

Yale Center for the Study of Globalization

UHC Charter Expert Papers

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UHC requires compulsory participation, comprehensive pool funding, subsidization and consolidation of the entire system.

Cheryl Cashin, Managing Director, Results for Development

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Introduction

Universal health coverage (UHC) is the aspiration to ensure all people in a society receive the quality health services they need without suffering financial hardship.¹ To make sustainable progress toward UHC requires that a country's health financing system routinely generate sufficient—and largely domestic—resources to expand and sustain access to high-quality health services with financial protection. Evidence and experience have shown that public resources are the most efficient and equitable way to fund health coverage,^{2,3} so UHC requires significant fiscal commitment from governments. But it is not only the amount of resources available for UHC that matters. UHC is fundamentally about social equity, so pooling and redistributive mechanisms are needed to ensure financial protection and subsidies for the poor. For redistributive mechanisms to function, all individuals need to participate in a consolidated system that can collect funding from individuals based on their ability to pay and direct resources to those with the highest need. Although each country will chart its own course to pursue UHC, the fundamental conditions of compulsory participation, pooled funding and consolidation, and subsidies to make participation affordable for all are required to ensure that the poor are able to participate and those who are sicker and need services the most are not punished with higher costs.⁴ In this paper we examine each of these conditions to demonstrate why each is essential to make equitable and sustainable progress toward UHC, assess the consequences that are observed when these conditions are not met, and review country experience with enabling policies and politics.

Compulsory participation in pooled funding

A defining characteristic of the health sector is the high degree of uncertainty associated with health needs, which vary across populations, over time and across geographies. Needs are concentrated in a relatively small segment of the population: 20 percent of the population generally accounts for 80 percent of all health spending in a given year.⁵ There is ample evidence that payments at the time services are accessed negatively affect utilization, particularly for the poor, or can lead to financial hardship and impoverishment.^{6,i} This uncertainty makes it necessary to “pool” risk across populations to protect individuals from financial hardship if they find themselves in the unlucky

ⁱ See Precept 5: “UHC financing must be public. UHC ideally must be financed by general taxation rather than either compulsory – or even worse, voluntary – social health insurance. Out of pocket payments for health should be out of the question as a primary source of financing.”

group that requires expensive health services. This is known as the risk-pooling or insurance function in health financing systems—a function that is integral whether the system is named a “health insurance” system, as in social insurance systems across Europe, or some other organization of the system, such as the U.K.’s National Health Service.⁷ The failure of the private market to provide the insurance function equitably and efficiently is a major justification for government involvement in financing of the health sector.⁸

For risk-pooling of any kind to be effective, the pool needs to be large and diversified to increase predictability and scope for redistribution.^{9,10} Whereas the risk of health expenditures in a given year are difficult to predict for individuals, they are more predictable across large populations.¹¹ This makes it possible to better predict the average cost of members in the pool and the financial contributions necessary for solvency. Mandating participation in the UHC system is necessary to ensure a large and diverse risk pool and to avoid adverse selection, or the “death spiral” of insurance pools.^{12,13} Adverse selection occurs because individuals face different levels of health risk, and they have private information about their own risk and probability of illness or accident. If participation in a UHC system is voluntary, the individual has the choice to contribute to the pool and access benefits upon need. Individuals will make the decision whether to participate based on the cost of the contribution to join the pool relative to the individual’s expected need or benefit extracted from the pool. Healthier individuals would need to face a lower contribution than the average to reap an expected net benefit from joining the pool. Adverse selection occurs when the relatively healthy people drop out, raising the average cost of covering the remaining people (since the relatively healthy are no longer in the pool). This raises contribution rates for those remaining in the pool, which causes more relatively healthier people to drop out (again those with expected benefits that are now less than the higher contribution rate). This can continue into a “death spiral” for the pool, as contribution rate increases again, which causes more people to drop out, and so on until the market breaks down entirely.¹⁴

