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BORDERS AND HEALTH IN EUROPE

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Abstract: In European countries, death is mostly caused by degenerative and chronic diseases, which are often called "diseases of civilization". It does not mean that communicable (infectious) diseases are not important anymore. For the last several years we could observe an alarming wave of new and "revive" sickness. This wave flows quicker than ever. The latest EU enlargement by new member states in Central (Eastern-Central) Europe is a reason for fear on public health. Citizens of the "old" EU are afraid of diffusion of communicable diseases from the "new" EU. The later ones worry about loss of their physicians and nurses. The aim of this paper is to give answers on these questions: Are these fears really put on facts? Is this problem unsolved?

Key words: medical geography, public health and communicable diseases, European Union

1. INTRODUCTION

"Health is a state of complete physical, mental, and social well-being and not merely the absence of diseases or infirmity" – the first major definition to present health as a positive entity, occurs in 1946 charter (preamble to the constitution) of World Health Organization (WHO). But this definition is an ideal, utopian. More useful seems to be the definition by Audy's J.R. (Meade M.S., 2000, 3): "Health is a continuing property that can be measured by the individual's ability to rally from a wide range and considerable amplitude of insults, the insults being chemical, physical, infectious, psychological, and social". The low ability of individuals to cope with these insults can bring, in result, some kinds of diseases (Figure 1).

In European countries (reach as well as poor), death is caused mostly by degenerative and chronic diseases, which are often call "diseases of civilization". It doesn't mean that communicable diseases (infectious diseases) are not important any more. In the last several years an alarming wave of the new and "revive" sickness appeared. This wave flows quicker than ever.

Communicable diseases – the term includes all diseases due to a specific infectious agent, which is transmitted from an infected host to a susceptible host, whether directly or not indirectly through an intermediary vector.

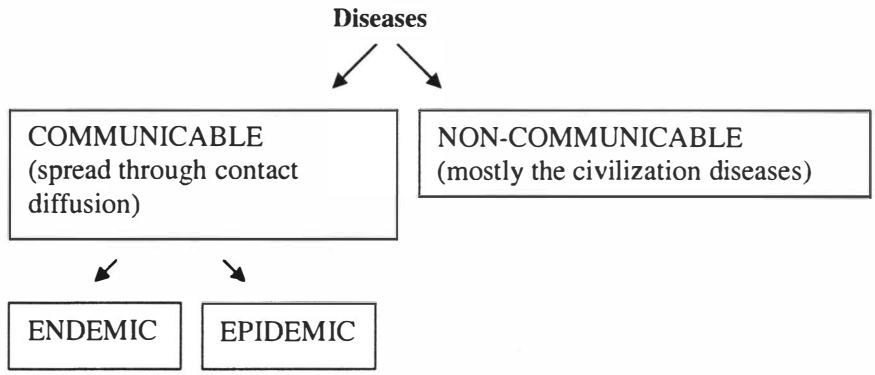

Figure 1 Health endangered by attack of diseases

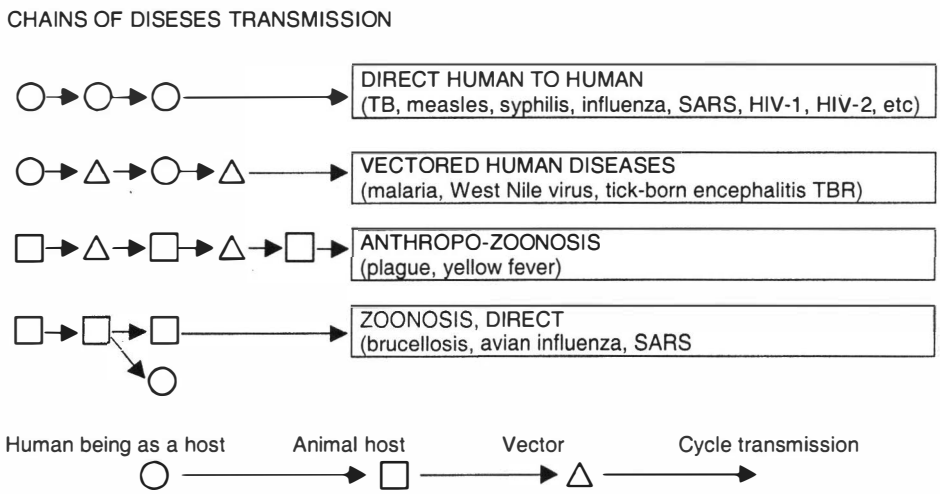

Figure 2 Communicable diseases (transmissible) Source: Meade M.S., (2000): Medical geography, The Guilford Press, New York (changed)

