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AN INTEGRATED APPROACH TO HEALTH SERVICES AND MANPOWER DEVELOPMENT: THE EXPERIENCE OF POLAND

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Summary

Poland is situated in Central East Europe bordered by the Baltic Sea to the north, by the USSR to the north and east, Czechoslovakia to the south and west, and the Democratic Republic of Germany to the west. It comprises an area of 312 677 sq.km and has a population of over 34.5 million (December 1976). During the period between World War I and II the economy of the country was based primarily on agriculture. After World War II a new socio-economic policy stimulated development of industry and socio-economic reconstruction of the country. One of the main objectives of the new social policy was to develop the national health service system rendering services to the whole population of the country.

	1950	1960	1975
Population (thousand)	25 035	29 795	34 186
rural (%)	63.1	51.7	44.3
urban (%)	36.9	48.3	55.7
Annual rate of population growth (%)	1.9	1.5	1.0
Crude birth rate (per 1 000)	30.7	22.6	18.9
Crude death rate (per 1 000)	11.6	7.6	8.7
Infant mortality rate (per 1 000 live birth)	111.0	54.8	25.1
Number of doctors	9 200	28 700	58 226
Doctor-population ratio (per 10 000)	3.7	9.6	17.0
Number of nurses	18 400	61 900	129 690
Nurse-population ratio (per 10 000)	7.3	20.7	37.9
Number of hospital beds (thousands)	99.8	165.0	226.7
Bed-population ratio (per 10 000)	39.9	55.4	66.3
Number of out-patient clinics (in cities)	3 800	4 625	5 724
Number of rural health centres	820	1 320	3 085

Important decisions made for development of health services in Poland.

1945 - Ministry of Health appointed as the body with overall responsibility for organization and administration of national health services.

1951 - Medical and Pharmaceutical Faculties become Medical Academies under administration of the Minister of Health. Schools for nurses, midwives, sanitary instructors, and allied health personnel are also placed under the supervision of the Ministry of Health.

1954 - State Sanitary Inspection Act passed.
Sanitary-epidemiological services organized.

1956 - Organization of industrial medicine health services.

1960 - Minister of Health and Social Welfare appointed and charged with the administration of social welfare as well as rehabilitation and employment of invalids.

1971 - Medical care and medical aid available free of charge for entire rural population.

Introduction

History and Constitutional Basis of Health Services in Poland

The first general programme of social health service in Poland was outlined at the first plenary meeting of the National People's Council on 31 December 1943, in occupied Warsaw - while war was still raging. The following principles of health care were adopted according to this programme.

The State will ensure free and universal medical care accessible to all citizens by organizing high level social, scientific and professional medical institutions. The pharmaceutical industry will be nationalized. The control of epidemic and social diseases, hygienic working conditions, and mother and child care are obligations of the State. State medical publishers will supply the necessary medical books and journals.

The Manifesto of the Polish Committee of National Liberation issued in Lublin on 22 July 1944 declared health care to be one of the main points of the programme of the State, and on 22 February 1947 the Sejm (Parliament) of the Polish People's Republic proclaimed the right of all citizens to health care, mother and child care, social security, and to recreation after work. On 28 October 1948 the Act of Social Health Institutions was passed, which ensured all citizens the right to therapeutic and prophylactic care in the framework of the national economy.

Finally, Article 60 of the Constitution of the Polish People's Republic, passed by Sejm on 22 July 1952, stated:

1. Citizens of the Polish People's Republic have the right to protection of their health and to medical care in case of illness or inability to work.

2. The implementation of this right will be insured by:

   2.1 Social insurance of blue collar and while collar workers against illness, old age and inability to work, and various forms of social assistance.

   2.2 State - organized health care of the population by development of sanitary facilities, health promotion in towns and villages, improved working safety, hygiene, prevention and control of diseases, free medical care in hospitals, sanatoriums, dispensaries for ambulant patients, rural health centres, and care of invalids.

In Poland, therefore, by Constitution, the Government is responsible for protecting the health of the population. This has made it possible to provide the entire population of the country with accessible and skilled care, to create an extensive network of public health establishments, and to conduct scientifically based preventive, therapeutic and rehabilitative measures on a nation-wide scale.

Background Information on Poland - Geography and Demography

Poland located in central-eastern part of Europe has a land area of 312 677 km^2 and a population of 34 528 000 as estimated on 31 December 1976. Population density 110 per 1 km^2.

Between the World War I and II the economy of the country was based primarily on agriculture. Introduction of the new socio-economic policy and system starting

with 1945 stimulated the development of the industry and socio-economic reconstruction of the country as a whole. In parallel to the development of the industry the urban population increased in number and in proportion to all population of Poland.