Adverse selection is observed consistently in voluntary health coverage schemes in countries of all regions and income levels. In a voluntary scheme in rural China, in spite of voluntary coverage rates over 70 percent, adverse selection was still observed, with healthier individuals more likely to opt out. Annual health expenditure per person for those joining the scheme was nearly twice that of those not joining in the year prior to enrollment.¹⁵ In Ghana’s National Health Insurance Scheme (NHIS), participation is legally mandatory, but with no effective mechanism of enforcement, the Scheme is essentially voluntary. Furthermore, individuals must actively renew their card each year, further increasing the costs of renewing membership. There is evidence that individuals are more likely to renew their membership in the NHIS if they had utilized services in the previous year, with the probability of renewing increasing with the number of visits, and most of those who did not utilize care drop out. Although premium contributions make up a small portion of NHIS revenue, adverse selection is considered to be at least partially responsible for the persistent sustainability challenges of the NHIS and continued high reliance on out-of-pocket payments for health in Ghana.¹⁶

Adverse selection can also occur when participation in the UHC system is compulsory overall, but there is choice across pools and the contribution rates and other features of the coverage differ. In

Chile, for example, workers and pensioners are mandated to purchase insurance coverage, either from the public insurer (Fonasa) or from private insurance providers (ISAPREs). Private insurance premiums depend on health risk and the level of benefits chosen by the individual, whereas Fonasa premiums are related only to income. Fonasa covers over 80 percent of Chile's population, while Isapres cover less than 20 percent. Not surprisingly, healthier and wealthier individuals are more likely to choose insurance coverage from ISAPREs, leaving Fonasa with a more costly population more likely to suffer from chronic illnesses.¹⁷ Although ISAPREs cover a healthier population overall, expenditure per beneficiary is 35 percent higher than for Fonasa beneficiaries, and service utilization is higher across most service categories.¹⁸ There is also inequity in the burden of out-of-pocket payments.¹⁹

Compulsory participation in the risk pool prevents adverse selection, since it forces those who would take a chance and go without coverage to participate in the pool. This can have several positive effects on the system, including expanding coverage and reducing the average premium or contribution rate per person, although effects on the contribution rate are ultimately affected by government policy and characteristics of the market. The individual mandate in the Affordable Care Act (ACA) alone, independent of other coverage-enhancing aspects of the law, is estimated to have increased the number of insured individuals in the United States by eight million people, reducing the uninsured rate for the non-elderly by 2.9 percent, although a much larger share of the coverage gains have been found to be attributable to the premium subsidies.²⁰ It is unclear how the individual mandate affected insurance premiums when the ACA was introduced, but several analyses predict an increase in premiums when the mandate is no longer in effect after recent changes to the implementation of the law, and every prediction suggests that adverse selection will again be a problem in the U.S. health insurance market.²¹

Adverse selection is often not the most significant consequence of lack of compulsory participation in UHC systems in low- and middle-income countries, particularly when direct contributions from enrollees do not make up a significant share of a scheme's revenue. In UHC systems where participation is voluntary, or is legally mandatory but without effective measures to enforce participation, countries face challenges including the entire population, particularly non-poor informal sector workers who are not targeted for subsidized coverage and marginalized populations.²² It took Germany, for example, 58 years to extend coverage to self-employed groups such as craftsmen and artists.²³