The geographical process of diffusion goes on constantly and affects many aspects of our lives. The diffusion of communicable diseases move both through population and over the space. In a space – diseases in Europe (as in another places) can come from different distance:

1. **Local**
   (endemic or epidemic in the country level)
2. Bringing from **"nearby" abroad**
3. Bringing from **"far" abroad** but generally inside Europe
   – EU states: old
   new
   – other than EU states
   members EU after 2007 (?)
   Commonwealth of Independent States
   others
4. "Imported" from **outside of Europe**

This has to be noticed that unparalleled in early ages mobility of people is responsible for numbers of diseases diffusion. Particularly less hermetic borders or their lack in region of European Union facilitate to short or longtime migrations. On the other hand different countries have divers level of public health (in broad sense) so it favour to transmission of communicable diseases. There are many trails of transmission of communicable diseases (Figure 3).

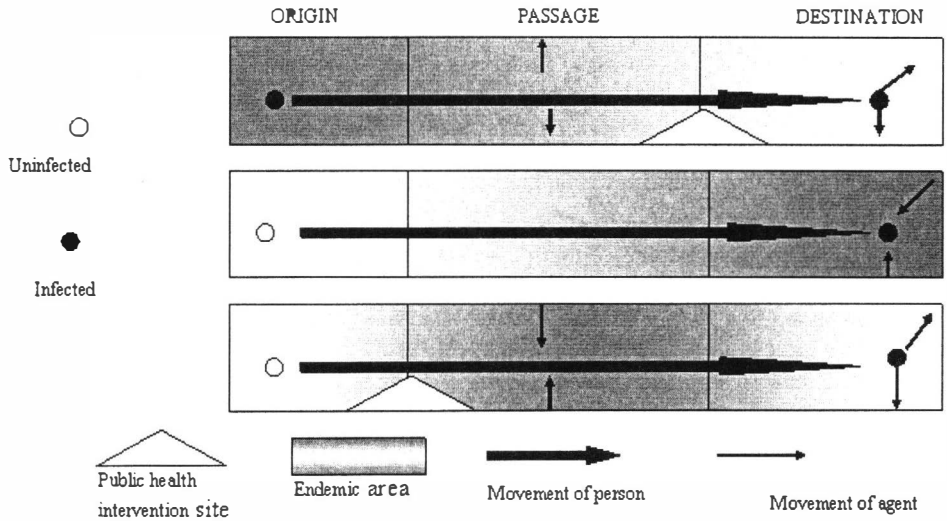

Figure 3 Mobility and diseases agent transmission. Source: Meade M.S., (2000): Medical geography, The Guilford Press, New York

Pathogens are not responsible for non communicable diseases (but at times is consider such assumption). They appear in a long time and exact source is mostly unknown.

Non communicable diseases – the term means all diseases due to a specific circumstances concern with "civilization": air and soil pollution, time stress and other type of stress, bad food habits, lack of social life, family disorder, etc. The term also include social diseases: diabetes, heart and coronary diseases, mental illness, etc. What is important: social diseases need long time of proper treatment and care.

2. BORDERS AND DISEASES

Last European Union enlargement and plans for continuation such processes create plenty of fears not only with movement of cheap man power, but also in case of public health. The health matter depress "new" and "old" EU states.

"Old" EU citizens and their governments are seriously afraid of health side effects of EU enlargement.

Western European fear in diseases matter:

- Communicable diseases are more common in the Central Europe (new EU states). The problem will move to the old EU states with mass migration (Brown H., 2004).
- Actually EU has wide border with East European Countries (CIS – Commonwealth of Independent States and others), where health systems are weak and society sick. There are exist vast migration from East to Central Europe (to new EU countries), what can be danger for public health (Coker R. et al, 2004).
- New EU states have STD problem (Sexually Transmitted Infections) as a result of geopolitical, social and economic changes in transition period.
- Problems will grow in 2007, when another quite poor countries will enjoy EU.