During a 30 years period from 1946 to 1976 the population of Poland increased by 10.5 million and the proportion of urban population to the whole population also increased from 31.8% in 1946 to 56.4% in 1976 (Table 1). Since 1950 until 1976 the rural population decreased by 740 000 and the urban population increased by 10 200 000.

The crude birth rate relatively high in early 1950's, about 30 live births per 1 000 population, decreased to about 17 in 1970-72 and increased slightly again to 19.5 in 1976. The crude death rates oscillated between 7.6 in 1960 and 8.8 per 1 000 people in 1976. Relatively low death rates in 1960-1976 and the gradually decreasing infant mortality rates from 112 per 1 000 live births in 1947 to 24 in 1976 give the evidence of improving health state of the population (Table 2).

SOME DEMOGRAPHICAL DATA ON POLAND

Area: 312 677 sq km divided into 49 provinces

POPULATION IN POLAND (31 DECEMBER)
Table 1

Year	Number (Thousands)	Per 1 sq km	Urban (Per cent)	Rural (Per cent)
1938	34 850	89	27.4	72.6 (1931)
1946*	23 930	77	31.8	68.2
1950*	25 035	80	39.0	61.0
1960*	29 795	95	48.4	51.6
1970*	32 658	104	52.3	47.7
1975	34 185	109	55.7	44.3
1976	34 528	110	56.4	43.6

* Census data

BIRTH AND DEATH IN POLAND
Table 2

Year	Crude Birth Rate Per 1 000 population	Crude Death Rate Per 1 000 population	Infant Mortality Rate Per 1 000 Live Births
1938	24.6	13.9	140
1947	26.2	11.3	112 (1948)
1950	30.7	11.6	111
1960	22.6	7.6	54.8
1970	16.6	8.1	33.4
1975	18.9	8.7	25.1
1976	19.5	8.8	24.0

LIFE EXPECTANCY IN POLAND AT AGE 0
Table 3

1932/33 - 50.0 years: Males - 48.2; Females - 51.4
1952/53 - 61.5 years: Males - 58.6; Females - 64.2
1965/66 - 69.9 years: Males - 66.8; Females - 72.8
1970/72 - 70.4 years: Males - 66.8; Females - 73.8

The life expectancy at the age of 0 year has extended by 20 years from 1932/33 to 1970/72 and by 9 years from 1952/53 to 1970/72. The live expectancy at birth was 66.8 years for males and 73.8 years for females in 1970/72 (Table 3).

Development of the Health Services in Poland in 1945-1976

The Decree of the National People's Council of 11 April 1945 created the Ministry of Health but did not define the Minister's prerogatives, leaving them to the discretion of the Council of Ministers. The Council decided that the Minister of Health should elaborate the principles of the State's social health policy to which other ministers were obliged to conform.

The administration of the health services in the years 1945-48 was decentralized and rested in hands of many ministers. As a result of this, progress in development of health services was slow.

This was changed by the Act of 24 October 1948 which subordinated the health service and their administration to the Minister of Health who had the sole right to plan the health services and to supervise the execution of plans. Implementation of this phase lasted about five years.

The next important step was the Decree on State Sanitary Inspection, passed on 14 August, which expanded the Minister's duties to include supervision of sanitary conditions in man's environment, for example by establishing hygienic norm of pollution of the air, soil and water, surveillance from the sanitary point of view of investments and spatial planning, and sanitary inspection of the food industry. This decree created the foundation for a specialized sanitary-epidemiological service concerned with environmental health conditions, epidemic diseases, and organization of health education.

The last important step which shaped the present model of the social health services in Poland was the Act of 13 June 1960 which made the Minister of Health, instead of the Minister of Work and Social Welfare, responsible for matters of social welfare, rehabilitation of invalids, and alcoholism. After this reform, the Minister of Health was renamed the Minister of Health and Social Welfare.

The decisions contained in these enactments were followed by reorganization of the administration of health services, which were adjusted to the general administration of the Government. Until 1950 territorial administration was in the hands of the general administration. After 1950 this was taken over by the administrative agencies of the People's Councils at the provincial (voivodship) and county level. In 1950-1974 the country was divided administratively into 22 provinces including five independent cities, 390-396 counties and 2 365-6 331 townships with numbers varying from year to year.

In 1975 the administrative division of the country was changed by abolishing the county level in favour of a two level administration divided into townships and province - 2 345 townships, 813 towns, and 49 provinces. The health services administration was also affected by these changes. Most of the duties of the former

administration at the county level were assigned to the provincial level, although some, concerned with prophylaxis, therapy and rehabilitation, were transferred to the Integrated Health Service Institutions (hospitals combined with out-patient clinics and emergency departments) deployed on a regional basis in the new provinces. The county sanitary-epidemiological stations were also reorganized on a provincial and regional basis in the new provinces.

