codes (drugs, strengthts, forms, package sizes), many synonyous brand and generic products and detailed reimbursement rules. It seems that in general the formulary concept where individual practices choose specific drugs for prescribing works in Denmark. There are though considerable variations and it was found generally that busy practices prescribe a greater variation of different drugs. It was stated that there is a correlation between the risk of complications and the number of different drugs prescribed and accordingly it is an issue of quality to work with a limited number of drugs in the practice setting.

What did we learn from Asthmatic Children? A Qualitative Analysis of Asthmatic Children Accounts on Health and Disease

Emilio Sanz from Tenerife, Spain presented a welcomed and excellent example of a qualitative study on the perspective of the user of drugs. An account was given on the ASPRO study which is an ethnographic study of 30 children aged 7-12 with moderate to severe asthma. This study with the spoken words and graphical input from the chlildren enrolled in the study indicate a high degree of knowledge and autonomy of the children and within the families.

Session 2. Collecting Qualitative and Quantitative Data on the Use of Antibiotics for International Comparisons. The DUR Response.

Chair: Almar Grimsson, Iceland
Reporter: Ulf Bergman

The chair initially referred to the emerging resistance problems in Europe and to the EU conference on "The Microbial Threat" held in Copenhagen 1998, with recommendations much in line with the aim of EURO DURG.

The Use of Antibiotics and the Cultural Context: a Comparative Study in Flanders and the Netherlands

Reginald Deschepper, Department of Anthropology, University of Gent, Belgium presented an explorative anthropological investigation in culture-specific opinions about illness and medications in a Flemish (Belgium) and a Dutch city, 60 km apart but in different countries and with remarkable differences in the use of antibiotics in tonsilitis/otitis media; high in Belgium and relatively low in the Netherlands. Families and GPs very interviewed in both countries about their health attitudes and disease management. Important differences were found in the attitudes to illness and medicines. While the Dutch tended to let nature run its course, the Flemish believed in medications. To be successful, attempts to improve antibiotic use has to take these differences in attitudes into account.

General Practitioners' Prioritisation when Infections are on the Agenda

Interviews were also conducted in Iceland. Ingunn Björnsdottir reported from 10 GPs perceptions of their roles with respect to antibiotics and infections and their priorities. Patient autonomy was ranked higher than patient welfare. The primary aim for the GPs was to help

people to go on with their everyday life. Patient pressure was often a factor behind antibiotic prescribing. The GPs were not quite comfortable with their prescribing. However, it reflects a balance between practical and scientific considerations, considerations also to be taken into account when antibiotic prescribing is being evaluated.

Antibacterial Drug Consumption in Norway 1998 - Therapy trends for in and outpatients

Hege Salvesen Blix, from the WHO Collaborating Centre in Oslo, presented a paper on the use of antibacterial drugs in Norway. Since 1973 a gradual increase was seen in the total use use of antibacterials (from 11 to 14 DDD/1000 inhabitants/day in 1998). Use of systemic antibacterials (J01) in Norwegian hospitals corresponded to 7,5% of the total use (a figure in agreement with the 8% hospital use seen in Sweden). The pattern of antibacterial use in Norway, a country with "no" resistance problem, is interesting: penicillins were dominating the use both in hospitals and in primary care and antibacterials such as cephalosporins and aminoglycosides were mainly used in hospitals.

Antibacterial Drug Use and Antimicrobial Resistance in University Hospitals in Vilnius and Stockholm in 1997

The complexity of hospital antibacterial use and resistance was illustrated by a comparison between the university hospitals in Vilnius, Lithuania and Huddinge, Sweden presented by Jolanta Gulbinovic from Lithuania. In Vilnius, the antibacterial use (number of DDD per 100 bed-days) was only about one third of that seen in corresponding departments in Huddinge. However, for most isolates the antibacterial resistance was much higher in Vilnius. This is in line with other findings suggesting that the resistance seen in hospitals may be more influenced by community use than use in the hospital.

In conclusion, this was a well balanced session with papers illustrating anthropological aspects of antibacterial use as well as the complexity of antibacterial resistance.

Session 3. Variability in Prescribing: the Value of Small Area Research.

Chair: John Ferguson
Reporter: Frantisek Perlik

In the opening part of this tutorial session, John Ferguson summarised the history and organisation of the Prescription Pricing Authority. He informed that drug cost trend development resulted in creation of the national prescribing database having the aim to provide a timely and accurate information for managing the prescribing budgets.

