The Major Merits of Healthcare Insurance Models A Review Study

Haidar Ibrahim [(1)], Hasanain Shakir Mahmood [(2)], Riyam Ali [(3)]

1. Pharmacy Department / Al-Yarmouk University College.
2. Department of Pharmaceutics/ College of Pharmacy/ University of Kerbala.
3. Al-Mansoor Technical Medical Institution/ Middle Technical University

Corresponding author: Hasanain Mahmood @uokerbala.edu.iq

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Abstract

World Health Organization persistently calls for establishing a universal healthcare insurance systems, capable of providing equitable, accessible, qualified, and affordable services. Solidarity is the doctrine through which healthcare insurance philosophy built. Different sociopolitical notions about solidarity had yielded four different models: Bismarck, Beveridge, Private Health Insurance (PHI), and Out-of-Pocket Payment (OOP). Accordingly; each model characterizes with certain merits in scope of the funding system, reimbursement techniques, and the total cost containment. Consequently, these merits have their own impact on the patient satisfaction in term of the rate of population coverage and waiting list size. This is a review study aimed to understand the economic and administrative features of each healthcare insurance model and their impact on the clinical outcomes. It's an attempt to pave the way to design a hybrid healthcare insurance system capable of optimally use the local resources of the society.

Keywords: Universal Healthcare Insurance system, Bismarck model, Beveridge model, Private Health Insurance, Out-of-Pocket Payment, Statutory Health Insurance system, National Health Services.

المميزات الرئيسية لنظم التأمين الصحي
دراسة مراجعة

حيدر خليل ابراهيم[1]، حسنين شاكر محمود[2]، ريام باسل علي[3]

الخلاصة:

حثت منظمة الصحة العالمية دول العالم بأستمرار الى تبني نظم التامين الصحي الشامل والتي تؤمن مبدأ التكافؤ في الحصول على الخدمة الطبية، اضافة الى الحصول على خدمة طبية كفوؤة عند احتياج المريض لها، ضمن كلفة مالية معقولة. وتعود فكرة نشوء انظمة التأمين الصحي الى مبدأ التكافل الاجتماعي في توفير الخدمة الطبية لمن يحتاجها. وهناك عقائد اجتماعية مختلفة تناولت مبدأ التكافل الصحي ونتج عنه تاريخيا اربع نظم من التأمين الصحي هي: نظام بسمارك، نظام بيفيردج، نظام التأمين الصحي الخاص، واخيرا نظام التحمل الذاتي لكلفة الخدمة الطبية. وعليه، كل نظام من هذه النظم يتمتع بما يميزه عن البقية في اطار نظام التمويل، و مستوى الكلفة الكلي للنظام. وبالتالي تؤثر هذه الصفات على مستوى رضا المريض عن الخدمة الطبية المقدمة من منظار نسبة السكان المشمولين بالحصول على الخدمة الطبية، بالاضافة الى كفاءة الخدمة الطبية ذاتها مثل مدة وحجم قائمة الانتظار الواجب المرور بها قبل الحصول على الخدمة الطبية المرجوة. هذه الدراسة تتناول بالمراجعة الدراسات السابقة في تحديد المميزات المالية والادارية لكل نظام صحي وكيفية تأثيره على المخرجات السريرية. بالتالي هي تتيح فهما اوسعا لصياغة نظام صحي مهجن قادر على استغلال الموارد المحلية بأفضل الاوجه بما يتلائم مع المفهوم المجتمعي للتكافل .

1. Introduction

High quality health service is one of the basic human rights that guaranteed for every individual. “Everyone has the right to a standard of living adequate for the health and well-being” (the universal declaration of human rights, article 25, Paris December 10th 1948). According to the World Health Organization (WHO); the objectives of well –functioning, universal healthcare insurance model should involve ensuring the equity in access to the health service, high quality of medical service produced, and protection of people against financial risks (1).

Throughout the last century; four distinguished healthcare insurance models had globally emerged. These are Bismarck, Beveridge, Private Health Insurance (PHI), and Out-Of Pocket Payment (OOPP) models (2).