The development of the national health services in Poland can be divided into two periods. In the years 1946-1960, a tendency to vertical centralization prevailed in health services organization and administration. Subsequently, decentralization has dominated, with a tendency to integration of the health services with the social services, especially at the provincial and former county levels, and more recently in the form of the Integrated Health Service Institutions at the local level.

During the first period, the health service was divided into the separate specialized departments, such as the departments of hospital and sanatorium services, open health services (rural health centres, out-patient clinics) emergency services and industrial health. Within the framework of each of these departments, specialized sections were formed for mother and child care, tuberculosis, venereal diseases, diseases of the nervous system and so on. This system was characterized by a strong vertical orientation in administrative and functional respects, but rather loose horizontal co-ordination of various sections at central, provincial and county levels. This had a particularly unfavourable effect on the peripheral health services. The first rank physicians were deprived of the support of the highly fragmented county and provincial organizations, and patients suffered by being sent continually from one department to another.

However, a major achievement of the first period of development of health services was the dynamic development of the departments of mother and child care and industrial health. On the other hand, the primary health service was at a disadvantage and the position of the first line practising physicians was weakened. This was a major failure of this period.

The second period was marked by decentralization with the transfer of responsibility for professional decisions from the Ministry of Health and Social Welfare to the provincial and county levels. At the same time professional supervision was transferred from the ministerial offices and provincial health departments to specialized centres in hospitals, medical schools and research institutes.

At the central level, for example, supervision of mother and child care activities was transferred from the Department of Mother and Child Care of the Ministry of Health and Social Welfare to the Institute of Mother and Child; supervision of environmental medicine was transferred from the Ministry to the National Institute of Hygiene and of tuberculosis to the Institute of Tuberculosis; and supervision of oncology passed to the Institute of Oncology. At the provincial level, the respective responsibilities have been taken from the Provincial Health Departments by specialized provincial hospitals and out-patient clinics, and the whole system of professional supervision has been put in the hands of the Medical Academies.

The general objective of decentralization was to improve the effectiveness and efficiency of the comprehensive integrated health services. More specific aims were firstly, to improve co-operation and co-ordination between specialized and highly rated institutions, and secondly, to diminate bureaucratic methods in health administration. An important problem in the years 1965-1974 concerned co-ordination of the health service and the social welfare services and their administration at various levels.

The programme adopted in recent years has resulted in better co-ordination and integration of the health service and social rehabilitation of invalids by combining the forces of the health and social systems into a single system. Better co-ordination has also been achieved between the different departments of the health service created in the first period, such as the departments of hospital, out-patient health care and emergency service, leading to a solid foundation of community oriented basic health care. A major achievement in the last period has been also the co-ordination of the whole system of medical education and training of medical personnel with overall health services system.

Development of the Educational System of Medical Personnel

Intermediate Medical Personnel

After World War II, in the years 1945-1960, both the Ministry of Health and the Central Vocational Training Board were responsible for the training of intermediate medical personnel. To increase the availability of the health services more medical personnel were needed, and thus the medical schools were organized on a large scale. In 1945 the first nursing schools were established. Girls who had completed four years of secondary education or nine years of primary school were admitted for training, which lasted 2.5 years. There were also established 2 year schools for midwives and for paediatric nurses, and specialized schools for mental hospital nurses. However, the number of nurses was still unsatisfactory and in 1949 6-month nursing courses were organized in addition to nursing and midwifery schools. The 6 month nursing courses were later developed into 2 year schools for assistant nurses. After 1955, 2 year schools of nursing for graduates from secondary schools were organized, and in 1959, 4 year nursing schools on an advanced, secondary level were established. Persons who had completed a 9 year general education could be admitted for training. The students continued their general education and were given an opportunity to obtain a general education advanced level certificate as well as a professional nurse's certificate.

In 1950 the 3 year schools for medical assistants (feldshers) were created. Until 1959 about 7 000 feldshers were trained at these schools. In 1960 training of feldshers was, however, discontinued.

Since 1961, the medical vocational training system has been based on the Vocational Training Bill of Parliament which has set the basic rules for the whole vocational training system in Poland. According to this Bill, there are three types of medical schools for intermediate personnel, namely:

1. Basic Medical Schools for applicants that have completed an 8 year primary school education. The training lasts for 2-3 years and the graduates receive their professional certificate.