His report further concentrated on an analysis of cost development in antibiotics, ulcer healing drugs, analgesics and statins. The work has identified significant health authority variation in almost every area of prescribing. For example it is interesting that there was only little correlation between coronary heart disease mortality rates and statin spending. At present Prescription Pricing Authority drives to target the use of drugs to those at greater risk, and so maximise the health gain.

Session 4. Research Methods in evaluating Efforts to improve Prescribing Quality

Chair: Flora M Haaijer-Ruskamp and Nick Freemantle
Reporter: John Ferguson

Study Design and Analysis in evaluating the Impact of Educational Interventions

Nick Freemantle from the UK identified the key questions around the issues of randomisation, the unit of analysis, analysis plan and the statistical power. He emphasized that randomisation is always appropriate and the rationale for this is that differences will always appear by chance. National guidelines implementation programmes needed national databases and analysis such as PACT to identify trends and patterns of prescribing. Under the unit of analysis, four questions have to be asked. Randomisation, intervention level, main outcome and major factors. Turning to the statistical power, an assessment has to be made as to how good it is and that is done by querying the sampling error, the change over the time and changes resulting from any intervention. The analysis plan then follows the above.

His take-home messages were:-

- Don't blindly apply inappropriate methods designed for other purposes.
- Randomise when possible - to have an easy life!
- Think about relevant unit of analysis and base design on this
- If trying to influence practices, analyse at that level.

Innovative Use of Prescribing Data as Meaningful Feedback on Asthma Treatment

Following a short introduction on intervention, outcome and feedback by Flora, Per Lagerlov from Norway introduced his "matrix model" which gave doctors feedback on their asthma treatments in Norway. Using a 16-box matrix of inhaled beta agonists against steroids based on DDDs per day, 16 peer review groups marked the boxes as "acceptable" or "unacceptable", which was useful for group and individual feedback. Feedback tells the prescribing doctor what he does well and what he does less well. It seemed that this methodology was transportable across different areas and countries, but there remains the problem of defining the mid point.

Development and Reliability of Outcome Measurements

Flora introduced the types of outcome variables. Looking at prescribing outcome variables, she identified volumes, costs, cost-effectiveness and quality issues, either drug-specific or disease-specific. She talked about the operalisation of intervention in guidelines and formularies and reviewed what data was available and its accuracy and randomisation. Considering asthma guidelines in groups, for example initiating steroids to those getting bronchodilators 3 or more times per week and adherence grouping measured using the normal data set, she suggested that DDD ratios for children and adults could be developed, a ratio of the proportion of the patients using prophylactic therapy and specific ratios such as those patients receiving high-level short-acting beta-agonists over patients receiving short-acting beta-agonists.

Measuring Asthma Prescribing Quality in General Practice

Lisa Pont, the Netherlands, demonstrated the agreement between different prescribing indicators in asthma and comparing them with sub-optimal pre-

scribers in asthma. Using the 3 suggested outcomes by Flora and the use of long-acting beta-agonists without steroids, she went on to look at the validity of these measures, their sensitivity and specificity and identified the need for a gold standard based on clinical patient data. She looked at correlation using the Spearman analysis, the percentage agreement and the KAPPA on sub-optimal prescribers.

Her conclusions were that:-

- different indicators focus on different aspects of prescribing,
- low agreements are difficult to interpret, and
- validate using clinical patient data.

There followed a discussion on reliability on indicators for prescribing, the use of oral steroids for acute bronchitis, with or without asthma, the sensitivity and positive predictive value of ratios and feeling that they can detect asthmatic patients but not exacerbations.

In conclusion, Flora reminded us that lots of work can be done with prescribing data.

Session 5. Free Paper Session

Chair: John Urquhart
Reporter: Marit Rønning

Prevalence of Use and Risk Factors for Treatment with Antidepressants. A study in the Canary Islands

Emilio Sanz presented data from the "Canary Islands Health Survey 1996-97", a descriptive cross sectional health survey comprising 2228 persons. The prevalence of antidepressant (AD) use in the community was estimated and the relationship of AD use and selected demographic and health factors. The study revealed that 3.7% percent of the population over 14 had been using ADs in the month preceding the survey. 81% percent of these users reported daily use. The mean age of AD users was 53 years. AD use was more prevalent among women, elderly people and housewives.

