Polish and foreign specialists and observers agree in their opinion about the health crisis in Poland. The crisis is caused by many factors, but the most important are the following: First, a profound economic crisis causing poverty and the inability to meet the basic needs of a significant part of the Polish population; second, an ecological threat in major areas of the country inhabited by large portions of the population. The final factor is the faulty organization and functioning of the health services, with shortages of hospitals, especially specialized facilities, and a lack of basic medical equipment and supplies, such as syringes, needles, bandages and medicines. The Polish Senate, the upper chamber of the Polish parliament, has issued a statement that the Polish health care system is just one step away from complete collapse.

I will present some statistical data, but first of all I would like to say that Poland is a medium-sized European country with an area of about 312,000 square kilometers and a population of about 40 million people. The statistical data were supplied by the Minister of Health for 1988 and published in the Polish Government's 1989 Statistical Data Yearbook. Life expectancy for men in Poland is 67.2 years, in comparison with over 70 years in Scandinavian countries. Life expectancy for Polish women is 75.7 years, compared to 80 in Scandinavia. I would like to emphasize the great significance of the data I am going to present. Life expectancy for Polish 30-year-olds for women is 47.3 years, and for men 39.6 years. Poland has the worst index in the whole of Europe of excessive deaths among men of working age. This index is even worse than during the Second World War, when it was 40.6 years. This seemingly impossible figure is nevertheless true. Infant mortality in Poland in 1988 was 9,532 deaths, i.e., 16.1 deaths per 1000 live births. By comparison, the West German figure
in 1986 was 8.3, and in Sweden, 5.7. According to data published by the World Health Organization, Poland has the worst index of infants underweight at birth. This is the worst index in Europe, reflecting the health situation for both mothers and children. Poland has one of the highest death rates in Europe among children and young people. Fifty-two percent of all deaths in Poland are caused by circulatory system diseases. For this reason, in 1988 per 100,000 population, there were 449 male deaths and 529 female deaths. In 1986 in Poland there were 79,443 cases of tumors, i.e., 212.1 cases for each 100,000 of the population.

According to data published by Professor Mieczyslaw Chorazy, director of the Molecular Biology Institute of the Oncology Center in Gliwice, 68,000 people died in 1985 as a result of tumors, and about 77,000 new cases of tumors were registered in the same year. Professor Chorazy claims that the real number of new cases is higher by about 20,000 cases. In Poland during the last several years, we faced one of the highest increases in Europe of lung cancer and coronary diseases among men, and of breast cancer among women.

Let me now give detailed data published by the Ministry of Health in Poland with regard to diseases in 1988, as published in the 1989 Statistical Yearbook: Tuberculosis, 85, 918 cases, i.e., 227.4 cases per 100,000. Active tuberculosis of the respiratory system, 32,430 cases, i.e., 85.8 cases per 100,000 population. Passive tuberculosis of the respiratory system, 45,090 cases, i.e., 119.4 cases per 100,000 population. Tuberculosis of other systems and organs, 8,398 cases, i.e., 22.2 cases per 100,000. Dysentery, 11,321 cases, i.e., 29.9 cases per 100,000. Food poisoning, 40,979 cases, i.e., 108.2 per 100,000. Salmonella, 26,254 cases, i.e., 69.3 per 100,000. Chemical poisoning, excluding food poisoning, 10,040 cases, i.e., 26.5 per 100,000. Encephalitis, 4,847 cases, i.e., 12.8 cases per 100,000. Tetanus, 67 cases, i.e., 0.2 cases per 100,000. German measles, 1,005 cases, i.e., 2.7 per 100,000. Measles, 15,529 cases, i.e., 41 per 100,000. Encephalitis, 327 cases, i.e., 0.9 cases per 100,000. Prurigo, 11,741 cases, i.e., 31 per 100,000. Influenza, 628,690 cases, i.e., 1,660 cases per 100,000. Venereal diseases, in total, 10,177, i.e., 26.9 per 100,000. This number includes 1,305 cases of syphilis, i.e., 6.6 per 100,000. There were
also 7,687 cases of gonorrhea. The statistical data of the Ministry of Health indicate a significant increase in infectious diseases, especially diarrhea, among children, plus viral liver diseases and food poisoning. The Polish 2,000 Committee predicts a further increase in long-term diseases in Poland, as well as in psychoses, tumors, and the handicapped.

