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A comparison of the United Kingdom's and Switzerland's healthcare financing systems for achieving equity and efficiency goals

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Summary

Healthcare financing systems in the United Kingdom and Switzerland were compared with a focus on efficiency and equity. The United Kingdom's National Health Service employs the Beveridge model. It is predominantly funded through taxation and aims to provide free healthcare at the point of use. Switzerland's healthcare financing system is based on the Bismarck model. This social health insurance model is structured around compulsory health plans for all residents.

METHODS: Healthcare financing systems were compared using World Health Organization reports, national health statistics and peer-reviewed literature. Efficiency was evaluated using metrics including cost-effectiveness ratios and healthcare outcomes. Equity was assessed by examining disparities in access to healthcare and socioeconomic health outcomes.

RESULTS: The National Health Service excels at administrative efficiency and providing equitable access to care. It faces challenges such as geographical disparities in service availability and perceptions of underfunding. Switzerland spends comparatively more on healthcare but delivers superior health outcomes. Issues arise with providing equitable care to all citizens, particularly affecting low-income and undocumented populations.

CONCLUSION: The National Health Service is a leader in providing equitable healthcare but must address falling health outcomes while working within financial constraints. Switzerland demonstrates excellent healthcare outcomes and patient satisfaction but requires measures to ensure equitable service delivery. Ongoing policy adjustments are necessary to balance equity and efficiency while meeting meet new healthcare demands.

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Introduction

An effective health financing system is one of the six building blocks of a healthcare system according to the World Health Organisation [1]. This paper compares the efficiency and equity of the healthcare financing systems of the United Kingdom (UK) and Switzerland. Different social and political contexts have resulted in the development of significantly different systems in the two nations. The UK's National Health Service (NHS) is funded predominantly through taxation and offers healthcare largely free at the point of use. Switzerland employs a social health insurance model with compulsory health plans for all residents. Understanding the concepts of efficiency and equity is crucial to evaluating these systems. This paper will critically analyse how well each system achieves these goals. Exploring potential trade-offs between efficiency and equity may provide insights for future policy adjustments.

Background and overview of healthcare systems

Healthcare financing is a fundamental component of all healthcare systems. Core functions include raising revenue, pooling funds and purchasing services [2]. Revenue can be generated through government budgets, taxation, insurance policies or external aid. Pooling funds involves managing financial resources and redistributing assets to support equitable and universal health coverage [3], as well as spreading financial and health-associated risks across large populations. Purchasing services involves allocating resources or making payments to healthcare providers [2]. Differences in health financing systems results in significant variability in efficiency and equity between nations.

Healthcare in the UK has been primarily delivered through the National Health Service since its establishment in 1948. The National Health Service operates on the Beveridge model, which relies on general taxation to fund government-provided healthcare [4]. This model was based on

the 1942 Beveridge report, authored by Labour MP Sir William Beveridge, which emphasised the necessity of a free and comprehensive health service to eliminate out-of-pocket expenditure. While primarily funded by taxation with central pooling of resources [5], 1% of National Health Service funding is derived from charges for prescriptions, dental care, car parking and overseas visitors [6]. Beveridge model healthcare systems aim to ensure all residents within a population are guaranteed access to healthcare, emphasising health as a human right by promoting universal coverage [7]. In Europe, this model is also adopted by Cyprus, Denmark, Finland, Ireland, Italy, Latvia, Malta, Portugal, Spain and Sweden [8].

A significant proportion of National Health Service funding is allocated to local organisations such as Clinical Commissioning Groups or Health Boards, which are then responsible for meeting local needs [9]. Each country within the UK has chosen to structure its National Health Service slightly differently. National Health Service England oversees the pooled budget and allocates funding to 191 Clinical Commissioning Groups who then pay for the delivery of healthcare at a local level [10].

In addition to the public sector, the UK has a parallel-running private sector that covers a smaller range of elective procedures [11]. Private health insurance policies are held by 10.6% of the population [12], with the majority offered to employees as part of an overall remuneration package [13]. In 2022, only 2.5% of total health expenditure came from private voluntary health insurance [14], a much lower level than in most comparable nations [15]. The role of private insurance in the UK is to facilitate rapid access to care, provide greater autonomy in choosing specialists and offer better amenities. Most existing policies exclude mental health, emergency care, maternity care and general practice [16]. Out-of-pocket expenditures are limited to a small range of services, mostly within primary care, such as travel vaccinations and provision of certificates for insurance purposes [10].