The Use of Antidepressants

John Ferguson presented an overview of the use of antidpressants in the UK based on data from the national prescribing database. There has been a steep increase in the sales of antidepressants in the period 1994-1999 due to high and steadily increasing sales of SSRIs. The sales of tricyclic antidepressants (TCAs) still covers 50% of the total sales of antidepressants measured in DDDs. Measured in money, the percentage of TCA sales is much smaller. About 95% of the prescriptions for antidepressants are from general practitioners (GPs) which probably indicate that GPs also treat severe depression. The dosages prescribed, particularly for the TCAs are probably too low in the UK.

Cytomegalovirus (CMV) Infection in Single Solid Organ Transplants: need for Evidence-based prophylactic Strategies

Robert Vander Stichele from Belgium presented a very interesting retrospective study comprising 379 patients transplanted in Belgium in 1996. Positive CMV status was observed in 45% of donors and 52% of acceptors. Overall prophylaxis rate was 46% with very large variations between Centres. Within each group of CMV status, the use of prophylaxis showed no influence on the rate of CMV related complications. It was therefore concluded that the the prophylactic treatment strategies for prevention of CMV related complications in transplanted patients have to be reconsidered.

Low Use of Medications for Symptomatic Treatment of Alzheimers Dementia in Sweden 1999

Ulf Bergman, Sweden, presented figures from Sweden. Anti dementia drugs have been on the market in Sweden since 1995. The drugs are all very expensive with a very marginal effect. The geriatricians are very positive to the new agents since the effect is very good in the responders. The only problem is to find the responders, as the percentage is rather low (10%?). In 1998, the drug consumption of anti dementia drugs, i.e. tacrine, donepezil and rivastigmine, amounted to 0.4 DDD/1000 inhab/day. This corresponds to 3600 persons treated annually. The percentage of the population over 65 years in Sweden is 17%, and 2% is over 85 years (i.e. 190000). The annual treatment cost for one patient is 15400 SEK. The following treatment guidelines have been discussed: each patient should be treated in 3 months which is long enought to identify the responders. To follow this guideline would, however, increase the expences of anti dementia treatment enormously.

Prescription Pattern of Contraceptive Combinations Pills in Teenagers with Acne

Sam Rowlands from the UK presented this study with data from 1994 and 1997. Among teenagers with acne, the 3rd generations pill dominated in 1994. In 1997, the prescribing of 3rd generation pills had almost disappeared while levonorgestrel combinations have taken over. An increased prescribing of cyproteron combination products was also seen in 1997 as related to 1994.

Session 6. Drug Utilisation Research in Israel

Chair: Haim Reuveni
Reporter: John Ferguson

The Prescription Pattern of Oral Nitrates in Patients with Coronary Artery Diseases: Quality and Costs Aspects

Dr Elaid Aviram reviewed the history of nitrates and their acute and prophylactic uses. He looked at the two main nitrates, isosorbide mononitrate and and isosorbide dinitrate and in their standard and modified release forms. He raised the problem of nitrate tolerance and the importance of a daily drug free period. He was in favour of minimal division of the daily dose and ideally it should be given once or twice a day. Evidence from the British National Formulary indicated that there was no clear difference between the mononitrate and the dinitrate and so he went on to describe his compliance and cost study. Using the unit cost, the units per patient and the total cost per patient and the ratio of 1-1.5 for mono to dinitrate, he calculated the theoretical potential savings which indicated that there were big differences in cost if dinitrate was used. He described a survey using 8,007 patients, the majority being 75 year-old with a male:female ratio of 1. It seemed to indicate that patients only took 6-7 months of treatment in a year and was this due to a compliance problem. Current prescribing is 88% for mononitrate and 12% for dinitrate with a tendency for older patients to get the dinitrate. There appeared to be a 50% over-use of mononitrates and the outcome of this study indicated that there were substantial savings in costs, both to patients and the healthcare organisations, by switching to dinitrate.

The importance of such a study and such a therapeutic switch was:-

- because of longer life expectancy,

- optimal strategies including a nitrate free period and daily dose,
- younger patients get mononitrates
- over-use of limited resources
- 5% get combination therapy which is not logical
- need for clinical guidelines based on evidence-based medicine.

He left us with the question over whether this was due to hospital-led prescribing and marketing influences and whether our greater use of sustained release preparations may be justifiable to support a proposed change from isosorbide mononitrate to isosorbide dinitrate.