I would like to give some details about the reasons for this. The primary cause is the deep economic crisis that we inherited from 45 years of communist rule in Poland. There was a rapid increase in prices in Poland in 1988 and 1989, and in January 1990. According to the data published by the Polish main statistical office the following month, in January 1990 food prices rose 78.6 percent and the prices of services 149 percent, while non-food commodities rose 72.3 percent. An average monthly salary in Poland for five basic branches of industry in January 1990 was 616,900 zlotych (about U.S. $70).

It may be helpful to provide some data on what Polish and German workers can buy for one hour of work. For instance, a worker in West Germany works nine minutes to buy one kilogram of sugar, whereas the same worker in Poland works 108 minutes to earn the money to allow him to buy the same kilogram of sugar. The German worker works 42 minutes to buy one kilogram of butter; in Poland, 640 minutes. The German worker works 12 minutes to buy 10 eggs, while in Poland it takes 100 minutes. The German worker works six minutes to buy one liter of milk; in Poland, it takes 34 minutes. The German worker works 45 minutes to buy one kilogram of pork; in Poland, it takes 640 minutes. The German works 14 minutes to buy one loaf of bread; in Poland, it takes 25 minutes. The German worker works 11 hours to buy one pair of shoes; whereas in Poland, it takes 46 hours. The data I just cited were published by the Gdansk weekly Solidarność, November 5, 1989, and the German data are taken from the Aachener Nachrichten, September 22, 1989.

Consequently, it is no surprise that many Polish citizens are unable to meet their basic needs for food. One has to add that a significant portion of the population lives in unsanitary conditions. In the Upper Silesia region (two percent of Polish territory) where 4 million people
live, 200,000 people do not have running water in their apartments, 1 million people have no bathrooms in their apartments, and almost 2 million people lack central heating.

Let me turn to ecological trends in Poland. With respect to the ecological threat, Poland occupies one of the first places in Europe. Some relevant data follow. As a result of burning black coal and lignite, we have 4.3 million metric tons of sulphur dioxide emissions per year. Because of this pollution there are 27 ecologically threatened areas, inhabited by one-third of the Polish population, i.e., 13 million people. In order for Poland to develop normally, we will have to reduce sulphur dioxide emissions by about 50 percent. In mid-1988, according to the American newspaper Earth Island Journal, the Polish press listed Poland as possessing some of the sootiest cities in the world. Three out of the first four places were occupied by Polish cities; Zabrze, Katowice, and Wałbrzych. In some industrial sections of the cities in Upper and Lower Silesia we have incredible pollution, especially from sulphur dioxide and lead. According to an analysis carried out by the Warsaw Oncological Center in cooperation with Finnish specialists, in 1980-1985 the highest incidence of deaths caused by tumors or cancers was found in those regions where we have the highest environmental pollution. For instance, in regard to benzolene—a carcinogen—the concentration of this chemical in the Katowice region is dozens of times higher than in the cities of the Ruhrgebiet in Germany.

The results of research done at the Upper Silesia Medical Academy on industrial pollution should also be mentioned. The degree of pollution is given in so-called "minus points," one "minus point" meaning a level 100 percent higher than the norms for the given pollutant. The results are as follows: For the Katowice district, 3,000 minus points; for the city of Zabrze, 5,000 minus points. For the Legnica district, 950 minus points; the Krakow district, 790 minus points; for the Tarnobrzeg district, 530 minus points; for the Opole district, 450 minus points. Forty-five percent of the pregnant women in Upper Silesia display a pregnancy pathology, and 10 percent of all births are premature. Fifteen percent of the children of the region have posture defects, and almost 50 percent of all the children in Upper Silesia require active medical care. As an example of soil pollution I should add that in the immediate
vicinity of the Szopienice steel mill in the Katowice district it is possible to melt out five grams of lead from one kilogram of soil.

The second center of ecological threat in Poland is the city of Walbrzych and its surrounding area. The pollution emitted by all the coking plants in the Walbrzych area contains hydrocarbons including cancer-causing benzoalphapropyran in a concentration dozens of times higher than the norm, in some spots even several hundred times higher than the norm. The gases emitted also contain carbon oxides, ammonium, hydrogen sulphide and formaldehyde. Average life expectancy in the Katowice region is three years lower than in the rest of Poland, while in the Walbrzych area it is four years lower than the Polish average. Only one-third of 365 industrial plants in this area has cleaning equipment of any kind, and most of this equipment is inoperative or ineffective. Atmospheric pollution is far higher than the norms: sulphur dioxide is 56 times higher than the norm; hydrogen sulphide 29 times higher; formaldehyde 46 times higher; sulfuric acid 11 times higher. The level of dust in the air as a result of industrial emissions is 10 times higher than the norm. These data were published in the Solidarnosc weekly Niezalezne Słowo in Walbrzych, October 18, 1989.

