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The Norwegian Health Care System: A Historical Perspective

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Abstract— *In Norway, since the infirmary in 1164, the first facility for ill, various institutions with different focuses and objectives were established until the end of the 18th century. In the late 1700s, the first institution with some features of a modern hospital was established. During the 19th century, disease burden of Tuberculosis and Leprosy were the main factors that decided the health care delivery model in Norway. Although the Health Act of 1860 gave the direction for the Norwegian health care system for more than 120 years, health system of Norway has undergone several vital reforms and changes during the last two centuries. After the World War ii, Norway was built on the principles of welfare with the influence of ideologies of the Norwegian politicians and diplomats exiled to the Britain during the Nazi occupation. The development of current health system organization and structure was mostly influenced by the socialist political vision of Dr Karl Evangs, the powerful health director of Norway from 1938 to 1972.*

This perspective explores the historical background, builds and expansion of hospital system, health care leadership and management and reforms in health care in Norway.

Keywords— ***Public health, Welfare state, History of health system, Build & expansion, Leadership & management, Reforms***

I. INTRODUCTION

Norway is a country with 5.2 million sparsely dispersed population. Very long coastline and deep fjords are main significant geographic features of the country. Norway became inhabitant after the ice age; nearly 10000 years ago. Since the 1960s, with the large-scale oil production, Norway became a one of the richest countries in the world. Besides, Norway invests over 10% of its GDP income on the health care.

II. HISTORICAL BACKGROUND

The history of the Norwegian health care system goes back to 400 years. In July 1603, a royal patent awarded the Danish-born physician Villads Nielsen a lifelong annual income from the public purse to provide medical services to the inhabitants of Bergen, the largest town in Norway at the time (Hubbard, 2006; Jordaen, 2006). In 1703 the first doctor was appointed as a public servant and given the title '*Provincialmedicus'* in Kristiansand. Until the first few decades of the 18th century, there were only five physicians in the entire country. A single qualified midwife was not in the service until 1740. In Norway, development of a health care system with modern elements was highly influenced by the establishment of medical faculty in 1812, the state school for midwifery in 1818 and the national teaching and research hospital, Rikshospitalet. Furthermore, the 1800s was an extensive expansion of health services: the number of doctors and midwives increased rapidly, local hospitals were built across the country, and psychiatric hospitals were erected (Jordean, 2006). The disease burden of Leprosy, during the period from 1800 to 1850 and Tuberculosis during the period from 1850 to 1900, were very high and were the main illnesses that led to the building of health institutions in Norway. According to the Schiøtz (1999); Jordean (2006), in 1860 the first public health act is known as 'constitution of health service' was passed in Norway. Health commissions also known as

public health boards were established in all communes under the 1860 health act. The commission was chaired by the district medical officer who represented the central health authority and composed of representatives from commune and community. The board mandate was comprehensive, "anything influenced health condition of in the community" (Hubbard, 2006). The decision of the board had the force of law after passed by the municipality and approved by the central government.

When considering the initiation of medical administration and governance system, Public Health Boards as well as appointing the District Medical Officers (DMOs) were important milestones. In 1836 there were 63 District Medical Officers and 79 in 1854 (Hubbard, 2006). Initially, the main responsibilities of District Medical Officers were supervised the activities of physician and other health personnel of the district, monitor health conditions by inspection and report, chaired the public health board meetings, prepare district annual health reports and submit to central authority and maintain the Leprosy registry. Later, implementing and monitoring preventive health care activities and programs were also assigned to them. Further, they were also responsible for the treatment of the individuals in their districts. By the 1930s the district medical officers, as responsible for preventive medicine and hygiene, were unquestionably in a high position as far as the authority and social ranking are concerned, both within the medical profession, but most among patients and in the population as a whole (Schiøtz, 1999).

According to the demographic data, the population of Norway expanded nearly three times by 0 .8 to 2.2 million from the early 1800s to early1900s. Since late 19th century managerial, curative, therapeutic and public health aspects of the Norwegian health care system have been expanded. In big towns such as Bergen and Christiania (Oslo) prophylactic and therapeutic health services became highly developed in keeping with current medical thinking and technology (Hubbard, 2006). The need for expansion of state medical service was recognized by the parliament and passed the legislation in 1912. Apart of the increased number of primary medical officers from 161 to 372 a new office of county medical officer was created to be an intermediate link between district medical officers and central directorate (Hubbard, 2006).