Switzerland's healthcare system is based on the Bismarck model, with basic health insurance plans mandated for all residents [17]. Mandatory health insurance plans are offered by competing non-profit insurers supervised by the Federal Office of Public Health [18]. Swiss health insurance systems are privately organised, with no public health insurance [19]. Insurance companies are obliged to provide basic plans to any resident who applies, with individuals on low incomes receiving subsidies to supplement payments [20]. Residents make regular payments for insurance coverage as well as yearly deductibles (in German and French: "franchise"), which are amounts paid out-of-pocket before insurance covers expenses. Coverage includes most physician visits, hospital care, pharmaceuticals, devices, home care and physiotherapy.

Access to the mandatory basic health insurance is guaranteed. This provides all residents equitable access to all essential health services. The cost contribution for basic premiums, which is pre-selected for the year ahead, ranges from CHF 300 for the lowest option for adults up to CHF 2500 as the highest possible deductible. Once the deductible is reached, individuals will have to pay 10% of health-related invoices with the insurance company contributing the majority of the cost until they reach an annual cap of CHF 700 in out-of-pocket payments. The out-of-pocket payments include the premiums, the deductible and finally the co-payments. This structure could lead to potential disparities with inequitable access to care for individuals on low incomes who could struggle with these co-payments or higher deductibles [20].

Insurance companies offer additional supplementary insurance plans beyond the basic insurance plan which are risk-assessed and based on an individual's age and general health [21]. This allows for different rates, creating competition between the insurance providers [21]. Supplemental private insurance covers additional services not included in mandatory health insurance, offers greater choice of physicians and allows for better inpatient hospital accommodation [18]. It is important to note that there is no mandatory rule nor guarantee of obtaining supplemental health insurance coverage in addition to basic health insurance coverage. Supplemental insurance can be denied based on pre-existing factors including chronic health conditions and age. This system can lead to further inequities for the elderly or people with a higher number of chronic health conditions, who may then face unforeseen barriers in obtaining supplemental insurance coverage.

Publicly financed healthcare accounted for 62.8% of total health spending in Switzerland in 2016, followed by mandatory health insurance premiums (35.6%) and general taxation (17.3%) [18]. In the same year, voluntary health insurance accounted for only 6.7% of total expenditure [18].

The system is highly decentralised. Each of the 26 cantons plays a role in how it operates, with its own constitution and minister for health [18]. Cantons, or states, are responsible for licensing providers, regulating hospital services and subsidising healthcare institutions. Each canton operates autonomously and, as a result, this could lead to possible disparities in access to more specialised healthcare services. Taking the example of cancer screening, there are high levels of inter-cantonal variability. Some cantons offer more robust screening programmes and have higher screening uptake than others, which is often due to budget constraints or cantons having differing public health agendas. The variability in preventive health measures such as cancer screening can lead to differing health outcomes and this highlights the difficulties in maintaining a consistent health standard in a decentralised healthcare system [22].

The federal government regulates system financing, ensures the quality of pharmaceuticals and medical devices, oversees public health initiatives and promotes education and training [23]. Other countries that use this healthcare funding system include Germany, France, Belgium, the Netherlands, Japan and countries in Latin America [17].

Efficiency and equity in healthcare

An understanding of the key terms efficiency and equity in the context of economic evaluation is required to analyse the two healthcare systems under discussion. Efficiency in healthcare refers to the use of resources or inputs in ways that optimise desired healthcare system outputs [24]. The most recent global analysis of the efficiency of 140 country health systems reported a mean efficiency of 93% (range 71–100%), with European countries achieving a mean of

96% [25]. It has been estimated that between 20% and 40% of all health system resources globally are lost to various forms of inefficiency [7]. Improved efficiency is therefore in the interest of policymakers and a recognised goal of healthcare systems [1, 26]. Technical inefficiency may arise when inputs are misused or wasted in the process of producing valued outputs. Allocative inefficiency may arise when health system inputs are directed towards creating outputs that are not priorities to society [27]. Pareto efficiency is an alternative efficiency concept. An allocation is Pareto-efficient if there is no alternative allocation which would benefit one group without reducing the health of another [28].