In details:

- The most danger is spread of TB and MDR TB, which is widely common in post communist countries: some of them became new member of EU, some of them are neighbours of new member EU. In opinion of Adolf Gallwitz, German police psychologist, "the German-Czech border is just the tip of the iceberg beyond lies Europe's largest open-air brothel" (Schlagenhauf P., 2003).
- Alarming is spread of HIV/AIDS, mostly by "imported" prostitution East European women (from out of EU) to new member EU states.
- Confusing is that new east border of EU could be not strong enough to be hermetic for movement of people and spread of diseases.

It has to be added that are real possibilities for come back of some diseases which are already eradicated in Europe, at least in "old" EU (Figure 4).

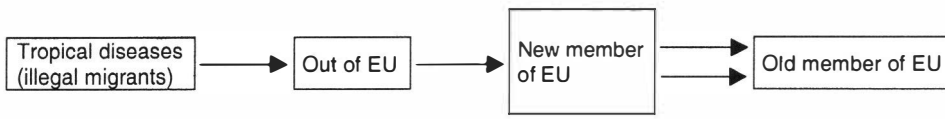

Figure 4 Direction of "imported" infections

Facts about possible spread of communicable diseases – East Europe

Fears of "old" EU citizens not always fit with the facts. Although it has to be admit that some of this view seems to be confirmed. In former Soviet Union conditions progressively remain those which characterized Third World countries. More frequent are cases of cholera, *typhoid fever, hepatitis,* dysentery, diphtheria, *tuberculosis* and sexual diseases. The driving force has been multiple use the same needles and syringes, mass migration, commercial sex work, lack of immunization and environmental pollution. Especially serious problem has been arise with TB (*tuberculosis*) and MDR-TB (Table 1). MDR-TB is a specific form of drug-resistant TB due to a bacillus resistant to at least isoniazid and rifampicin, the two most powerful anti-TB drugs. In Russia resistance level is 10 times higher than in the rest of Europe (world?).

All over the world in the end of ninetieth has been started new anti malaria action based on five elements of DOTS strategy: sustained political commitment, access to quality-assured TB sputum microscopy, standardized short-course chemotherapy to all cases of TB under proper case-management conditions, uninterrupted supply of

quality-assured drugs, recording and reporting system enabling outcome assessment. In East Europe only from 15 % cases (in Ukraine) to 54 % (in Romania) are covered by DOTS strategy. Compare to "old" EU, where in some countries DOTS strategy has covered 100 % cases (like in Germany, Austria, Greece) or 0 % (in France, Spain).

Table 1 Prevalence of *tuberculosis* in some East European countries *versus* some "old" EU countries (profile as of mid 2005)

Country	TB cases/100 000 persons (2003)	
Russia	160 (34 in 1991)	6% MDR-TB
Ukraine	135 (73 in 2000)	8,9% MDR-TB
Belarus	60 (80 in 2000)	2% MDR-TB
Romania	194 (130 in 2000)	2,8% MDR-TB
Bulgaria	47	–
Rep. of Moldova	178	–
Austria	16 (2000)	–
Belgium	12	–
France	12	0,3 MDR-TB
Germany	6,7 (13 in 2000)	0,9 MDR-TB
Greece	22	–
Great Britain	12	0,7% MDR-TB
Ireland	12	–
Italy	5,8 (9% w 2000)	1,2% MDR-TB
Spain	28 (59 in 2000)	0,3% MDR-TB

Source: WHO TB epidemiological profile as of 31-May-2005, www.who.int/globalatlas, 20.09.2005

Another health problem concerns HIV/AIDS epidemics, which in East Europe and Central Asia (consist one WHO Region) has changed rapidly last years. Despite data limitations, this region shows the fastest growth (excluding Africa South of the Sahara) in the world. At the end of 2004, between 920,000 and 2.1 million people in the region were living with HIV, compared with about 160,000 in 1995. Most countries in the region have low level epidemics, with less than 1 % prevalence among pregnant women and less than 5 % prevalence among high risk groups. The countries most affected are Ukraine and Russia, but in some opinion incidence is also increasing elsewhere (Table 2). Currently the US$ 150 million World Bank loan support Russia in fight with TB and HIV/AIDS.