Historically, Bismarck healthcare insurance system is the first health insurance plan nationally applied in 1883, named after Otto Von Bismarck, the first Chancellor of Germany (3). Solidarity is the moral value that shapes the Bismarck insurance system, where compulsory, proportional contributions usually deducted from the employees and employers' gross income. In spite of the political purposes of the Bismarck' plan, to counter the socialistic movements (4); however, the systems succeeded to achieve its goals in Germany through keeping the workers as healthy as possible to increase their productivity (5).

The term Statutory Health Insurance (SHI) usually refers to the healthcare systems adopted Bismarck model. Several countries adopted SHI system like France, Austria, Belgium, Japan, Mexico, in addition to Germany (6).

Beveridge Healthcare insurance model was named after William Beveridge, the British economist. In 1942, the famous Beveridge report addressed (Social Insurance and Allied Services) reported that a full-range medical treatment will be ensured for every citizen (7). That means the healthcare services became a human right rather than a right for workers. Unlike Bismarck model, Beveridge believed that the healthcare services should be universal. In addition, Beveridge suggested that the public department of health should run the process of providing the curative and preventive healthcare services (7). This is another vital difference comparing to Bismarck model which adopted autonomous administrative policy in managing both supply and demand chains. National Health Services (NHS) is the governmental apparatus that run providing the healthcare service in United Kingdom. Cyprus, Finland, Italy, Spain and Sweden are examples of countries adopted the NHS-based model (8).

United States adopted Private Health Insurance System (PHI). In 1939, during the great economic stagnation, Blue Cross, a coalition of health insurance providers, was found. Blue Cross identified the premiums based on relative risks of people (9).Many attempts to legislate a U.S. universal health insurance system failed, for example publically funded healthcare programs sponsored by Franklin D. Roosevelt in 1933, and providing universal healthcare as a part of the Fair Deal program were adopted by Harry Truman in 1949. These opposition campaigns were almost always led by the American Medical Association (AMA). The reasons behind the failure of these projects could be due to the social philosophy of interest – group liberalism in addition to the constitutional rights that allow for a variety of groups of interest to promote policies for their own private profit and to successfully defeat policies they classified as harmful to their interest (10). However, in 1965, Medicare Program was

legislated which is publically funded health services for indigenous people older than 65 years (11). The same federal legislation included Medicaid Program which publically covers the poorest individuals and families. In 2013, Medicaid covered 62 million citizens representing the largest health insurance programs in USA (12).

Out-Of-Pocket Payment (OOPP) is the extent of payment that the patients afford to both public and private healthcare providers as a part of the total health expenditure (9). Relying on OOPP limits the demand for healthcare and has a negative impact on the social health status, especially when the OOPP pushes the patients below the poverty line (10).

This research is a review study in which its main objective is to understand the administrative and economic perspectives of the different models of healthcare insurance system, and how do these merits influence on the healthcare system outcomes in term of the level of coverage of the population as well as the patient's satisfaction.

Understanding the financial merits of each healthcare systems was done using three parameters: the funding system used to finance a given healthcare insurance model, the reimbursement technique used to compensate the healthcare providers, and examine the total cost containment of each mode. On the other hand, evaluation of the outcomes of each insurance system was reviewed through evaluating the extent of the coverage of the population as well as examining the size and the time of the (Waiting List) in each model.

Finally, this review tried to highlight the hybridization attempts that aimed to enforce the strength points and overcome the vulnerable aspects of each of the reviewed healthcare insurance model.

The significance of the research is to highlight the strength and weakness points of each model and to illustrate how a hybrid model should be designed to align with the local medical, economic, and administrative capabilities of each society.

