OBJECTIVES: Modelling and forecasting the consequences of AIDS on economic growth in Africa.

METHODS: Our model is based on two crucial hypotheses: AIDS has a short-term impact on a flow variable (the flow of labour available and capable of working at a moment t in the economy); AIDS has a long-term impact on stock variables (human capital, i.e. the stock of health or the stock of education and competence incorporated in the workers; and physical capital). The first effect is generally taken into account in the existing literature but the second is missing. Data from Ivory Coast (data given by UNAIDS and WHO) about macroeconomic variables and epidemiologic situations are used to calibrate our model.

RESULTS: Integrating these two impacts in a model of growth with multiple factors of accumulation is sufficient to reverse the standard impact-evaluations based on classical tools. We show that, under a realistic range of epidemiological shocks, an involution trap can appear, corresponding to a modification of the long-term growth regime of the economy. CONCLUSIONS: When the long term impact of AIDS is taken into account, the impact of AIDS on economic growth in Africa is far worse than predicted by UNAIDS for instance. In Ivory Coast, the GDP loss is about 15% of the no-AIDS scenario in 2010 (against ~8% for the UNAIDS forecast).

PERSPECTIVES AND BARRIERS IN THE DEVELOPMENT OF PHARMACOECONOMICS AND ITS APPLICATIONS IN POLAND—PRELIMINARY RESULTS OF A SURVEY

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OBJECTIVES: To investigate the potential role of pharmacoeconomics in decision making and education.

METHODS: A group of 102 people with backgrounds in health economics/pharmacoeconomics was interviewed. Interviewees were students (23), medical doctors (28), pharmacists (36), managers/economists (22) by education, working in hospitals, outpatient clinics, pharmacies, and the pharmaceutical industry. They were asked about sources of information that should be used by decision makers at different levels of a Health care sector, barriers to practical application of pharmacoeconomic evaluation results, criteria for inclusion/exclusion of drugs in a hospital formulary, means by which economic evaluation utilization could become more common, needs for education initiatives. RESULTS: A total of 86% of responders indicated that expert opinion and 66% that articles in reviewed scientific journals are the most important source of information for reimbursement decisions. At management level, also expert opinion (77%) and scientific journals (65%) played a key role. In relations between pharmacist / physician and patient, personal opinion is vital (58%), followed by experts’ opinion (55%) and information from scientific press (50%). Limited interest in pharmacoeconomic analyses focusing only on cost-containment (77%) followed by lack of Governmental Agencies’ involvement in introduction of regulations (61%), difficulties in applying long-term view (57%) and limited access to cost data (lack of national cost database) (57%) were recognized as main barriers. On inclusion to hospital formulary, acquisition cost (70%) and efficacy (96%) were crucial, hospital savings were less important (50%). Wider use of pharmacoeconomic studies may be due to more educational initiatives (74%), creation of professional cost databases (72%) and transparent criteria of evaluation (69%). A total of 86% of responders declared the need to expand their knowledge. CONCLUSIONS: Education, cost databases and regulations seem to be the most important in the future development of pharmacoeconomics and health economics in Poland. Confirmation of these preliminary results requires broader investigation.

ARE THE RESULTS OF ECONOMIC EVALUATIONS GENERALIZABLE? EVIDENCE FROM STUDIES OF PHARMACEUTICALS IN WESTERN EUROPE

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OBJECTIVES: To identify the main causes of variation in study results from place to place, to assess whether the variation differs by type of health economic study, to assess whether differences among countries are systematic and whether the differences are important for decision-making. METHODS: A literature search was conducted to identify economic evaluations of pharmaceuticals conducted in two or more European countries. These included reports of multicountry studies and separate reports of single country studies that were sufficiently methodologically comparable. The studies identified were then classified by methodological type and analysed to assess their level of generalizability and to identify the main causes of variation. Assessments were also made of the extent to which differences in study results among countries were systematic and whether they would lead to a different decision, assuming a range of values of the threshold willingness-to-pay for a life-year or quality-adjusted life-year (QALY). RESULTS: In total 46 intercountry drug comparisons were identified, 29 in multicountry studies and 17 in single country studies that were considered to be sufficiently comparable in terms of methodology. The type of study (i.e. trial-based or modelling study) had some impact on generalizability, but a more important factor was the extent of variation across countries, in effectiveness, resource use or unit costs, allowed by the researcher’s chosen methodology. Cost-effectiveness results did differ widely between countries.
and in general such differences were not systematic (e.g. the result for Germany was not always more favourable than that for the UK). However, if a cost-effectiveness threshold (i.e. willingness-to-pay) for a life-year or QALY of $50,000 were assumed, the implications for decision-making would be similar across countries. CONCLUSIONS: It is concluded that, where the analyst allows factors to vary, cost-effectiveness results differ by country. However, the implications of such variation for decision-making depend critically on the cost-effectiveness thresholds applying in Europe.