The driving force in most countries has been intravenous drug use, also migration, commercial sex work, increasing rates of sexually transmitted infection, widening economic disparities, and risky behaviour among prison populations (Novotny T.E., 2005). It has to be added that in late 1990s 50 million people in eastern Europe were living on less than 2.15 US$ per day with most of them in Commonwealth of Independent States.

Rhodes and Simic (2005) about HIV/AIDS in East Europe and Balkan States mention: *"As national borders have been progressively opened, HIV risks have migrated across them along with people and goods, including illicit drugs. Civil society protections have not kept up with this globalization, nor have legal frameworks that consider members of vulnerable groups as criminals or social deviants. But people with HIV infection are not deviants: they are predominantly young (more than 80 % of new HIV cases occur in people younger than 30); they may be disenfranchised groups such as the Roma; they may be transport workers with sexually transmitted infection; and*

they are certainly heterosexual partners of intravenous drug users (the main bridge population)".

Table 2 HIV/AIDS in some East European countries versus some "old" EU countries (profile as of mid 2005)

Countries	HIV/AIDS (est. in % of population – 2004)
Russia	1,1 %
Belarus	0,2-0,8 %
Ukraine	1,4 %
Rep. of Moldova	0,2 %
Romania	<0,1
Bulgaria	<0,1
Austria	0,3 %
Belgium	0,2 % (60% cases non-Belgian, mostly sub-African)
France	0,4 %
Germany	0,1 %
Italy	0,5 % (20% cases non-Italian)
Spain	0,7 %

Source: WHO HIV/ADS epidemiological profile as of 31-May-2005, www.who.int/globalatlas, 20.09.2005

In Ukraine by DeBell and Carter (2005) opinion: poverty and wealth disparities create fatalism and hopelessness about social risks and the exploding HIV epidemic (Figure 5). Also a critical lack of investment in health systems and in effective national strategies to control the spread of HIV, corruption, trafficking, and stigma to isolate HIV outside the mainstream of health systems can't give too much hope to solve the problem soon.

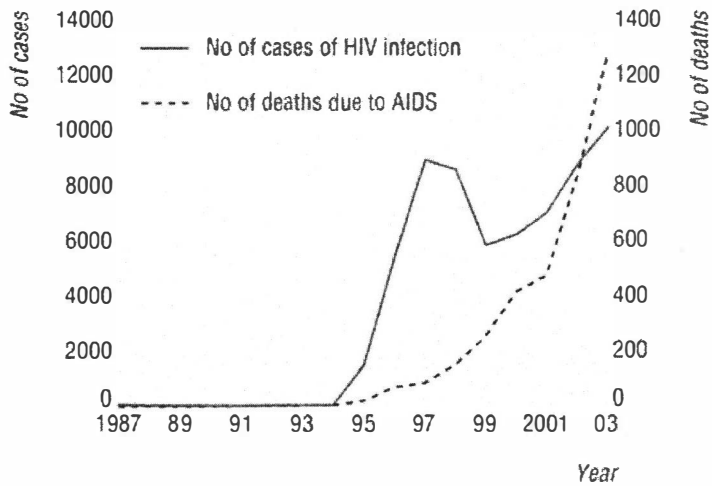

Figure 5 HIV/AIDS in Ukraine, 1987 – 2003. Source: DeBell D, Carter R. (2005):The impact of transition on public health in Ukraine: A case study of the HIV/AIDS epidemic, BMJ, 216-9

Serious problem goes from sexually transmitted diseases (STD), where syphilis is one of these. In Ukraine 148 persons on 100 000 are infected with this disease.

Facts about possible spread of communicable diseases – 'new' EU states

Some problems create increasing number of TB cases with high proportion of MDR-TB (14 % in Estonia, 9.4 % Lithuania, 9 % Latvia, 6 % Hungary) (Table 3). But in some countries like Czechia, Poland, Slovakia, Slovenia the proportion of MDR-TB are even smaller than in "old" EU (1.1 % Czechia and less than 1 % in others) (Enserink M., 2004).