The efforts of reevaluation and renewal of state public health initiatives were affected by World War II and the Nazi occupation of Norway. After the war, Norway was built up as a welfare state. Public health was an integral part of a welfare state. The transition from a social assistance state to a welfare state also impacted the hospital sector (Jordean, 2006). The ideas launched by the Beveridge Commission in 1942 set the pace for major reforms in post-war Britain, and inspired Norwegian welfare programmes as well, with gradual reforms leading to free – or almost free- access to health care and education for all (Westin, 2011). In the post-war period, the British National Health Service (NHS) motto was "health care free for all at the point of use". With the impact of NHS, the Norwegian health system evolved on the principle of cost of health care services to the people irrespective of their income or social level financed by the state. Norwegian politicians and diplomats exiled to Britain during the period of Nazi occupation were the leading groups influencing these ideologies to the Norwegian society. The charismatic Norwegian surgeon Dr Karl Evang (1902 – 1981) was among those influenced by the new ideas (Westin, 2011). The development of organization and structure of Norwegian HCS especially during the post-war period was mostly personified by his socialist political vision. Karl Evang, the powerful health director of Norway from 1938 to 1972, may have wanted to establish a «command and control-state» in Norwegian healthcare (Byrkjeflot, 2005).

Practising physicians were required to provide free medical care to the poor is an evidence of that practising equity principles since the early stage of the Norwegian health care system. (Hubbard, 2006).

School dental services (1947), general nursing (1948), universal sickness benefit(1956), public health nursing (1957), school medical services (1957), home nursing (1959), mental health and psychiatric care (1961), universal social security benefits (1966) and public health centres (1972) were among the important milestones of expansion of Norwegian public health service.

The size of the health sector (public and private) grew enormously. Between 1950 and 1976 its share of the gross national product rose from 3.5 per cent to 8 per cent; the number of certified physicians and nurses doubled (Hubbard, 2006).

Table 1: Changes of total population and health care workforce from 1980 to 2020 in Norway

year	Total Population	Number of health care workers
1980	40 80 000	181 000
2020	52 00 000	352 000

Source: Health care system in transition, 2003; Statistics Norway, 2021

Norway has the highest nurses density (17.7/1000 population) and second-highest physicians density (4.7/1000 population) in 2017 among the Organization of

Economic Co-operation and Development (OECD) countries.

III. BUILD AND EXPANSION OF HOSPITAL SYSTEM

According to Jordaen, the earliest Norwegian facility for the ill is the infirmary at the Augustina monastery in Halsnoy, probably dated from 1164. Trondheim hospital is considered as the first 'hospices' (Church hospital with no doctors and treatment based on prayer and herbs) in Norway. It was established and operated continuously since 1277. Jordaen in 2006 says that the first real hospitals in the country were military hospitals (Fredriksvern and the Garrison Hospital). Literature reveals at the end of the 18th century there were institutions in Norway those had some features of "modern hospital". In early 1800s Rikshospitalet building was completed and started as a teaching and research institution. The institution was focused on treating ill people and not a care home. Therefore, hospital authority thought that the word 'hospices' would not reflex the real meaning of the institution and named as National Hospital (Sykehus). When become to 1830 there were three classifications of health institutions: "Ordinary Hospitals" "Hospitals for venereal disease/ Rade disease" and "Insane Asylums" (Jordaen, 2006). In 1860 there were approximately 27 general hospitals in Norway (Angell, 2012). The Norwegian Radium Hospital opened at Montebello on 1932. The Norwegian Radium Hospital has developed into the only comprehensive cancer centre in Norway.

In the late nineteenth and early twentieth-century rapid hospital expansion could be observed in the Norwegian healthcare system to satisfy locally felt needs for hospital care. Gronlie, 2006, defined that phenomenon as 'welfare localism'. "I would argue that welfare localism fits our case— hospitals—better. It covers a broad and highly varied spectrum of local interests taking part in the expansion of the hospital sector over more than three-quarters of a century" (Gronlie 2006). Sevin Ivar Angell in 2012 says that it was the local government that was to influence the development of the hospital system in Norway. According to the statistics, when considering the composition of hospital beds ownership in the 1930s, 21% of beds were owned by the private sector and 70% were owned by local authorities. There was a disparity in hospital facility between urban and rural areas. In 1964, 9.9 hospital beds were available per 1,000 inhabitants in Oslo, the capital city of Norway; the county of Sogn og Fjordane had an average of just 2.9 per 1,000 people (Angell, 2012). The surplus wealth and population base of cities and towns created the demand for more medical institutions locally.