2. Advanced medical schools for applicants that have completed an 8 year primary school education. The training lasts for 5 years and the graduates receive both a professional nurse's certificate and a general education advanced level certificate.

3. State medical schools specialized in various directions for graduates from general secondary schools. The vocational education lasts for two or 2.5 years. These schools train nurses, midwives as well as medical technicians and other medical or social workers - altogether in 16 specialized fields that keep up with the development of health and social services.

In 1975/76 altogether 79 500 students were trained in various directions at 288 middle level medical schools. Over 17 000 students graduated from 425 faculties of these schools (Table 4).

TRAINING OF HEALTH SERVICES PERSONNEL IN POLAND
IN 1975/1976

Table 4

University Level Institutions

Medical Academies under the Ministry of Health and Social Welfare	- 10
Medical Academy under the Ministry of Defence	- 1
Number of Medical Faculties	- 13
Number of Stomatological Divisions or Institutes	- 9
Number of Pharmaceutical Faculties	- 8
Number of Nursing Faculties (Post Nursing Diploma)	- 4

Vocational Medical Schools

Number of schools	- 288
Number of faculties -	- 425
including nursing faculties	- 244
Number of students -	- 79 497
including nurse students	- 60 050
Number of graduates -	- 17 315
including nurses	- 10 538

Type of vocational training: nursing, midwifery, dentistry, pharmacy, medical electronics, medical analytics, medical electro-radiology, physiotherapy, occupational therapy, sanitary instructor, dietetics, biomechanics (prosthesis), school hygiene, stomatological hygiene, baby nursing, social assistant.

To enter the vocational medical school it is required to present a certificate of completed secondary education. The training programme in vocational medical schools and at all faculties lasts for two years except midwifery and psychiatric nursing faculties lasting 2 1/2 years and except school hygiene, stomatological hygiene, baby nursing and dietetician faculties lasting for one year only.

In order to maintain and improve the professional qualifications of teachers in vocational medical schools, the Intermediate Personnel Training and Development Centre was established in Warsaw in 1960. Since 1966 various branches of the Centre have been organized in fourteen main cities in Poland slowly developing during the recent years also in some other provinces. The main tasks and objectives of their activity are: to determine the post-graduate training policy, organize specialization courses, prepare the training programmes and the methodological guidelines,

training of teachers. It is also the role of the Centres to provide assistance and advice to all health service institutions on the problems of training the intermediate medical personnel.

Undergraduate Medical Education

During the interwar period and after World War II, in the years 1945-1950, academic medical education was the direct responsibility of the Ministry of Education, and the medical and pharmaceutical faculties were part of universities. In 1950, the medical and pharmaceutical faculties were separated from the universities and set up as independent schools, called the Medical Academies, answerable to the Minister of Health. The purpose of this reform was to make the education of health personnel a direct responsibility of the Minister of Health and to integrate the teaching hospitals into the general system of social health care and in this way make them accessible to the whole population. This was a matter of prime importance in view of the shortage of hospital beds throughout the country.

Medical Academies were created in the ten provincial cities of Bialystok, Gdańsk, Katowice, Kraków, Lublin, Łódź, Poznań, Szczecin, Warszawa and Wroclaw. Several years later the Military Medical Academy in Łódź, responsible to the Minister of National Defence, was established. In all these Medical Academies there were created 13 medical faculties, nine stomatological divisions or institutes, eight pharmaceutical faculties and in recent five years also four nursing faculties for graduates from nursing schools. At these faculties the nurses are trained at the university level (Table 4).

During the years 1945-1950 the number of graduates from Medical Faculties increased from 432 to 909 and during the years 1951 to 1968 the number of graduates varied from 900 to 3 900. The average number of graduates per year was about 2 200 and this level of Medical Faculties output continues until the recent years. An extensive programme of training physicians, dentists and pharmacists was reflected in development of medical personnel employed in growing number of health service institutions, and in particular in hospitals, out-patient clinics, rural health centres and sanitary-epidemiological laboratories (Tables 5, 6 and 7), (Figure 1).

Up to 1956 medical studies took five years, but an additional year of practice was then introduced, prolonging the study period to six years including one year of internship. Stomatological and pharmaceutical studies were prolonged from 4 to 5.5 years. In order to give young physicians the widest possible scope of theoretical and practical knowledge, after 1962 medical studies were prolonged to six years, and a compulsory two year period of post-graduate internship was introduced.

Simultaneously, a reform of the basic curriculum of undergraduate training was introduced to ensure more efficient education and also to adapt the educational system to the needs and requirements of the modern health service system and the progress in medical science and practice. The purpose of the new curriculum was to provide the community with services of highly qualified physicians. The reform of the medical curriculum started in early sixties in the Cracow Medical Academy and was introduced in all Medical Academies in Poland in 1965. From 1971 the post-graduate period of internship was reduced to one year only.