Measurements of healthcare efficiency examine different aspects of resource utilisation and outcome optimisation. Cost-effectiveness analysis (CEA) compares the costs and results of alternative health interventions and focuses on assessing impact on clinical measures [29]. Cost-benefit analysis (CBA) measures both costs and effects of interventions in monetary terms, allowing a direct assessment of the economic value of interventions [30]. Data envelopment analysis (DEA) is a statistical method used to evaluate how effectively resources are used to achieve desired outcomes [31]. Incremental cost-effectiveness ratios (ICER) are a ratio of differences in costs to health outcomes. They allow an appreciation of the additional cost per additional unit of benefit. A unit of benefit in frequent use is the quality-adjusted life year, which measures both the quality and the quantity of life lived [32].

Equity in healthcare refers to achieving a state where there are no disparities between different social groups in a society [33]. Health inequities develop when resources are not fairly distributed, leaving people with an equal need for healthcare without equal access to it. Equity requires that patients who are alike in relevant aspects to be treated alike, and those that are unlike in relevant aspects to be treated appropriately in an unlike fashion. The treatment of an individual is judged to be inequitable if it relates to irrelevant characteristics such as race, religion, gender or ethnicity [34].

Resources and opportunities are adjusted to account for different needs and circumstances, aiming for fair outcomes. This provides a further subdivision into "horizontal" and "vertical" equity. Horizontal equity requires the like treatment of like individuals, while vertical equity requires the unlike treatment of individuals in proportion to the differences between them [34]. Vertical equity allows cases of fair inequalities to arise, for example requiring a lower contribution from households with a lower ability to pay. Equality is a different though closely related concept, referring to the provision of the same services and treatment to all individuals regardless of their circumstances. Equity in health may therefore require inequality in resource allocation [34].

Measuring equity in healthcare involves assessing distribution of resources and comparing health outcomes between different population groups. Research may involve analysing utilisation rates and evaluating geographic and financial barriers to healthcare access [35]. Gauging patient satisfaction and perceptions of fairness will also provide insight into equity [36].

Comparative analysis of the two healthcare financing systems in reaching equity and efficiency targets

In 2021, the UK and Switzerland each spent 12.0% of their Gross Domestic Product (GDP) on healthcare [37]. Both nations spent a lower percentage of GDP on healthcare in 2022: 11.7% and 11.1% for Switzerland and the UK, respectively [37]. Both nations consistently exceeded the Organization for Economic Co-operation and Development (OECD) average, which was 9.7% of GDP in 2021 [37]. Clear differences between the two nations can be found in healthcare spend per capita. In 2021, the UK spent $5738 (USD) per capita on healthcare. In the same year, Switzerland nearly doubled this amount, spending $10,897 (USD) per capita. The average spend per capita among OECD countries was $5653 (USD) in 2021 [38].

Higher spending does not necessarily equate to greater efficiency. A study evaluating the healthcare systems of 32 European countries in 2014 found Switzerland to be among the least efficient [39]. When the same study aggregated scores for efficiency and effectiveness, Switzerland again ranked among the least successful healthcare systems [39]. Comparison of healthcare efficiency between nations is challenging, and other studies present conflicting information. A systematic review and meta-analysis of OECD countries' healthcare efficiency estimated Switzerland's efficiency score as 0.94, slightly higher than the UK's score of 0.93 [40]. This review highlighted the low validity of findings across different studies and methodological limitations in comparative analyses, suggesting that these results should be interpreted with caution [40]. Another study identified Switzerland as having a higher mean bias-corrected technical efficiency score (1.00) as compared to the UK (0.99), indicating that allocative efficiency could be a key area for policy improvements in Switzerland [41].

Research comparing the equity of healthcare systems in eleven nations found Switzerland and the UK to be the third and fourth most equitable, respectively [42]. Equity was assessed by comparing healthcare access, preventive care and engagement between higher- and lower-income individuals. The cost of healthcare for patients in Switzerland was found to be the second least affordable of all compared nations. Cost-related healthcare access problems were reported by 26% of the lower-income population and 21% of the higher-income population in 2020. The UK was found to be the most affordable, with cost-related access problems reported by 12% of the lower-income population and 7% of the higher-income population [42].