Table 3 TB and HIV/AIDS in "new" EU states (profile as of mid 2005)

Countries	TB cases/100 000 persons	HIV/AIDS cases in % of total population
Czechia	12 (19 in 2000)	0.1
Estonia	54 (54 in 2000)	1.1
Hungary	40 (33 in 2000)	0.1
Latvia	80 (105 in 2000)	0.6
Lithuania	73 (99 in 2000)	0.1
Poland	34 (32 in 2000)	<0.1
Slovakia	29 (28 in 2000)	<0.1
Slovenia	22 (27 in 2000)	<0.1
Cyprus	4.4	–

Source: WHO TB epidemiological profile as of 31-May-2005, www.who.int/globalatlas, 20.09.2005; WHO HIV/ADS epidemiological profile as of 31-May-2005, www.who.int/globalatlas, 20.09.2005

Also the statistics concern HIV infection are clear, AIDS is much less problematic in "new" EU states than in "old" EU. STD diseases are serious only in Estonia (76/ 100,000 in 1997 and 21/100,000 in 2004) and in Czechia – Prague vicinity (9,4/100,000 in 2000 and 3-4/100,000 in 2004) (Resl V., et al, 2003; WHO..., www.who.int). Probably, some of "old EU" citizens know about that. A UNICEF report (in Catharine Schauer opinion) published in 2003 "details the plight of more then 500 sexually exploited children and a flourishing sex trade serving mainly German pedophiles and sex tourist" on Czech-German border. Children, from other "former eastern bloc countries such as Slovenia, Moldova, and Lithuania (..) are attractive because of reduced risk of AIDS and other diseases" (Schlagenhauf P., 2003).

3. BORDERS AND HEALTH SECTOR

Western European fear in health sector matter

- Some of "old UE" countries are afraid of mass immigration. UK in 2004 claim between 40,000 – 50,000 workers from East every year (partly because of better quality care in UK).
- West European countries have to secure health service for people with poor health from poor country...(Meek C., 2004).
- In realistic scenario reach countries (old UE) are push to financing underinvested health sector in post communist countries (new UE and others)).

Central European fears in health sector matter

- All countries are afraid to lose high skilled medical personnel (educated in public school), who will move to reach countries in "old UE".
- Czech health administrators see most pressing problems: 70,000 Slovaks working in the Czech and covered by Czech insurance companies and influx of pensioners from West because of lower cost living.
- Polish government see problem with immigration unwell workers from the East (out of EU) to the country.

New ideas of individuals in old EU states in health matter

- Patients from "old EU" are taking advantage of the EU open borders to stock up on cheaper medicines from neighbouring "new" EU countries. Mostly over-the-counter drugs, but also ...
- Patients from any 25 EU countries can present their prescriptions to pharmacies in any of the member states.
- Costs of dentistry, plastic surgery and spa treatment are much cheaper in "new" EU than in "old" EU. Middle class West patients move to the East for treatment.
- Long waiting list for surgery in some "old" UE countries push people to look for closer and cheaper possibilities in "new" EU hospitals.
- Or other scenarios: "old" UE citizens move to "exotic" countries for "operation with vacation"; "middle class Russians or Arabs who want good care but can't afford the Mayo Clinic might come to the Czech Republic" ((Spritzer D., 2004, 224); etc.

In details ...

- Some pharmacies in border regions (in Poland and Czech) reported sales of some over-the-counter medicines up 100 %.
- Growing parallel trade cost pharmaceutical companies 5 billion in lost sales and 2 billion in lost profit annually (European Federation of Pharmaceutical Industries Association). But besides new EU states, parallel traders are working in Spain and Greece.
- Prescription cost few Euro in "old" EU, and nothing in "new" EU. This type of cross-border trade still grow.
- Between 1 May-31 December 2004 to UK came 133.000 migrants from "new" EU.
- Probably "new" EU states lost 5 – 30 % physicians.

Objections

- Risk for patients who must buy drugs from unfamiliar locations.
- Patients can't read information concerning drugs in different languages (new EU states). It can be danger for them with dozes ...
- Difficulties to judge for pharmacist whether or not prescription issued in another country is genuine.
- Parallel trade "gives profit margins not to companies investing in research, but to entrepreneurs investing in warehouses and white vans" (Mathiew Worrall in Krosnar K., 2005).
- Reimbursement problems in country of origin after hospitalization in another country.

4. HOW TO SOLVE HEALTH SECTOR PROBLEMS?

Problems in health sector are not specific only for European Union. In 1992 National Institute of Medicine in USA brought epidemiological committee into being to answer a question: what intensify spread of communicable diseases in the country? The result of the work of committee was list of six causes (Karlen A., 1997):

1. Break-down of national health system;
2. Economic development and management of new area under agricultural cultivation;
3. Transnational trade and travel;
4. Technological upgrade;
5. Demographic and behavioral changes;
6. Adaptation of pathogens to changing of natural and social environment.