Post-graduate Education

After six years of undergraduate education and having passed the final examinations, the student is awarded the degree of Licentiate in Medicine (Physician) and starts working in the chosen place with one year of compulsory internship, comprising

INFORMATION ON HEALTH SERVICES DEVELOPMENT IN POLAND

Medical Personnel in Poland

Table 5

Year	Physicians		Pharmacists		Nurses	
	Number	Per 10,000 Population	Number	Per 10,000 Population	Number	Per 10,000 Population
1938	12,900	3.7	3,800	1.1	6,670	1.9
1946	7,000	2.9	-	-	-	-
1950	9,200	3.7	3,800	1.5	18,400	7.3
1955	18,373	6.7	6,276	2.3	49,278	17.9
1960	28,700	9.6	7,900	2.7	61,900	20.7
1965	39,600	12.6	10,100	3.2	77,000	24.4
1970	49,300	15.1	12,300	3.8	102,800	31.5
1975	58,226	17.0	14,496	4.3	129,690	37.9
1976	60,000	17.4	15,100	4.4	137,500	39.8

Medical Institutions in Poland

Table 6

Year	Hospitals No.	Hospital Beds		Out-patient Clinics in Cities		Rural Health Centres	
		No. (Thous.)	Per 10,000 Population	No.	Population Per 1 O.C.	No.	Population Per 1 R.H.C.
1938	632	69.4	11.9	-	-	-	-
1950	516	99.8	39.9	3,800*	2,530*	820*	18,800*
1960	653	165.0	55.4	4,625	3,066	1,320	11,870
1970	673	205.2	62.9	5,566	3,045	2,775	5,608
1975	682	226.7	66.3	5,724	3,287	3,085	4,929