Establishment of a Drug Utilisation Database in Israel

Dr Eli Marom, Ministry of Health in Jerusalem, outlined the background to this proposal.:-

- Increasing costs 6-10% of GNP
- In 1996, 13% of healthcare spent on drugs in Israel
- No sick fund data currently providing 70% of care
- Partial information only from IMS
- New regulatory system with drug cost provision drug coding

He went on to indicate their initial thoughts on the establishment of a drug utilisation database which would be based on the British National Formulary. It could follow trends in prescribing using the generic drug description to include all proprietary preparations. The proposed database design would take the top 4,000 trade names with all generic products giving a trade and generic input to form the generic basis of this database. Questions were raised as to why the database was not ATC based. A new computer system would be needed, designed by Pharmacists, to develop generic group consumption of drugs with automatic transfer of trade names to generic tables. Pharmacy issues were to be the point of data entry and initially no patient data or diagnostic information would be captured. The HMOs have patient data, diagnosis and disease registers and issues of confidentiality around using this information were discussed. Currently, written prescriptions were not captured on their database. It was recognised that more information would be needed as time goes on and similarities were recognised with the original PACT system.

They hope to develop a doctor-user-friendly feedback system and this was needed to develop the potential of the new drug database. Trends and patterns of prescribing and geographic variation as in the UK would be useful, as would the longitudinal patient-based drug history as in Holland and in the USA.

Session 7. Poster session

Chair: Ulf Bergman

Poster session was organised as a guided tour chaired by Ulf Bergman. The following posters were presented:

E. Sanz: Drug Prescription in outpatients children. A comparison between Spain and Bulgaria.
S. Ratchina: Drug use in outpatient children in Russia.
O. Andreja: The use of antibiotics in hospital and in general practice in Slovenia.
V. Biba: Antiulcerants consumption in the Czech republic and in Hungary-Comparison with the incidence of gastric surgeries.
P. Solinova: Introduction of newly registered drugs as seen in consumption.figures in the Czech Republic.
R. Vander Stichele: Production and dissemination of information from national drug information center to physicians and pharmacists using Standard Generalized Markup Language and the New European Standard for Medicinal Product Identification.
H. Nordeng: Factors associated with consumption of analgesic/antipyretic drugs during pregnancy in parous Scandinavian women.

Session 8. Mapping Europe

Chair: Robert Vander Stichele and Micha Levy
Reporter: Frantisek Perlik

In a first presentation, R. Vander Stichele, and J. Van Campen, (both from Belgium) presented the Belgian INEMED project, in which modern document management techniques (Standard Generalized Markup language or SGML) are applied in the editorial system of the national drug register. Furthermore, the data model for Medicinal Product Identification (ENV 12610) was implemented to describe hierarchical levels of therapeutic classes, medicinal product groups, medicinal products, medicinal product packages and ingredients. Third, a transparent procedure to link medicinal product package correctly to the ATC was described. This procedure involves multidisciplinary cooperation between pharmacists and physicians and auditing by the scientific community as well as by the competent authorities. Forthly, a categorization scheme was presented to describe the legal status and the reimbursement status of drug on the market. Some examples were given of the possibilities of such an approach in analyzing the therapeutic arsenal of a country and to compare it with the drug lists of other countries.

In a second presentation, R. Vander Stichele gave a brief overview of a research proposal in the 5th Framework Research Program of the European Commission. The main objective of this project is to provide telematic solutions for the optimal dissemination of objective, independent medication information to health care providers and citizens in Europe. The data model for Medicinal Product Identification (ENV 12610) will be implemented to facilitate data exchange amongst National Drug Information Centres (DICs) and other interested parties for drug-Labelling, -Decision Support and -Utilisation Review. The project will use advanced Document Management System Techniques (SGML/XML):

a. to foster collaboration between the DICs within the Member States,
b. to organise transparency and harmonisation of drug labelling,
c. to ensure consistency of drug information for professionals and consumers all over Europe,
d. to enable efficient spread of independent drug information to health care professionals and citizens,
e. to integrate International Classifications Systems into European drug utilisation review systems,
f. to facilitate Evidence-Based Medicine in medical practice.

Session 9. Fundraising for International research

Chair: Kees de Joncheere and Flora Haaijer-Ruskamp
Reporter: Marit Rønning

This session was intended to be a "guide" for researhers on the different possibilities for funding of research. Kees de Joncheere presented WHO and their knowledge about different funding possibilities. Deanna Trakas from Greece, presented her experience with BIOMED for qualitative research. Flora Haaijer Ruskamp gave an overview of programmes in the 5th framework.

More detailed information from this session is avaiable on the EURO DURG website

Report from the Nominating Committee

Dear National DURGs in Europe, Dear individual EURO DURG members,

According to our constitution, the Chair and the Executive Committee of EURO DURG have to be elected every two years. The next elections will take place at the next EURO DURG Meeting in Barcelona, August 2000.