2. The Financial Merits of the Variant Healthcare Insurance Models:

Equitable, accessible and affordable healthcare services is the ultimate objective of any healthcare system with a tending to ensure a universal coverage. Different organizational approaches were introduced during last century in order to make these goal true as well as ensuring the sustainability of the healthcare system itself, as long the expanding demand for healthcare service has become a problem. Such organizational differences may have social and economics roots that imposed different theories as a tool to make sophisticated healthcare services available. As a result; each healthcare insurance approach exhibited strength and weakness points though out the decades where it was applied. Understanding of these merits were the clue to initiate series of reforming processes leading to generating hybrid systems in attempt to keep equity, accessibility, and affordability. That may help the developing countries to understand the social, economic, and organizational requirements to optimize the success chances when borrowing one of the health insurance approaches which are successfully applied in the developed countries.

In this review, understanding the financial merits involves reviewing the following indicators:

a. The funding system used to finance a given healthcare insurance.
b. The reimbursement technique**.**
c. Total Cost-Containment and affordability**.**

a. The Funding system: The National Health Services (NHS) depends on tax-based financing system (15). NHS system offers a universal healthcare services which are usually free of charge for all the patients (15). A socioeconomic factor is a major factor behind adapting such approach of funding. Beverage, the godfather of the modern British healthcare system believed that the healthcare service is a human right for every citizen (7). However, free of charge healthcare services usually run by a public organizational apparatus adapting (Command and Control) system. Strategic objectives and policies, budgets, and accountability often centrally set by the government and Department of Health (16). Accordingly; the sociopolitical context has a significant influence on the effectiveness of the Beveridge healthcare system. This is because of highly centralized approach of management where the decisions related to the funding policy are filtered through the political institutions. For example, it's not possible to predict the financial tradeoff between the health sector and other sectors like defense, agriculture…etc. Even the financing process within the healthcare sector itself, the financial tradeoff among personnel, recurrent cost, and capital investment is highly centralized by the political elite (17).

On the other hand, Bismarck model, like in Statutory Health Insurance (SHI)/Germany, is a contribution-based model. It depends on the social insurance principle (18). Unlike Beveridge funding system which run by highly centralized public apparatus; these contributions are independently run by around 130 delegated sickness funds (5). In other words; (who) will pay & (how) is largely depending on the social understating of the solidarity doctrines. Certainly, that in turn is significantly affected by the political understanding of the social needs (19). Accordingly, the Beveridge financial system run centrally, while the Bismarck model has decentralized, autonomous entities run the funding process. The autonomously run sick funds make them capable of effectively dealing with three different players involved in providing the healthcare services in SHI: The public hospitals, voluntary non-profit hospital, and Private hospital (20).

Such kind of autonomy in controlling those different players ultimately accompanied with offering high quality of medical services, which recognized as a one of the major strength points of Bismarck system, however, free-for service in the ambulatory sector and the principle of cost coverage in the hospital sector continued to provide incentives to expand the expenditure (21).

However, as long as the Bismarck system depends of the contributors in the labor market. Self-employed people with no employees, unemployed people still at risk of being medically unsecured (22). The several reforming processes tend to step closer to the universal coverage. In 2009, Health insurance was made mandatory aiming increase the rate of enrolling in (SHI). These continuous reforming processes aim to provide a higher level of healthcare welfare for those who already insured, and to expand the protection for the people outside the system (23).

Medical & administrative competencies required in the peripheries is another challenge as the decentralization and autonomy is an administrative feature of SHI. The role of local decision making agents is crucial to understand the local context and set the health priorities from the point of the patients, the medical stuff, and the community (24). The high number of local sickness fund that involved in providing of the healthcare services may reflect that fact.

b. Reimbursement technique: the nature of health insurance system is an essential factor that determines the demand for healthcare services (25). Changing the reimbursement system from capitation to fee-for service was associated with increase the physician-induced demand especially with the non-chronic diseases (26). SHI adapts fee-for service reimbursement technique. That may be a leading cause of increase cost containment in Bismarck's model, especially that SHI deals with different healthcare providers in the public, voluntary, and private sectors.