Critical evaluation of the two healthcare financing systems in reaching equity and efficiency targets

Efficiency of the UK's healthcare financing system

The UK's healthcare financing system allows structural efficiency by pooling funds derived from general taxation and National Insurance Contributions. This centralised approach reduces administrative costs relative to the revenue raised [12], as evidenced by a review that ranked the UK

as the second most efficient healthcare system among 19 economically developed countries [43].

Systemic underfunding is likely a contributing factor to suboptimal health outcomes, particularly in population health and patient safety where the UK falls below standards compared to other high-income countries [44]. A national survey in 2017 revealed that 86% of respondents felt the National Health Service faced a major or severe funding problem, a significant increase from 14% in 2014 [44]. Further efficiency improvements and increased healthcare spending are likely required to sustain good health outcomes.

Potential new treatments and technologies in the National Health Service are assessed using incremental cost-effectiveness ratios. The cost threshold per quality-adjusted life year for England and Wales is between £20,000 and £30,000 [32]. There is limited evidence supporting this range, with a lower estimate of £12,936 per quality-adjusted life year suggested based on an analysis of healthcare spending and associated disease-specific mortality [45]. The higher quality-adjusted life year threshold currently in use may reduce the efficiency of healthcare spending by allowing more expensive interventions that do not proportionally improve health outcomes. Efficiency may be improved by reassessing the quality-adjusted life year threshold to ensure it aligns with evidence-based spending. In some cases, efficiency must be sacrificed to meet equity goals. The UK has specific guidelines for the treatment of rare diseases, which balance ethical considerations with efficiency and equity objectives [46].

Equity of the UK's healthcare financing system

The UK is able to achieve universal healthcare provision with health spending per capita close to the OECD average [37]. Financing this service primarily through taxation mitigates both the financial and health risks of falling ill. This allows equitable healthcare provision regardless of health conditions, income or occupation. Financial protection for residents does remain weaker in some areas, such as dental care.

Despite these protections, clear disparities in healthcare access exist between different socioeconomic groups. Poorer and more socially disadvantaged populations utilise more healthcare in terms of volume and cost due to greater health needs. Wealthier and more socially advantaged individuals consume more preventive care and often present at an earlier stage of illness [47]. Equal access to general practice services is another area requiring improvement. Addressing this has been one of the recent goals of the National Health Service, with initiatives aimed at providing additional funding to improve access in underserved areas and communities [48].

There is significant variation in access to specific services based on where an individual lives, often referred to as the "postcode lottery" [49]. In more affluent regions, patients benefit from a wider range of services, shorter waiting times and more advanced facilities. Patients in less affluent areas may face longer waiting times and limited access to certain treatments. This may result in a patient in one area receiving National Health Service funding for a particular treatment, while a patient with similar needs in another area does not [50]. The quality of preventive healthcare services can also differ between regions, reducing equity and widening disparities in healthcare [49]. Suggestions for addressing these inequalities include instituting nationally prescribed guidelines and standards, although this may limit local flexibility [49].

Efficiency of Switzerland's healthcare financing system

Switzerland's highly decentralised social health insurance system produces some of the best healthcare outcomes in Europe [20]. Compared to Beveridge model systems, Bismarck model systems generally perform better on key outcome measures such as life expectancy and overall mortality rates [51, 52]. They also receive higher patient satisfaction scores, with 91% of adult respondents in Switzerland rating their health as good, very good or excellent [53]. Bismarck systems are less effective at controlling healthcare-related costs than their Beveridge system counterparts [52]. Consequently, healthcare spending per capita in Switzerland is the second highest among OECD nations [37].

In 2013, the Swiss government prioritised increasing efficiency within the healthcare system. Proposed measures included the concentration of highly specialised medicine and the revision of existing fee schedules to remove incentives for expensive and unnecessary services [54]. Despite these initiatives, the government identified persistent issues in its "Health2030" report. These included lack of coordination in hospital planning at intercantonal and regional levels, which results in overprovision or inappropriate provision of care [55].

Competition between insurance plans provides greater choice to residents, but also incentivises switching between providers. This drives up administrative costs, with one analysis ranking Switzerland tenth for administrative efficiency among the eleven nations examined [42]. Access to basic health insurance in Switzerland is guaranteed on a non-discriminatory basis, promoting equity but potentially limiting efficiency. Since younger and older users, as well as men and women, have significantly different demands for health insurance, uniform pricing cannot achieve the most efficient resource allocation [56].