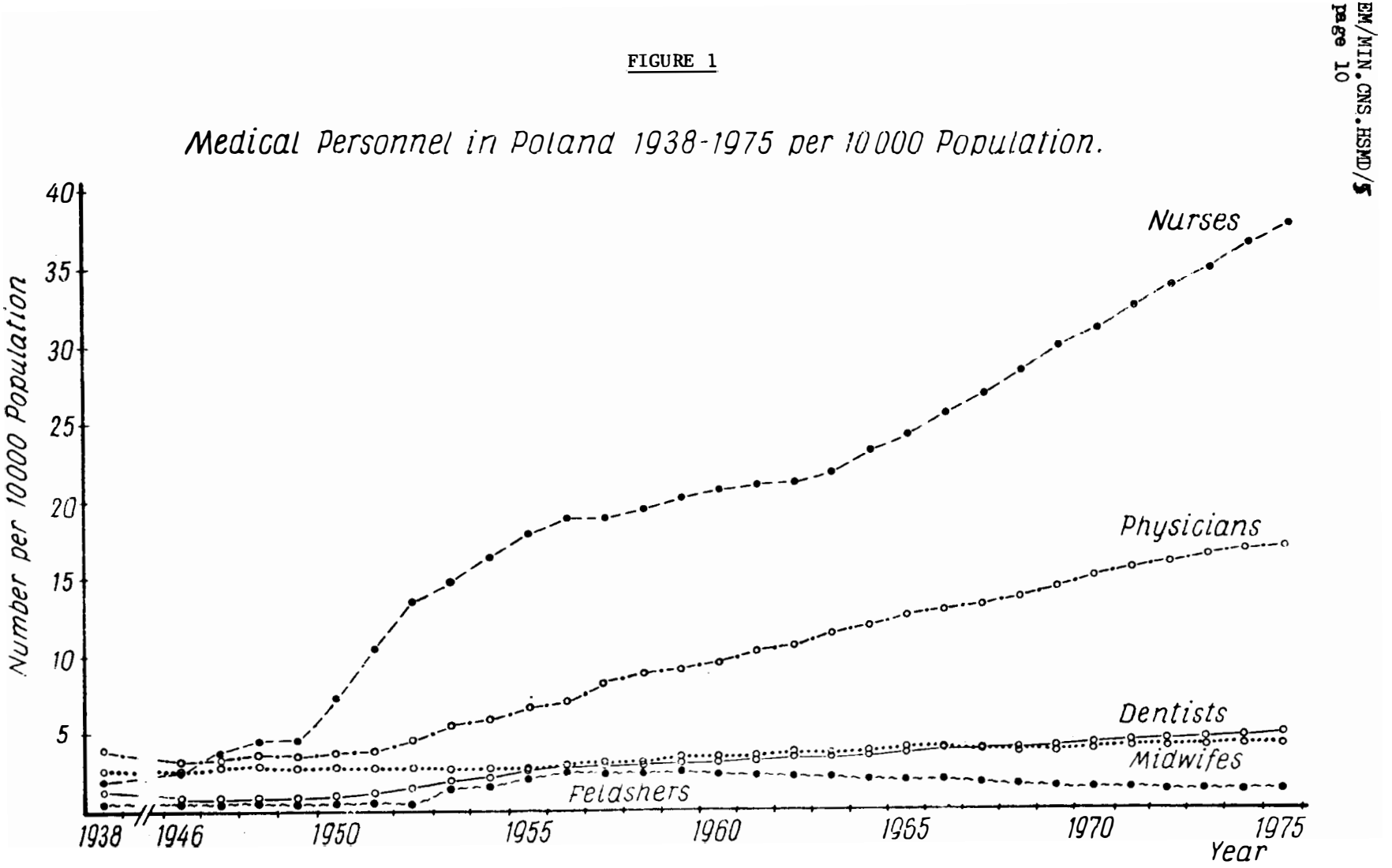
\- Data not available
* 1955 year

Emergency Service and Sanitary-Epidemiological Laboratories in Poland

Table 7

Year	Emergency Service Depts.	Sanitary-Epidemiological Laboratories	
		Provincial	Sub-provincial
1960	405	22	442
1970	420	22	390
1975	439	49	332

FIGURE 1


Medical Personnel in Poland 1938-1975 per 10000 Population.
Number per 10000 Population
40
35
30
25
20
15
10
5
1938
1946
1950
1955
1960
1965
1970
1975
Year
Nurses
Physicians
Dentists
Midwifes
Feldshers

three months in each of the following fields: internal medicine, paediatrics, surgery, and obstetrics and gynaecology, all under the supervision of specialists.

This one-year period of practical training is the first form of post-graduate education, and only after its completion can the Licence to Practice be awarded. The doctor can then specialize in his chosen medical discipline. The system of continuing education of health service workers with academic education (physicians, dentists) is illustrated in Figure 2. A similar, although less elaborate, system of post-graduate education exists for intermediate medical personnel. The system has been consolidated over the past five years. Cooperation with various sub-systems of health services has improved but there is still a long way to go.

The system of post-graduate continuing education favours introduction of new methods and resources and the practical application of results of biomedical and health services research.

In 1952 the Institute of Post-graduate Medical Education and Specialization was created in Warsaw with the task of organizing and co-ordinating post-graduate medical education throughout the country. In 1958 this Institute was incorporated into the Warsaw Medical Academy as a semi-independent unit called the Centre of Physicians' Training. This institution started by organizing basic and refresher courses, mainly in its own clinics and departments, and took care of the specialization throughout the country. Gradually more and more clinics and departments of other Medical Academies and Research Institutes became associated with the Centre and in the late 1960's conditions were prepared to found a system, which was formally established in 1970 by the Bill of the Government on the foundation of the Medical Centre of Post-graduate Education (MCPE).

The main task of the MCPE is organizing and co-ordinating post-graduate medical education of physicians, stomatologists and pharmacists throughout the country. The post-graduate training is conducted at the various departments of the MCPE, and at all the Medical Academies and Research Institutes answerable to the Ministry of Health and Social Welfare. The best regional hospitals and specialist out-patient clinics make also a part of post-graduate education system. Post-graduate training programme implemented and co-ordinated by the MCPE combined with post-graduate training programmes of all Medical Academies and Research Institutes as well as some provincial or regional integrated hospitals make one integrated system (Figure 3).

The Medical Academies have then five basic functions:

1. Training of health manpower (physicians, stomatologists and pharmacists), including that in the recently established Faculties of Nursing.

2. Post-graduate education of health service workers with academic degrees.

3. Biomedical research.

4. Professional supervision of the health services, especially specialized services such as internal medicine, surgery, obstetrics, gynaecology, paediatrics, ophthalmology and others in the region of the academy, including supervision of post-graduate education.

5. Rendering health care in cases requiring highly specialized qualifications, for examples, in neurosurgery, cardiosurgery or endocrinology.

FIGURE 2

Continuing medical education system in Poland.