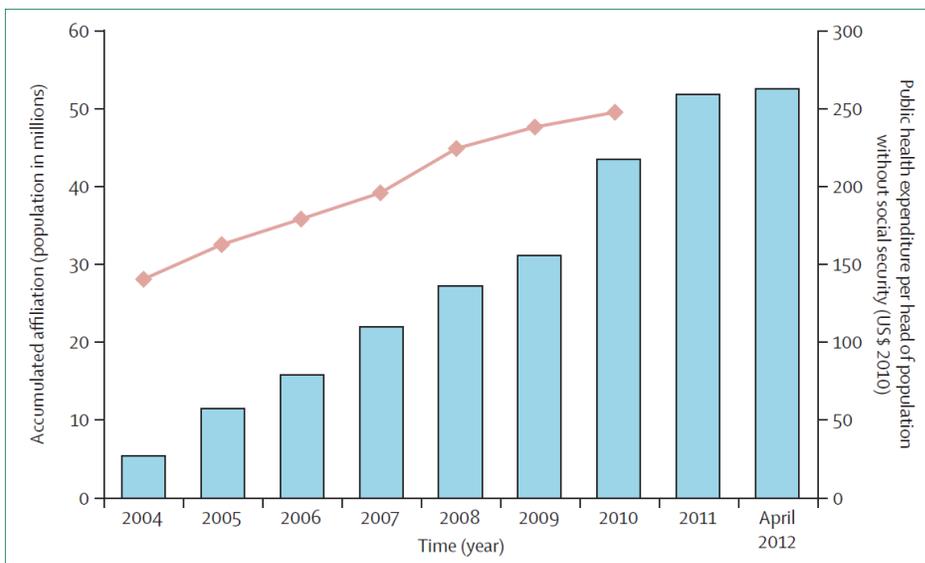
Nearly all countries that have achieved population coverage of 90 percent or higher have legally mandated participation in health coverage.²⁴ Compulsory participation can be politically challenging, however. In Indonesia, for example, when the current national health insurance system was being designed, arguments were made by employers that mandatory participation would raise costs and violate individual rights.²⁵ In the U.S., the individual mandate of the Affordable Care Act (which requires that individuals obtain health coverage or pay a federal fine) was one of the most controversial provisions of the bill, even challenged at the level of the Supreme Court.²⁶ The penalty for not obtaining coverage was repealed in 2018, essentially abolishing the mandate. In Rwanda, the community-based health insurance (CBHI) scheme was made compulsory in 2006 by ministerial

order, and then by law in 2007 in response to low enrollment rates and concerns that adverse selection was threatening the sustainability of the scheme. The decision to make participation in CBHI compulsory was controversial, with the strongest opposition coming from Rwanda’s donors and development partners, who claimed the move was perceived as “authoritarian.”²⁷

Furthermore, compulsory participation in UHC systems can be difficult to enforce, particularly in countries with weak regulatory capacity. Even in formal sector coverage schemes where individuals are covered through their employers mandated by law to participate in the scheme, enforcement can be challenging. In Lao PDR, for example, where a social security scheme for formal private sector firms was introduced in 1999, participation remains low. The low coverage is due to the small proportion of private sector firms that have been targeted for enrolment, and within the target group few firms comply with the mandatory enrolment law.²⁸

Some countries are able to expand population coverage through voluntary coverage but with strong incentives to sub-national governments to expand coverage in their jurisdictions. Mexico’s public health insurance program *Seguro Popular* was established in 2003 to provide coverage for families formerly excluded from traditional social security. Affiliation with *Seguro Popular* is voluntary, but there are incentives to state governments for expanding coverage.²⁹ *Seguro Popular* reached its goal of covering more than 50 million previously uninsured individuals in less than a decade, and Mexico has achieved more than 90 percent population coverage (Figure 1).^{30,31} Challenges remain, however, in terms of effective coverage and equity, especially disparity across rural and urban areas in terms of service availability.³² In Argentina’s Plan Nacer, a voluntary health coverage scheme for the poor, a structured cascade of incentives from the national government to provincial governments to public health providers has led to a gradual expansion of effective coverage to more than 40 percent of the eligible population, although a significant share of the population remains without coverage.³³

Figure 1. Expansion of coverage under Seguro Popular



Source: Knaul et al. (2012).

Comprehensive pooled funding and consolidation

Larger, more diverse risk pools for financing UHC expand the scope for redistribution and equity, with a single national pool offering the greatest opportunity to ensure equity and financial risk protection for the entire population.³⁴ Pooling means accumulating funds from the range of sources to harmonize funding streams and being able to cross-subsidize funds from wealthier to poorer populations and from people at low risk of illness (such as the young) to those with higher risk (such as the elderly). Pooling is also necessary across time because of the uncertainty about how health needs in a population will vary from one year to the next. Solidarity is the commitment to redistribution and cross-subsidization, but mechanisms are also needed.³⁵ Effective pooling of public funds thus requires both a mandate and a fiscal mechanism (such as a resource allocation formula or intergovernmental transfer regime) to accumulate funds for health based on the ability to pay and reallocate them according to need.³⁶