**PHP5** HOW PHARMACOECONOMICS INDICATORS FOR THERAPEUTIC INNOVATIONS IN ACUTE AND CHRONIC DISEASE CAN ASSIST PAYORS IN THE DECISION MAKING PROCESS

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Therapeutic innovations are generating increasing pressure on health care budgets particularly for hospitals. Health care professionals are confronted with budgetary, ethical and equity issues when no explicit criteria for choice have been set by the community. Reviews of cost-advantage profile for costly innovations are rare. OBJECTIONS: This work seeks to analyse propensity and capacity of health systems to finance therapeutic innovations according to their cost/advantages profile. METHODS: A literature review was carried out. A series of therapeutic innovations addressing life-threatening conditions were identified between 1988 and 2003. They were selected according to: whether they were considered as innovations at time of their introduction into the market and their cost high. Forty-four publications in peer-reviewed journals were selected. Innovations were classified according to severity of the condition and the treatment impact on vital prognosis and survival. Reported costs were actualised to 2002 values. Common indicators across studies were identified. RESULTS: The cost per year of life saved (YLS) for breast cancer treated for combinations including paclitaxel in Europe varies between €7800 and €14000; at 5 years, the cost for trastuzumab/paclitaxel association is €23000 in UK. This is between €7000 and €14000 for ovarian cancer. Cost per YLS for myocardial infarctus treated by alteplase in France is €12000. It varies between €45000 and €79000 for implantable cardiac defibrillators. This cost varies between €10000 to €12000 in Europe and around €12000 in France for drotrecogin alfa (activated) (recombinant human activated protein C) for treatment of severe sepsis with multiple organ failure, recently launched in France. CONCLUSIONS: Pharmaco-economic indicators such as cost per YLS can assist payors in decision-making process when confronted with costly innovations in chronic and acute disease. A further step is to consider the budget impact, taking into account criteria such as incidence, prevalence, severity, and mortality.

**PHP6** RESEARCH 5539: COMPARISON OF ACTUAL COSTS AND DRG-BASED REIMBURSEMENT OF INTENSIVE CARE IN GERMAN ICUS

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OBJECTIVES: Financing of hospital services in Germany is presently transformed to a DRG-based system destined to derive 100% of the hospital revenue. The aim of this study is to determine whether the German DRG based reimbursement provides adequate coverage of actual costs of intensive care unit (ICU) patients. METHODS: Retrospective analysis of ICU length of stay (LOS) and direct cost data extracted from patients’ electronic records from the surgical ICU of the University Hospital Göttingen, Germany. Cost calculations performed for 1187 patients with LOS > 24 hours over a 24-month period (January 1, 2000–December 31, 2001). ICU reimbursement calculations based on the specific G-DRG according to the individual diagnosis and the fixed ICU proportion of the G-DRG reimbursement. Direct variable cost (consumables) were assessed bottom-up by means of a patient data management system. Personnel cost were calculated per day of treatment. Actual total costs were compared with the hypothetical DRG reimbursement. RESULTS: Total actual cost for ICU services was €5.58 million (mean per patient: €4697), while the corresponding DRG-based total reimbursement was €2.98 million (mean per patient: €513). The cost deficit was statistically significant (p < 0.001). Underfunding of the costs was evident in most DRG classifications, some with reimbursement deficits of over 80%. These differences showed a significant and negative linear correlation with ICU LOS (R = -0.593, p < 0.001). CONCLUSIONS: The computed G-DRG based reimbursement for ICU services differed significantly from the actual costs incurred. These findings highlight the importance of a more realistic and fair DRG-based reimbursement of hospital ICU services in Germany, particularly with respect to patients with extended LOS.

**PHP7** PHARMACOECONOMICS IN HEALTH CARE-DECISION MAKING: A SURVEY ON CHINA HEALTH CARE SYSTEM

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Abstracts