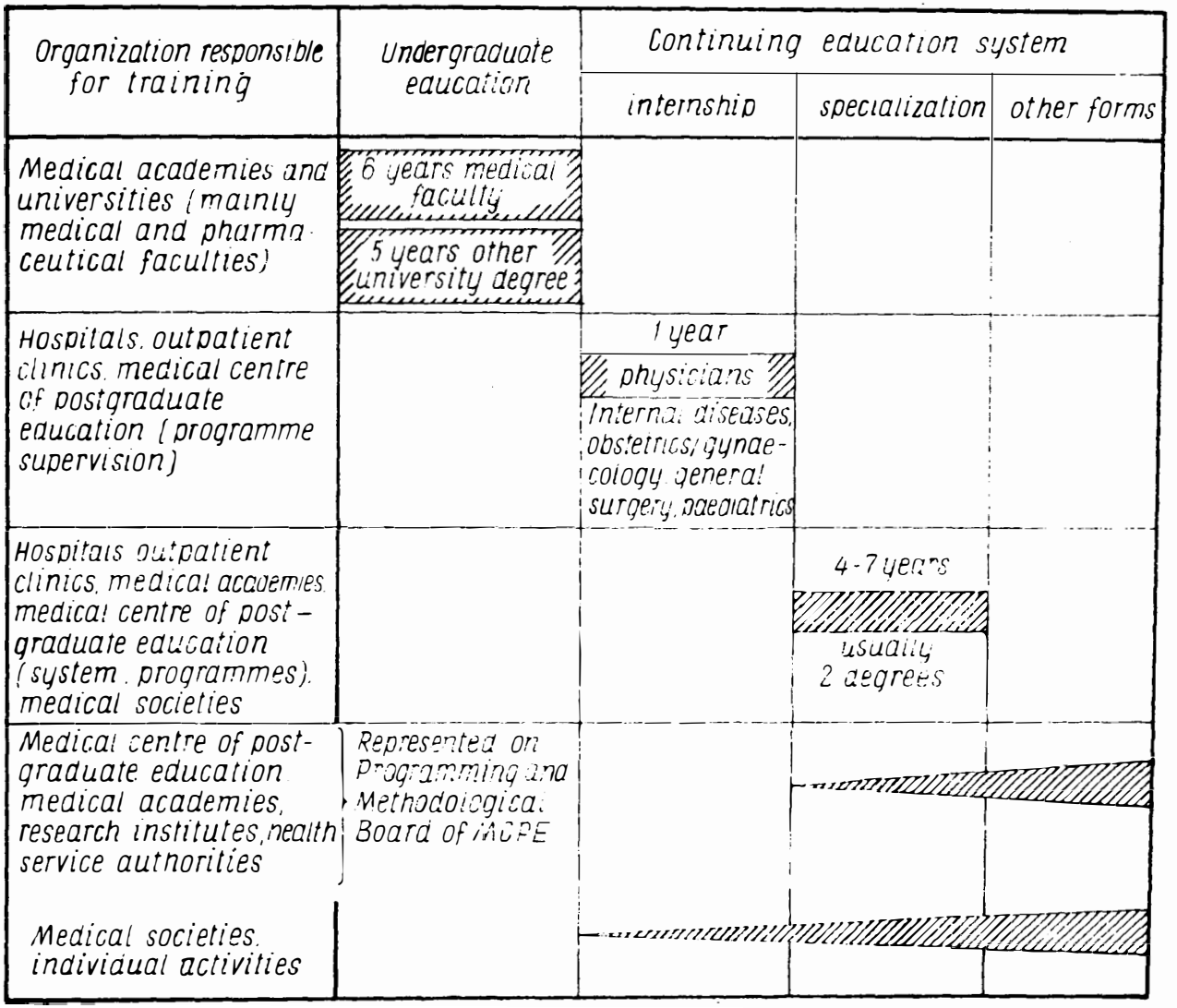
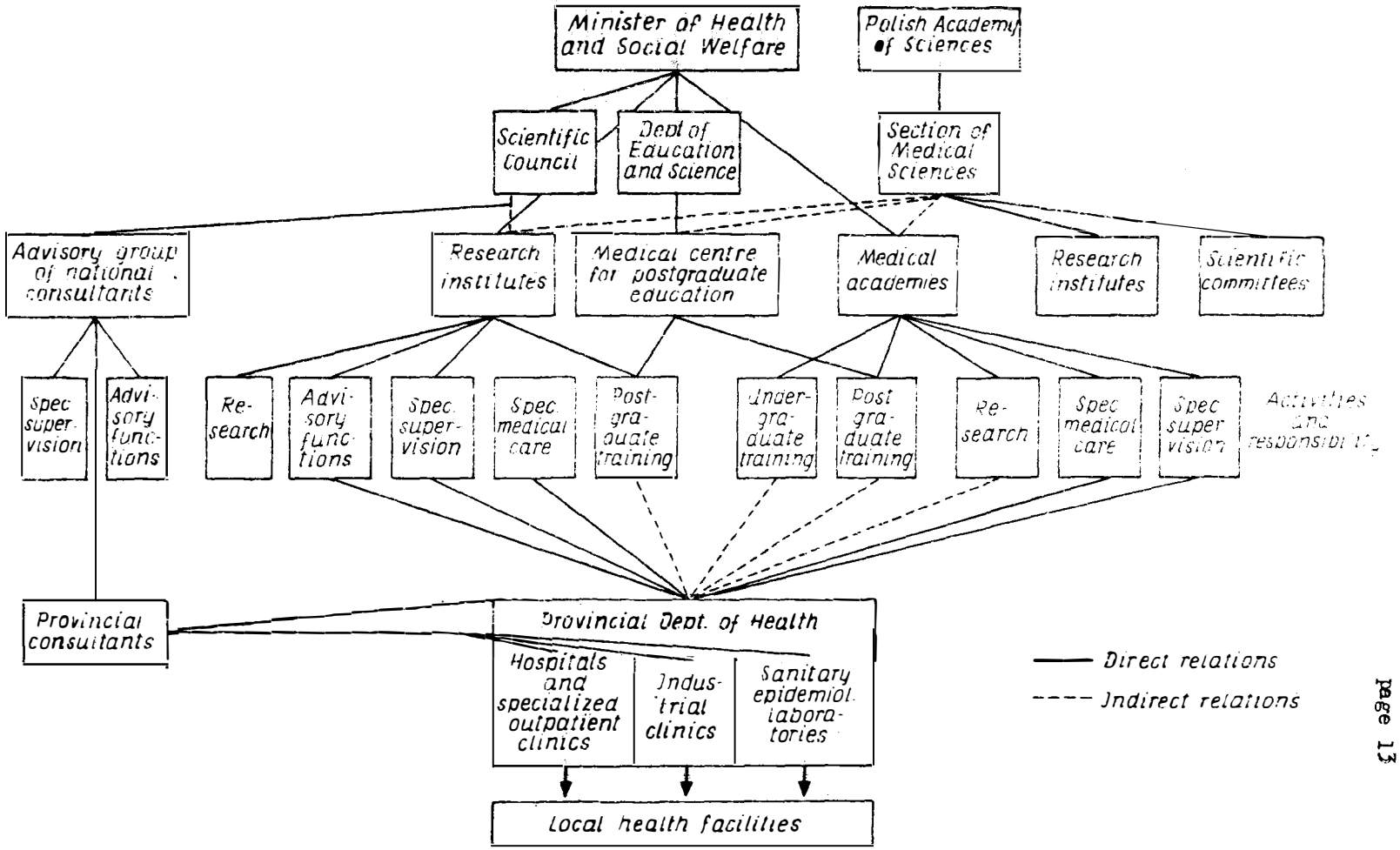