Comprehensive pooled funding not only improves the system's capability for redistribution of funds to achieve equity, a single or large pool also creates more purchasing power and the ability to use strategic purchasing approaches to reduce unproductive cost growth and shift resources to more cost-effective parts of the system to address the most pressing population health needs.³⁷ When strategic purchasing improves efficiency in the use of funds, ministries of finance and other funders may be more open to arguments for funding increases.³⁸ There are also potential efficiencies in single-purchaser systems with lower administrative costs in systems and fewer opportunities for cost-shifting by providers by billing more to the purchasers with more generous payment policies. In the U.S., for example, while competing private insurers report administrative costs to be 12-17 percent of their total outlays, the single public purchaser for the government Medicare program had administrative costs of under 2 percent of total expenditures in 2017.³⁹ Fragmentation in pooling is often translated into fragmentation in purchasing, which weakens the power of purchasing levers to drive efficiency and other health system objectives.

In systems such as in the United Kingdom that are mostly centralized in terms of revenue collection but have varying degrees of expenditure authority at subnational levels, health funding is pooled at the national level and then redistributed geographically using a needs-based allocation formula.^{40,41} In Denmark, a national 8 percent income tax earmarked for health is collected (and pooled) by the central government and then redistributed to five regions and 98 municipalities through a risk-adjusted capitation formula and some activity-based payment.⁴² Multiple pools across revenue streams or at different administrative levels is more the norm globally, however, and the various forms of fragmentation they create bring different challenges to achieving UHC goals. Fragmentation exists when there are barriers to redistribution across the different pools, leading to inequity in contribution rates, benefits, and/or per capita expenditures.⁴³

Sources of fragmentation in pooling

The incremental nature of UHC expansion often leads to the development of multiple risk pools as different programs evolve to cover different population groups.⁴⁴ For example, many low- and

middle-income countries initiate health insurance schemes for the formal sector workforce, since this group is well-organized and easy to reach, but they are also already advantaged. So this often locks these countries into two-tiered systems.⁴⁵ The inequity shows up in variations in contribution rates that are not related to ability to pay, and variation access to services and expenditure per enrolled person. Thailand's three main public health coverage schemes each has its own pooling and purchasing agency—the Social Security Office of the Ministry of Labor for the Social Health Insurance (SHI) Scheme that covers formal sector workers, and the Comptroller General Department of the Ministry of Finance for the Civil Servant Medical Scheme (CSMS) that covers government employees and their dependents, and the National Health Security Office for the Universal Coverage (UC) Scheme that covers the remainder of the population. The different purchasing approaches and provider payment systems across the schemes in Thailand has led to a four-fold difference in expenditure per enrolled member, representing both inefficiency and inequity.⁴⁶

Another common obstacle to effective pooling in low- and middle-income countries is the fragmentation of revenue streams, with general tax revenues collected and used through the budget system and largely disbursed as input-based budgets to maintain the health delivery infrastructure, and other sources of revenue pooled in an off-budget fund (such as a public insurer) and disbursed as payments for services.⁴⁷ In countries such as Ghana, Indonesia, the Philippines, and Vietnam, national health insurance systems often get stuck managing a small share of total government health funds as the majority remain in the input-based budget with many obstacles to pooling the budget funds. In the Philippines, for example, the national health insurance system PhilHealth has been operating since the mid-1990s but still only manages less than 15% of total health expenditure, with the remainder either coming from the government input-based budget or out-of-pocket payments.⁴⁸

Multiple pools can also be a feature of system design, as in the case of Germany, where the national health insurance system is operated by more than 100 competing, not-for-profit, nongovernmental “sickness funds,” or Japan that covers the population through 3,000 competing insurance plans. Multiple pools can also exist at the state level in federal systems, such as in India and Mexico with varying levels and approaches resource allocation and outcomes across states.⁴⁹