On the other hand, universal health insurance plans, like in Beveridge model, may encourage patient-induce demand. The more generous insurance coverage, the higher demanding for health services (27). It may also induce the supplier to overuse the technical and pharmaceutical goods (28). That reflects the importance of conducting clinical guidelines and protocols to reduce such phenomenon.

c. Cost-Containment and affordability: It was revealed by several studies that the cost containment is in favor of health insurance systems adopting the (NHS) comparing to those adopting (SHI) (15). Especially at the time of economic stagnation where Beveridge system perform better in the scope of health status improvement (29). Highly centralized administrative and purchasing authorities allow to making advantage of scale economies (17). In spite of that, it was indicated through certain studies that the publically funded healthcare services may encourage the (Patient-induced demand) where some patients feel thirst for more free of charge medical care (30). However, as it was clarified earlier; Supplier-Induced demand is more predominant with Bismarck-based healthcare systems.

3. Patient's Satisfaction: obviously; NHS, or the countries that adopt the public system ensures the optimum equity with a 100% coverage of population (31). Once more, it’s a reflection of sociological thoughts produced by Beveridge who believed that the health care is a human right, not a privilege. Unlike the (SHI) system in which people in charge try to extend the rate of coverage through numerous reforming processes. Incomplete coverage is a result of Bismarck's philosophy who created a solidarity-based institution capable of producing the healthcare services to the labor forces in order to improve their productivity. However, ensuring full coverage of whole population is a long-term goal for the countries that adopt Bismarck's model. The speed of moving to the full protection may vary from one country to another based on the local capabilities (32).

The size and time of waiting list in any given healthcare system is an objective indicator of the accessibility to the medical services offered (33). It’s a parameter evaluates the quality of healthcare services offered against the patient's expectations (34). While the equity parameters directed in favor of NHS systems; it had revealed that the accessibility the health service when required is in favor of SHI system (35). The institutional structure and the level of decentralization of the healthcare system should be soundly considered when addressing the accessibility and the quality of the healthcare services (35). The financial and administrative independence of the sickness funds is a potential reason behind the superiority of the SHI over NHS in term of waiting list time and size. Bismarck autonomous healthcare providing system allows for the patient to choose the healthcare provider no matter whether in the public or private sector.

The situation is different in case of NHS. The waiting time and size has been a sustain source of tension in the British healthcare system, whether on the national or the local levels. This is because the highly centralized administrative structure which makes the system incapable of acting quickly to ensure the customer needs. Enforce the dialogue between the operational level in the periphery (the clinicians, the hospital managers, and the mid-tier management) and the top-tier management in the center has changed the discussion concerns toward the "needs" and "fairness"(36).

4. Reforming process:

Both NHS and SHI experienced several reforming processes to overcome the vulnerable aspects in each one. The primary objective of the German SHI was to move the system to obtain a universal healthcare services. Germany initiated around twelve significant reforming attempts between 1990-2008. Nowadays, the hybrid SHI system ensure coverage rate very close to the universal (37).

NHS, on the other hand, encouraged the dialogue between the operational level, the local managers, and the government minister to overcome the performance issues associated with the highly centralized, public-run healthcare system. "Target and Terror" regime was one of these reforming actions. Sanctions were imposed on the managers of hospitals for poor performance against the deliberated goals. A greater level of autonomy was rewarded to those who achieve these targets. Target and terror succeeded in lowering the proportion of patients waiting for planned treatment (did target) (37).

5. Discussion

World Health Organization encourages the countries worldwide to create a universal healthcare insurance system capable of providing equitable, accessible, qualified, and affordable healthcare services. Sustainability of such model depends on understanding the local financial and administrative capabilities of each society, in addition to the sociopolitical notions of each country. Accordingly, four different health insurance models had emerged, these are: Statutory Health Insurance (SHI) - based model conducted by Bismarck, National Health Services (NHS)-based model produced by Beveridge, Private Health Insurance (PHI) model in US, and Out-of-Pocket Payment (OOP) in many countries especially the developing ones.

SHI-based model of Bismarck based on the solidarity notion among labor forces. Contributions deducted from the employees and employers will keep the labor force as healthy as possible as encourage their productivity. The system run autonomously by independent "Sickness Funds". That gives an administrative merit of responding well to the healthcare providers and patients needs. Bismarck's model insures the healthcare services equitably in both the private and public sector. That positively reflected on the patients' satisfaction and the acceptable waiting listing in scope of time and size.