Because of welfare localism, geographically dispersed population and health-seeking pattern of people reasoned many small hospitals scattered instead of a few large hospitals. But economic hardship of the country between the 1920s and 1930s raised focus on the cost of welfare especially expenditure on hospitals. In the 1930s for the first time, state health policy was initiated (Gronlie 2006). National plan for hospital development was initiated as a part of national policy. That remarks the end of the trend that hospitals founded by local initiatives. After the Second World War, a decision was taken to establish the central hospitals as the apex of hospital hierarchy.

As a well-defined geographical unit, and the only (official) one between the local municipalities and the country at large, the county could easily be considered as the natural unit for hospital planning, and several had some or considerable experience as hospital owners(Gronlie 2006). However, at the same time, Gronile argues that counties were not ready for design and govern a complete hospital system for its area because of not being a unitary political and administrative entity. Because of this incapacity and the rising cost of health care, in 2002, the responsibility of hospital management was transferred from county to the newly established five Regional Health Enterprises.

Table 2: Hospital ownership & direction of authority in Norway since 1850.

Period	Ownership & Management	Direction of Authority
Since the 1850s to 1970	Local communities	Decentralize
1970 - 2002	Counties	Centralization
2002 – up to date	Central state	More centralization

IV. HEALTH CARE LEADERSHIP AND MANAGEMENT

One who wishes to understand the emergence and reforms of contemporary management structure in the Norwegian health system should know the historical and theoretical background of the medical management system in Norway. Many scholars argue that operational complexity and professional bureaucracy made engagement of doctors in the management of health care organizations (Mintzberg, 1979; Neogy & Kirkpatrick, 2009; Dwyer, 2010; cited by Spehar & Kjekshus, 2012). Reviewing the literature on hybrid management, Montgomery (2001)

concluded that doctors are 'uniquely positioned to bring their expertise and insights from the clinical side of medicine to the complex issues facing today´s managed health care delivery systems'. Neogy and Kirkpatrick (2009) believe that doctors embody a unique ability to control resources and clinical practice, as they exercise a key role in treatment decisions that often have important implications for overall budgets (Spehar & Kjekshus, 2012).

Until the 1960s, only a few hospitals had official directors. Most hospitals were publicly owned and managed on a part-time basis by a medical director, with assistance from a general manager (Spehar & Kjekshus, 2012). Literature reveals that until around 1970 doctors reigned on top of the hospital hierarchy and in a protected world because most of the public hospitals were owned by county authorities and they more or less bowed to the wishes of doctors. This was in part due to the influence of Doctor Karl Evang, with a firm decision on that the medical profession must play a leading role in governing the health sector. (Spehar & Kjekshus, 2012; Schiøtz, 1999).

Competing strategies for the internal leadership of hospitals led to disagreements between the medical professions and the professional management (usually based on economic-administrative expertise), and even between different professions within the medical camp (Gronlie 2006). 1982 health reforms played a vital role in shifting professional bureaucracy and autonomy from doctors. Byrkjeflot says it was a precursor of a decline in medical power when the Health Directorate was moved out of the Ministry in 1983. In 1984 when the local municipalities became their employers, district medical officers lost their prestigious title and the direct line to the central administration was cut (Schiøtz, 1999). General hospital administrators were introduced and the head of departments were now instead of becoming middle-managers. At the same time, doctors were losing influential positions in health policy (Spehar & Kjekshus, 2012).

With the feeling of losing professional status and unhealthy wages, in the 1990s many doctors had chosen to leave the hospital to engage in private practice. On the other hand, during this period peoples' expectations and demands from health care were being increased. Increased life expectancy, changes in disease pattern towards chronic illnesses and more patients with co-morbidity created more demand for health care services. Because of mainly those reasons hospital waiting lists persistently increased.