Fiscal decentralization is another common barrier to effective pooling of public funds for health. In countries with a high degree of fiscal decentralization for collecting revenues and setting priorities for expenditures without a strong equity-based mechanism for redistribution, pooling is more fragmented, which lessens equity and financial protection. In Tajikistan, for example, rapid devolution of both revenue and expenditure authority to local governments in the immediate post-Soviet period led to fragmented pooling across regions and generated a high degree of inequity, with per capita resources for health in the highest-spending region exceeding that of the lowest-spending region by more than 400 percent.⁵⁰ In China, by contrast, strong central control over revenue collection and revenue-sharing coupled with greater decentralization in expenditure decisions may have protected equity through “virtual pooling” at the geographic level while providing incentives for investment in health at the local level with positive effects on health

outcomes.⁵¹ Evidence from OECD countries shows that revenue-sharing rules can help mitigate health inequities associated with fragmented geographic pools from fiscal decentralization.⁵²

Input budgets can also be fragmented, which is another barrier to effective pooling. For example, in many low- and middle-income countries, most health workers are civil servants so salary budgets are determined according to civil service rules and pay scales that are outside of the budget process, and health workers receive their salary directly from the treasury. Although staffing allocations may be based on need, they are often tied to historical staffing patterns with an urban bias and other sources of inefficiency and inequity.⁵³ Staff salaries and allowances account for between nine and 80 percent of total government health expenditure, with an average of 29 percent in Africa and more than 50 percent in the Eastern Mediterranean.⁵⁴ Maintaining separate budgeting and salary payments keeps a large segment of health resources outside of pooling arrangements, where they cannot easily be moved to address variations in health need.⁵⁵

Overcoming fragmentation in pooling

Once multiple pools have been established, it becomes politically difficult to merge or integrate them, as this will require trade-offs with some interest groups losing, or perceiving to lose, their advantages.⁵⁶ It is often also administratively difficult to merge pools, as different pooling agencies typically use different operating systems, such as information systems, systems for contracting with providers, and many other different administrative systems that can be challenging to harmonize. Nonetheless, many countries move in the direction of merging or consolidating multiple pools to gain the benefits of more effective risk-pooling, better redistributive mechanisms and greater equity, stronger purchasing power, and increased administrative efficiency.⁵⁷

Attempts to fully integrate existing multiple pools have become increasingly common. Full integration is the most politically and administratively challenging but has also brought the strongest foundation for improving equity moving forward. Brazil, Ghana, Republic of Korea and Turkey are examples of countries that have successfully integrated multiple health insurance schemes into one and reaped benefits of improved equity and lower administrative costs in their systems, while Vietnam has faced greater challenges.