Polish forests are also threatened. Professor Wierzbicki of Torun University stated during a lecture at the Polish Club in Boston in April 1989 that only 16 percent of all Polish forests could be described as healthy. The remaining 84 percent of Polish forests are threatened to a widely varying extent, from completely dead forests in the Izerskie Mountains in the Sudeten region and in Lower Silesia, to the first symptoms of diseases in the forests of the Tatra Mountain valleys or in the Bialowieza virgin forests in northeast Poland. According to predictions by the Polish Forest Research Institute, during the period 1990-2000 between 3.9 and 4.6 million hectares of forests will suffer damage, i.e., about 50 percent of the current forest area in Poland.

In addition, Polish rivers and lakes are very gravely polluted. Drinking water in Poland is disinfected only with chlorine and it is simply dirty. Water treatment facilities in Poland are inefficient and limited to mechanical treatment. Biological treatment for sewage is rarely used,
since there are very few biological water treatment facilities. Poland finds itself in a very
dramatic situation, confronted simultaneously with economical and ecological crises.
Inevitably there will be enormous problems in finding the resources to bring about an
improvement in the ecological situation.

Finally, the flawed organization of health care services is a major factor affecting the
standard of public health in Poland. According to the Polish Government Statistical Office, the
country has a total of 78,662 doctors, i.e., 20.8 doctors per 10,000 population. Many
Warsaw hospitals are overcrowded to the absolute limit of capacity. It is common to find
corridors filled with beds, dirty windows and cockroaches, together with a horrible smell of
urine. There is a shortage not only of health care facilities, but also of medical equipment,
chemicals, medicines, needles, and syringes. The distribution of doctors in Poland is very
uneven, and they have unequal access to medical experience depending on whether they are
located near those cities in which medical colleges are situated. In these cities there are 30 to 50
doctors per 10,000 population, while at the same time in eight other districts the number is
under 12. Professor Chorazy claims that if the government program for diagnosis and
treatment of tumors and cancers were implemented, about 20,000 persons per year would be
saved. Many cancer patients in Poland die while they are on the waiting list for a hospital bed.
If we take cardiac conditions, patients needing heart valve operations have to wait up to a year
for the operation.

The low salaries of Polish doctors contribute to the problem. In 1989, for example, a
junior doctor working as a hospital intern earned as much as a cleaning lady, or one-half the
average salary for Poland as a whole. Similarly, in 1989 the maximum salary for the director
of a large hospital or for a neurosurgeon was 80 percent of the average salary for five basic
branches of Polish industry. Indeed, a locker room lady at a Warsaw beach was making
slightly more money. The situation is even worse in regard to salaries for nurses and nurses' aides. It is not surprising that they are leaving the profession to take other jobs. Because of the shortage of nurses in three cities --Gdansk, Gdynia, and Sopot-- a total of about 300
hospital beds was vacant. A shortage of personnel in the hospital in Gdynia, which is a relatively large city with a population of 250,000, led to the closure of the lung disease and the children's orthopedics departments.

Another problem is the emigration of Polish doctors. About 2,000 students complete their medical studies every year. According to the weekly *Kobieta I Zycie* (Woman and Life) 2,500 doctors emigrated in 1988. The situation with regard to pharmaceuticals is dramatic. Hospitals simply cannot afford to buy them. For instance, in 1989 the principal manufacturer of pharmaceuticals in Poland, Polfa, received only one-third the normal number of orders. The Polish pharmaceutical industry is on the brink of bankruptcy because the government does not have the resources to pay for the medication needed by the population.

Rather than end on this bleak picture, I would like to say something positive about the situation. The new government led by Solidarity Prime Minister Tadeusz Mazowiecki has introduced a major reform program for health care services in Poland. Let me summarize this program. The government plans to tie health care services to a system of physicians' self-regulation by newly re-established medical boards called Doctors' Chambers. All health care facilities will be put on an equal footing and given the same rights. Decisions on the health care structure will be left to the medical boards or to independent local government authorities. The principle of the patient's free choice of his or her own doctor will be introduced. All health care facilities will be financially self-supporting. Services provided by health care facilities will have to be paid for by the patients. There is a plan to link the salaries of doctors and nurses to the amount and quality of their work. The whole system of government funding of health care provision is to be revamped. As a result of these reforms, there is a very good chance that there will be a significant improvement in the health care situation in Poland.