In the late 1990s, the financial pressure and public pressure influenced the government to take necessary legal and structural reforms in hospital management and ownership. There was a growing perception among policymakers that Norway was facing a financial problem in the health sector. Health budgets had grown very rapidly, particularly between 1995 and 1999 and they had grown twice as fast as in the rest of the public sector (OECD, 2003; Gronlie, 2006). In December 1999, the government presented a bill to regulate ownership of county hospitals. Health Care Systems in Transition (2000) report says the purpose of this bill is to enlarge the range of possible organizational forms for county-owned hospitals. The report further says the discussion concerning greater hospital autonomy has created a need for clarification between the providing and the purchasing role. So far, Norway has not taken the full step towards a separation between the providing and financing roles, as has been the case in the United Kingdom and, to some extent, in Sweden. The 2003 published OECD review report criticizing the reforms says the reform does not sufficiently separate the state's roles as purchaser and provider. The regional health authorities are specifically tasked to maintain both roles.

The New Public Management (NPM) perspective is currently the predominant interpretation of any reform undertaken in the public sector (Byrkjeflot, 2005). Confirming this Spehar & Kjekshus says, however, following budget deficits and the increased complexity of health care organizations, reforms inspired by New Public Management have been requested, both internationally (Glouberman & Mintzberg, 2001) and in Norway (NOU, 1997; NOU, 2005). The philosophy behind the NPM model was, introduce private sector management practices to the public sector organizations to ensure the accountability of results rather than process. When applying NPM approach in Norwegian health care, main objectives were reshaping the provider –purchaser relationship, purchaser putting pressure on the provider to ensure the quality and minimum waiting time and giving more autonomy in operational and decision-making capacity of institutions. Health system reforms that took place in the late 1990s and 2002 were highly influenced by the New Public Management Principles. The most ardent protagonists for New Public Management tend to see professional dominance as a problem and directed to marginalize the influence of the professions both in politics and in the hospital. In Norway, management structures in hospitals have become a hot political topic, and as a consequence, it has become mandatory for all hospitals to be organized according to the same principle of management; unitary management (Byrkjeflot, 2005). In 1998 a committee is known as "Steine Committee" was appointed by the ministry of social affairs and health to evaluate the internal organization and management structure in hospitals and to suggest measures to

improvements. The committee recommended that the practice of dual management in clinical departments be replaced by unitary management (Spehar & Kjekshus, 2012). Mo, 2007 define the dual manager model as physicians manage physicians and nurses manage nurses. The unitary department managers are to be line managers for all personnel groups of the department, and responsible for strategic decisions concerning the departments' professional development. Spehar & Kjekshus points out after the introduction of unitary management, which emphasized professional neutrality; nurses have been competing directly with doctors for the department manager position.

V. REFORMS IN THE HEALTH CARE SYSTEM

The Health Act of 1860 gave the direction for the Norwegian health care system for more than 120 years (Schiøtz, 1999). In the late 1970s with the political-ideological changes happened in Norway, pressure raised to decentralized the existed centrally administered comprehensive public health care system. The strong focus on medical treatment had greatly increased the costs of health care, and in 1975 a government proposal to regionalize the health care system was passed (Spehar & Kjekshus, 2012). The law on communal health services was introduced by Act number 66 in 1982. Since the establishment of health care reforms in 1982, the Norwegian health care system has undergone several major changes. According to that Act, most responsibilities of the central government on the public health system was transformed into the local authorities. Municipals are responsible for the provision of health and care services for all of its citizens irrespective of their age, functionality and ethnic background. The services including general medical services, emergency medical services, home help, environmental preventive health measures, occupational therapy training in the home, regular general practitioner service, Mental health services, physiotherapy, measures to combat alcoholism/drug abuse, convalescence and rehabilitation, personal support contacts, health centre and school health service, prenatal checks, dental health services and home nursing (Handbook on municipal health and social services, 2009).

Late 1990s Norwegian health care system faced many challenges. While the insufficient number of medical doctors has been a problem in rural areas particularly in the north of the country, there are also very few qualified nurses in the cities with highly specialized hospital functions, as well as in other health institutions (Health Care Systems in Transition, 2000). Long hospitals waiting lists, the requirement of the cost-efficient health care system and providing health services to the remote parts of the country were most prominent among the challenges.