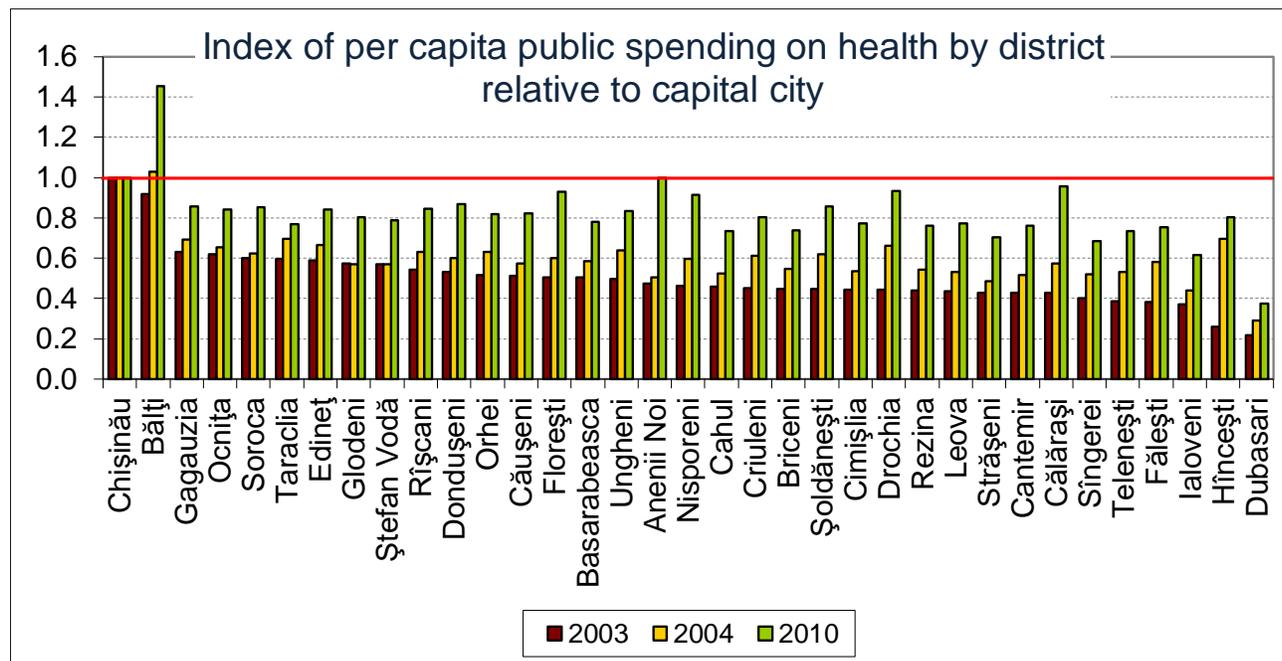
Before the merger of statutory health insurance funds in 2000, health insurance in the Republic of Korea was fragmented and consisted of more than 350 quasi-public insurance funds. The insured were assigned to insurance funds based on workplace (for employees) or residential area (for the self-employed). Before the merger, many health insurance funds for the self-employed in rural areas experienced serious financial distress and ongoing threats of insolvency.⁵⁸ In 1997, the accumulated surplus of employee health insurance funds totaled more than 113 percent of one year's health expenditure, while that of self-employed insurance funds was only 30 percent of one year's expenditure, in spite of some redistribution mechanism and a partial government subsidy.⁵⁹ The merger of the insurance funds into a single pool was politically contentious and was only possible after the election of a new president.⁶⁰ It took several years to complete the merger after the law

was passed. The merger succeeded in reducing administrative costs in Korea’s national health insurance system and improved equity in terms of contribution rates.⁶¹

Turkey integrated its multiple insurance programs and achieved highly equitable cross-subsidization.⁶² Ghana’s universal coverage system started with district-level community-based insurance schemes, which were consolidated into one national program (NHIS). The NHIS has effectively redistributed resources according to the exempt populations across districts.⁶³ In Ghana redistribution from the wealthy to poorer households is made possible by the reliance of progressive general taxation for the majority of funding in the system, and the redistributive function of the national pool. One study found that the poorest 20 percent of households have less than 3 percent of the burden of funding the system, the wealthiest 20 percent almost 60 percent.⁶⁴

Moldova created a new national risk pool from decentralized, fragmented health budgets. In 2004 the Mandatory Health Insurance Company was established to pool all government health funding, including both payroll contributions and tax transfers for priority groups. The reforms significantly reduced fragmentation in the health system (for example, in terms of the flow of funds to health facilities), brought state commitments more in line with fiscal capacity and improved the equity in allocation of financial resources between geographical areas (Figure 1).⁶⁵