Equity of Switzerland's healthcare financing system

Inequities in healthcare utilisation exist between different cantons in Switzerland. While common procedures such as hospital medical admissions, hip fracture management and Caesarean sections remain relatively uniform, procedures such as knee arthroscopy and coronary artery bypass grafting (CABG) show considerable variation between cantons [57]. This variation is further compounded by differences in healthcare premiums, subsidies and tax schemes due to the autonomy of each canton [58].

Improving equality of opportunity and minimising health risks for the most vulnerable groups in the population has been a recent priority for Switzerland [54]. Particular attention has been given to children, individuals with low income or education levels, the elderly and migrants. While difficulties with ensuring equity within these groups are universal, Switzerland faces challenges with its high mi-

gration rates. Foreign-born citizens made up29.3% of the Swiss population in 2017, compared to 14.2% in the UK [44].

Switzerland also hosts an estimated 90,000 undocumented migrants [59]. Like all other residents, this population must have basic health insurance to access healthcare. Policies are directed towards providing equitable healthcare for this population, and health insurance companies and healthcare professionals are prohibited from passing on information about them [59]. Lack of awareness of healthcare rights, concerns about financing and fears of being discovered remain obstacles to accessing healthcare for undocumented migrants [60].

There does also appear to be a difference in equitable goals between different cantons. One review assessing the regressivity of the Swiss system suggests a degree of inequity across different cantons [61]. Cantons have autonomy in how to design subsidy policies, choice of tax rates and the decision of the amount of total expenditure needing to be financed through taxation versus through mandatory health insurance. Considering these factors, alongside the competition among insurance companies and the level of supply of premium discounts given, can lead to different levels of inequity.

There are further implications of a decentralised system in reaching health equity goals. Wider health determinants, such as cultural and socioeconomic factors, can influence health consumption. The healthcare culture in Switzerland generally tends to encourage individuals to have more autonomy and responsibility for their own health and to make their own decisions about their care. This consumer-driven model can thus lead to inequities as there are disproportionate levels of health literacy and finances, which worsen health inequalities [62].

Suggestions for addressing these inequalities require targeted interventions aiming for a more homogeneous cost distribution. The number of local integrated care initiatives has risen in the last 20 years [22] and the healthcare system could attempt to find a more harmonised balance between local health agendas and more centralised federal support for care initiatives. Reducing barriers to supplemental insurance and introducing further income-based subsidies could further improve health equity. Initiatives could be implemented to reduce disparities between different cantons. Integrating these measures could improve accessibility for patients who require further care while maintaining the system's existing strengths of patient choice and quality of care.

Conclusion

This comparative analysis shows that the healthcare financing systems of the United Kingdom and Switzerland demonstrate distinct strengths and face significant challenges. It explores the difficulties in achieving both efficiency and equity within their healthcare financing systems.

The National Health Service's centralised approach promotes equitable access to healthcare, but addressing geographical and socioeconomic disparities in service delivery remains crucial. Its notable administrative efficiency could be enhanced through measures such as reassessing cost-effectiveness thresholds. Maintaining high health outcomes in the context of perceived underfunding is challenging. Increased investment in healthcare staffing, long-term care and social services is ultimately necessary to align with comparable systems [43]. The recent change in government may introduce new solutions and unique challenges.

Switzerland's decentralised social health insurance model achieves some of the best health outcomes in Europe. These superior health outcomes come at the expense of higher costs and difficulties managing resource intensity. Policy reforms aimed at optimising resource allocation may improve healthcare system efficiency. A competitive insurance market offers excellent patient autonomy, but balancing this with cost containment brings difficulties. Significant regional disparities in healthcare access and utilisation remain, particularly for vulnerable groups such as undocumented migrants.

This analysis emphasises the need for a balanced approach to future policy adjustments. Policymakers must consider the unique social and political contexts of each nation when addressing healthcare needs. Healthcare systems must display both efficiency and equity in order to remain sustainable and capable of delivering high-quality care.

Potential competing interests

All authors have completed and submitted the International Committee of Medical Journal Editors form for disclosure of potential conflicts of interest. No potential conflict of interest related to the content of this manuscript was disclosed.

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