Elections of the Executive Committee are prepared by a Nominating Committee, consisting of Annemarie Hoffmann, Germany, Nicola Montanaro, Italy and Ebba Holme Hansen, Denmark.

To this purpose, National DURGs and individual members are invited to send their proposals of candidates to the Nominating Committee within the deadline of by the Europe Day 2000, i.e. Friday May 5th. In the June 2000 issue of EURO DURG Bulletin the names of the candidates for the 2000 election will be published.

When making their proposals, EURO DURG Members are invited to consider that:

a) All 11 Members of the Executive Committee (The Chair and 10 Members) have to be elected.

b) The members of the Executive committee should come from different European regions: to this regard, contacts among the National Groups belonging to the various Europeans areas (e.g. Northern, Southern, Central-Eastern Europe) are recommended, in order to put forward concerted candidates (different National Groups may agree on a common candidate).

c) Members who have served in a position for two consecutive terms i.e. 4 years, shall not be eligible for re-election for the following two terms, i.e. 4 years. This holds true for Flora Haaijer-Ruskamp, The Netherlands, Emilio Sanz, Spain, Ulf Bergman, Sweden, Frantisek Perlik, Czech Republic, Zsuzsana Szepezdi, Hungary, and Robert Vander Stichele, Belgium.

The Chair and the 10 Members of the Executive Committee shall be elected at the General Assembly by the delegates of each country present at the meeting on the basis of one country one vote.

Members from one country appoint their delegate and make this known to the Chair at the start of the General Assembly.

The election shall be by secret ballot. The country delegates will receive two ballot papers, one for the election of the Chair and the other for the 10 members of the Executive Committee; on this second ballot, the delegates will be asked to rank their preferences from 1 (first choice) to 10, in order to allow a weighted outcome.

Proposals should be sent to:
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CPT 2000 in Florence, Italy July 15-20, 2000 CPT/EURO DURG joint symposium A.3, Tuesday, July 18: Implementation of rational drug use in Europe

Chairpersons: *U. Bergman, Sweden*
N. Montanaro, Italy

- The introduction of new drugs in Europe through centralised procedure and mutual recognition: a cross-national study (*N. Martini, Italy*)
- Can we afford new expensive drugs? Different approaches do cost containment (*Flora Haaijer-Ruskamp, The Netherlands*)
- NSAIDs and the use of gastrointestinal protective agents in Europe (*N. D. Moore, France*)
- Impact of registration on antibiotic use: an Eastern Europe perspective (*R. Kiivet, Estonia*)
- Is it possible to change physicians' inapproppriate prescribing behaviour through feedback from prescription profiles (*J. Soendergaard, Denmark*)

CPT 2000
Abstract deadline February 15
http://www.newtours-cmo.it/CPT2000

16th ICPE
Abstract deadline February 25
http://www.pharmacoepi.org

EACPT 2001
http://www.sdu.dk/med/homepages/eacpt/eacpt5.html

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http://www.eurodurg.org/

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- **Read the back issues of the bulletins**
- **Read our mission statement**
- **Find updated adresses of board members**
- **Find out the latest about upcoming congresses**

16TH INTERNATIONAL CONFERENCE ON PHARMACOEPIDEMIOLOGY
Joint EURO DURG Meeting

20-23 August 2000

Hotel Princesa Sofia Inter-Continental
Barcelona, Spain

CONFERENCE ANNOUNCEMENT

The objective of this conference is to provide a forum for the exchange of information among researchers, medical care practitioners, health care administrators, the pharmaceutical industry, regulatory agencies, and other stakeholders on pharmacoepidemiological approaches to studying the efficacy and safety of pharmaceuticals. The conference will include invited lectures, workshops, submitted papers, and posters. There will be a joint ISPE/EURO DURG day on August 21, 2000.

DEADLINE FOR ABSTRACT SUBMISSION
February 25, 2000

The 16th Internal Conference on Pharmacoepidemiology (ICPE) is sponsored by the International Society for Pharmacoepidemiology (ISPE). ISPE is a nonprofit, professional society dedicated to advancing the science, methods, capacity, communication and public understanding of and support, for pharmacoepidemiology toward the goals of assuring, promoting and protecting the health of all persons using medications.

ISPE will be accepting abstracts electronically for the first time this year. Please visit our website at http://www.pharmacoepi.org for more information.

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An update of National DURGs in Europe

Chairs and/or contact persons also to be found on our web page:

http://www.eurodurg.org

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