Activity-based financing system and Diagnosis-Related Group (DRG) system were introduced in the year of 1997 and 1999 respectively focusing improve the efficiency of hospital care and reduce the waiting time.

The 2002 hospital reform introduced by the Norwegian government is considered as the biggest reform ever in the Norwegian public sector. It was suggested for the state to take over the ownership of hospitals and the establishment of local and regional healthcare enterprises. The stated aims of the reform were improved cost control and more equal distribution of health resources across counties (Byrkjeflot, 2005). Meanwhile, the perspective in cost control, reforms oriented to the closed hospitals that serve for a limited number of population and develop few hospitals with more facilities. Magnussen says that specialized hospital services are delivered in fewer and larger hospitals, the motivation being both cost-saving through economies of scale and a higher level of quality through an increased volume of complicated patients seen by each physician. Control of the central hospitals was assigned to the counties. The state's formal role was reduced to laying down the general legislative framework and supervising its application; in 1992 the central administration's Heath Directorate became the State Health Inspectorate. According to the Laegreid et al in 2006, 2002 reform has been presented as a movement both towards decentralization and centralization, due to the transfer of power to local enterprises and the shift of ownership from counties to the central state.

Table 3; Reforms in the Norwegian health care system since the 1970s

Period	Main focus of the reform
1970s	Equality and increasing geographical access to health care services
1980s	Achieving cost containment and decentralizing health care services
1990s	Focus on efficiency and leadership
2000s	Structural changes in the delivery and organizing of health care and efforts to empower patients and users
2010s	Focus on coordination between healthcare providers, quality of care and patient safety

Sources; Health systems in transition, Norway, 2006; Marinova, 2017.

The Specialist Care Act in 1999 and the Municipality Health Act in 2011 emphasized the quality and patient

safety is a responsibility of all hospitals at specialist care level and municipalities at primary care level. The Quality Based Financing (QBF) system was introduced in 2014 to motivate the hospitals to increase the overall quality and patient safty.

REFERENCES

[1] Bykjeflot H, The Rise of a Healthcare State? Recent Healthcare Reforms in Norway, 2005.
[2] Doupi P, Renko E, Giest S; ehealth strategy, Norway, 2010.
[3] Gronliea T, Norwegian General Hospitals, 1970–2002: County Ownership—An Interlude
[4] between Welfare Localism and State Direction, Medical History, pp. 189–208, 2006,
[5] Health Care Systems in Transition – Norway, The European Observatory on Health Care
[6] Systems, 2000.
[7] Health at Glance, OECD, 2015
[8] Health Master Plan, Norway, 2007 – 2010.
[9] Health statistics in Norway, Public health report – short version published by National Institution
[10] of Public Health, Norway 2018.
[11] Heimly V, Grimsmo A, Faxvaag A; Diffusion of electronic health record and electronic
[12] communication in Norway, 2011.
[13] Helsenorge.no
[14] Hubbard W H, Public Health in Norway 1603 – 2003, Essay Review, 2006
[15] Jordaen R, Health buildings in Norway – A historical overview, 2006.
[16] Lindahl A K, The Norwegian Health Care System, 2016
[17] Mo T O, "Doctors as managers: moving towards general management?: The case of unitary
[18] management reform in Norwegian hospitals", Journal of Health Organization and Management,
[19] Vol. 22 Issue: 4, pp.400-415, 2008.
[20] Magnussen J, The Scandanavian Healthcare System, Medical Solutions, May 2009.
[21] OECD Data, 2018
[22] Principles of priority setting in health care, Ministry of health and care services, 2017.
[23] Public health report, 2018, NIPH
[24] Romoren T I, Torjesen D O, Landmark B; Promoting coordination in Norwegian health care,
[25] International Journal of Integrated Care, Jan-Dec 2011.
[26] Rotveit G, Primary care in Norwegian health care system, Online; euprimarycare.org.
[27] Schiotz A, District medical officers in Norway, UiO, 1999.
[28] Spehar I. Kjekshus L E, Medical Management in Norwegian Hospitals; Profession and
[29] Professionalism, Volume 2, No 1, pp. 42-59, 2012.
[30] Stagene A, Recruiting and retaining GPs, 2019.
[31] Statistics Norway, 2020; https://www.ssb.no