However, Bismarck model does not involve a universal coverage. Unemployed people and employer without employees still vulnerable to the financial risk of the uninsured medical services. Also, the decentralized management misses the economies of scale regarding the supply chain, which increases the cost containment. Another factor that increases the cost

containment is the reimbursement technique. Fee-for- Service may induce the Supplier-demand for the healthcare services.

National Health Services (NHS)-based model of Beveridge constructed on the sociological notion that the healthcare service is a right for every citizen. That means ensuring a hundred percent coverage of the population. Accordingly; taxes is the basic funding source of the healthcare system. Consequently; the funding system run centrally by a public apparatus. Making advantage of the Economies of scale is a characteristic merit of Beveridge model, which leads to reduce cost containment. Reimbursement technique reduces the cost containment as the NHS- system workforce are public employees. However; Patient-induced demand is a potential risk regarding free of charge health services.

On the other hand, Beveridge model may leave the healthcare system sharply influenced by the political directions as long as the funding process run centrally under the control of the government. Financing tradeoff among different national sectors, as well as resources allocation among the multiple health disciplinary are processes usually run centrally. Such Vertical administrative hierarchy makes the system lazily response to the continuously updated needs of both providers and patients. That's could be seen by the Waiting list which is a sustain source of tension in the NHS model.

Reforming and hybridization are necessary to overcome the vulnerable aspects of each model. SHI-based model did many reforming steps in order to increase the level of coverage toward the universal level, and to reduce the cost containment.

NHS, on the other hand, took remarkable steps to increase the administrative autonomy within the system. "Target and Terror" was a successful practice on this level.

Finally; the health insurance model should match with the local financial, operational, and administrative capabilities of each country. Most importantly, it should align with the sociopolitical doctrine of the solidarity in each society.

Table of Abbreviations:

WHO: World Health Organization

SHI: Statutory Health Insurance

NHS: National Health Services

PHI: Private Health Insurance

OOPP: Out-of-Pocket Payment

AMA: American Medical Association

References

1. Sethia B, and Kumar P. Essentials of Global Health. 1st ed. 2018. Elsevier.
2. Rothgang H et al. Classifying OECD Healthcare Systems: A Deductive Approach. 2012; Paper No. 165. Bremen. SFB 597

3. Ennajar K, Nessef L. Overview of World Health Systems. International Journal of Scientific and Research Publications. 2018; 8(Issue 9):511-515.
4. Bismarck versus Beveridge: A Comparison of Social Insurance Systems in Europe. CESifo DICE Report 4/2008.
5. Kutzin J. Bismarck vs. Beveridge: Is There Increasing Convergence between Health Financing Systems. 1st annual meeting of SBO network on health expenditure 21-22 November 2011; OECD, Paris.
6. Wagstaff A. Social Health Insurance vs. Tax—Financed Health Systems – Evidence from the OCED. The World Bank, Policy Research Working Paper Series. 2009.
7. Beveridge W. Social Insurance and Allied Services. 1942; HMSO, London.
8. Gaeta M et al. An Overview of Different Health Indicators Used in the European Health Systems. Journal of Preventive Medicine and Hygiene. 2017; 58(2):E114-E120.
9. Ellis R, Chen T, Luscombe C. Comparisons of Health Insurance Systems in Developed Countries. Encyclopedia of Health Economics. 2014; Elsevier Press., Inc.
10. Patel K, Mark R. Healthcare Politics and Policy in America. Journal of Nursing Regulation. 2015; 10.1016/S2155-8256(15)30013-2.
11. Cohen W. Reflection on the Enactment of the Medicare and Medicaid. Health Care Financing Review. 1985; Annual Supplement:3-11.
12. Licata R. Census Data and the Kaiser Family Foundation. 2012. The Kaiser Commission On Medicaid and the Uninsured for Health Statistics Forum. Suitland, MD.
13. Validity and Comparability of Out-Of- Pocket Health Expenditure from Household Survey: A Review of the Literature and Current Survey Instruments. World Health Organization. 2011; Geneva.
14. Sandwell A, Theurl E. Out-of-Pocket Payments in the Austrian Healthcare System- A Distributional Analysis. International Journal for Equity in Health, 14:94:1-12.
15. Light D. Universal Health Care: Lessons from the British Experience. American Journal of Public Health. 2003;93(1):25-30
16. Peckham S. Accountability in the UK Healthcare System: An Overview. Healthcare Policy. 2014; 10 (Special Issue):154-162.
17. Tax-Based Financing for Health Systems: Options and Experiences. World Health Organization. Discussion Paper. 2004; Geneva.
18. Doring A, Paul F. The German Healthcare System. EPMA Journal. 2010; 1:535-547.
19. Liaropoulos L, Goranitis I. Health Care Financing and the Sustainability of Health Systems. International Journal for Equity in Health. 2015, 14(80):1-4.
20. Overview of the German Health-Care Industries: Evolution, Trends, and Main Players. The Ministry of Industry, Trade, and Labor of Israel. 2007. MIP.
21. Gerlinger T, and Schmucker R. A Long Farwell to the Bismarck System: Incremental Changes in the German Health Insurance System. German Policy Studies. 2009; 5(1):3-20.
22. Can People Afford to Pay for Health Care: New Evidence on Financial Protection in Europe. World Health Organization, Regional Office for Europe, 2019.