Taking to account that may be at least few of these causes are true also for European countries, this is important to undertake some solutions. Taking care of all this (six?) components in whole EU (country by country) are quite difficult and time-consuming. But we don't have much time. So at European forum has arisen idea of single market in health. Also in health! What does it mean? Legal battles are raging in the European courts as service providers fight national regulations in other EU countries that prevent them from establishing operations abroad. New Directive on Services has been designed to ensure that these companies (including health services providers) can operate freely in all member states (Rowland D., 2004; Neroth P., 2005). Incorporating health will mean EU countries must concede at least some power over national health systems to the Union. It will work? We don't know yet.

Any way probably the solution is to open borders broadly than to close them again. Sure that some countries or their citizens must loose a bit of their welfare. But the question is what is to win in this process? A peace?

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Granice a zdrowie w Europie

Resume

Przyczyną zgonów mieszkańców we wszystkich krajach europejskich są choroby upośledzające i chroniczne nazywane często chorobami cywilizacyjnymi. Nie znaczy to jednak, że już ostatecznie przestały nam w istotny sposób zagrażać choroby infekcyjne. Zwłaszcza w ostatnich latach można było zaobserwować niepokojąco rosnącą falę nowych i „wskrzeszonych" chorób. Ostatnie rozszerzenie Unii Europejskiej w maju 2004 roku wywołało także falę wątpliwości i obaw związanych ze zdrowiem publicznym, zarówno wśród starych jak i nowych członków Unii. Mieszkańcy krajów zachodnioeuropejskich, a zwłaszcza ich rządy prognozują, iż wraz z masową imigracją zarobkową ze wschodu na zachód Unii Europejskiej może do ich krajów powrócić na większą skalę gruźlica, choroby przenoszone drogą płciową oraz zwiększy się zagrożenie HIV. Nowi członkowie Unii obawiają się, że wyjadą z ich krajów wykształceni (na koszt państwa) lekarze i pielęgniarki. Ci ostatni trochę cieszą się, że mogą planować potencjalny wyjazd.

Wobec powyższych rozważań celem artykułu była próba odpowiedzi, czy obawy mieszkańców „starej" Unii mają odzwierciedlenie w faktach tj. sprawdzono stopień zagrożenia wybranymi chorobami zakaźnymi w państwach „starej" Unii, „nowej" Unii oraz w państwach graniczących na wschodzie z Unią Europejską. Zagrożenie gruźlicą, HIV i chorobami wenerycznymi w krajach sąsiadujących z Unią na wschodzie wydaje się potwierdzać. Występowanie tych chorób zwłaszcza wśród mieszkańców Rosji czy Ukrainy jest znaczne i ma tendencję rosnącą. Państwo wydaje się nie panować nad pogarszającą się sytuacją zdrowotną swoich obywateli. W grupie nowych członków Unii największe zagrożenie chorobami zakaźnymi (zwłaszcza gruźlicą odporną na tradycyjne leczenie) występuje w republikach nadbałtyckich, ale też i tam czynione są najsilniejsze staranie w celu poprawy zdrowia mieszkańców (przy znacznym wsparciu organizacji międzynarodowych). Na obszarze Polski, Czech, Słowacji, Węgier, Słowenii, a także i Rumunii zagrożenie gruźlicą jest znacznie mniej poważne, a HIV nawet mniejsze, niż w większości krajów „starej" Unii. Taka sytuacja prowokuje pedofilów i tzw. seksturystów do odwiedzania tych krajów w poszukiwaniu bezpiecznych kontaktów seksualnych (także z dziećmi).

Kolejnym celem pracy były próby oceny, czy rzeczywiście nastąpiła ucieczka wykwalifikowane kadry medycznej z krajów „nowej" Unii na zachód oraz czy mieszkańcy starej Unii w zupełności z nowej sytuacji w dziedzinie ochrony zdrowia nie są zadowoleni. Otóż wydaje się, że społeczeństwa krajów położonych blisko „nowej" Unii znajdują korzystne dla siebie aspekty, m.in. dostęp do tańszej opieki medycznej i leków. Tym samym spowalniając odpływ lekarzy i farmaceutów na zachód.