FIGURE 3

Integration of the medical education and research activities in the National Health Services system in Poland.



The Medical Academies and the MCPE co-operate with health service institutions in their respective provinces. Each Medical Academy serves from two (Warsaw Medical Academy) to seven provinces (Cracow Medical Academy) (Figure 4). In each province the Institutes and Departments of the Medical Academies watch over specialist medical care, organize post-graduate education, and co-operate with provincial health departments and provincial or regional hospitals. The Medical Academies and Research Institutes also co-operate in biomedical and health services research conducted in the health service institutions and co-ordinated by the Polish Academy of Sciences in co-operation with the Ministry of Health and Social Welfare.

Thus, the health services and social services combined with the health manpower development system contribute to one integrated and comprehensive system in Poland which facilitates health planning, implementation and execution of health programmes.

FIGURE 4


Gdansk
MA
Slupsk
Elblag
Suwalki
Koszalin
Olsztyn
MA Szczecin
Pila
Bydgoszcz
Torun
Ostroleka
Lomza
MA
Bialystok
Ciechanow
Wloclawek
Poznan
MA
Plock
MCPT
Siedlce
Konin
MA
Warszawa
Biala Pod-
laska
Skierniewice
Zielona
Gora
Leszno
Lodz
MA
Kalisz
Sieradz
Radom
Lublin
Legnica
Wroclaw
Piotrkow
Trybunalski
MA
MA
Chelm
Jelenia
Gora
Kielce
Walbrzych
Opole
Czestochowa
Tarnobrzeg
Zamosc
MA
Rzeszow
Katowice
MA
Krakow
Tarnow
Przemysl
Bielsko-
Biala
Krosno
Nowy Sacz
MA Medical Academy
MCPT Medical Centre For
Postgraduate Training