23. Doetinchem O, Carrin G, Evans D. Thinking of Introducing Social Health Insurance? Ten Questions. World Health Organization, Background Paper 26, 2010. Geneva.
24. Panda B, Thakur H. Decentralization and Health System Performance: A Focused Review of Dimensions, Difficulties, and Derivatives in India. BMC Health Services Research. 2016; 16 (Suppl 6):2-41
25. Phelps C.E. Health Economics. Harper Collins Publishers; New York, USA. 1992.
26. Dijk C.E et al. Moral Hazard and Supplier-Induced Demand: Empirical Evidence in General Practice. Health Economics. 2013; 22(3):340-352.
27. Culter D.M and Reber S. Paying for Health Insurance: The Tradeoff between Competition and Adverse Selection. Working Paper, No. 5796, National Bureau of Economic Research, New York. 1996.
28. Mosadeghard A.M. Factors Influencing Healthcare Service Quality. International Journal of Health Policy and Management. 2014; 3(2):77-89
29. Lyszczarz B. The Effect of Health Care Model on Health Systems' Responses to Economic Crises. Economics and Law. 2016;15(4):493-501.
30. Hurst, J. Challenges for Health Systems in Member Countries of the Organization for Economic Co-operation and development. Bulletin of the World Health Organization. 2000; 78(6):751-760.
31. Lameire N, Joffe P, Wiedemann M. Healthcare Systems--An International Review: An Overview. Nephrol Dial Transplant, 1999; 14 (Suppl 6):3-9.
32. Normand C, and Weber A. Social Health Insurance: A Guidebook for Planning. Verlag fur Akademische Schriften-VAS. 2009; 2nd Ed.
33. Musinguzi C. Patient Waiting Time and Associated Factors at the Assessment Center: General Out-patient Department Mulango Hospital Uganda. 2013; Makerere University, Kamplala.
34. Bergenmar M et al. Improvement in Patient Satisfaction at an Outpatient Clinic for Patients with Breast Cancer. Acta Oncologica. 2006; 45(5):550-558.
35. Or Z. et al. Are Health Problems Systemic? Politics of Access and Choice Under Beveridge and Bismarck Systems. Health Economics, Policy, and Law. 2009; 5(3):269-93.
36. Sherad S. Space, Place, and (Waiting) Time: Reflections on Health Policy and Politics. Health Economics, Policy, and Law. 2018; 13(3-4):1-25.
37. Carrera P, Siemmens K, Bridges J. Health Care Financing Reforms in Germany: The Case for Rethinking the Evolutionary Approach to Reforms. Journal of Health Politics Policy and Law. 2008; 33(5):979-1005.