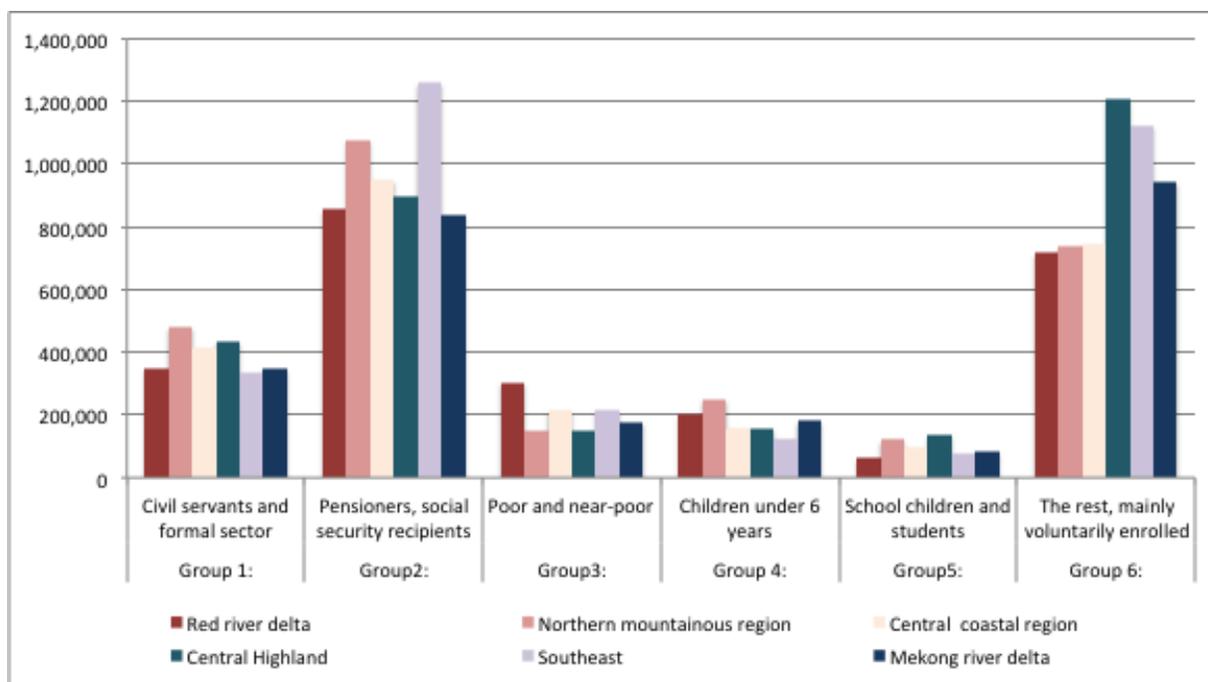
Figure 1. Improved geographic equity in health expenditure after pooling reforms in Moldova



Source: Source: Shishkin and Jowett (2012). A Review of Health Financing Reforms in the Republic of Moldova. Health financing policy paper 2012/1. WHO Regional Office for Europe.

Vietnam, on the other hand, integrated its multiple programs, including the social insurance scheme for the formal sector and the Health Coverage for the Poor (HCP) Program without effectively pooling and redistributing funds to improve equity. So although all beneficiaries fall under the same organizational and management of the purchaser Vietnam Social Security, the revenue available to cover services is highly inequitable across beneficiary groups.⁶⁶ There are 63 provincial pools that each cover populations ranging from 300,000 to 4.8 million people. The large number of membership categories—six—each covered by contributions from different revenue sources with different contribution rates, worsens the fragmentation. Provinces maintain sub-pools for each of the six categories. The social health insurance agency pays district hospitals on a per capita basis to provide basic care to insured individuals. The capitation rates depend on the revenue available for the specific insured category and are not risk-adjusted; rather, they are based on historic spending levels that are driven by available revenue. So, while there is one pool in principle, the fragmentation from the revenue sources flowing into the pool is perpetuated through the provider payment system.⁶⁷ Figure 2 shows the high degree of inequity in the average capitation rates by region for the six membership categories.

Figure 2. Average Capitation Rates in Vietnam by Region (2011)



Source: Phuong et al. (2015)

Indonesia is the latest country to integrate multiple programs in an effort to improve equity and efficiency and make the final push to achieve UHC. On 1 January 2014, the Indonesian government integrated a fragmented set of public health insurance schemes into a single national insurance scheme, *Jaminan Kesehatan Nasional (JKN)*, implemented by the newly formed national social

security agency, *Badan Penyelenggara Jaminan Sosial Kesehatan*, or BPJS Health. In addition to the political challenges of merging multiple existing schemes, a significant amount of negotiation and administrative planning was needed to harmonize the functions and systems of several large public insurance programs. Challenges persist with the institutional arrangements and transfer of some functions and authorities from the Ministry of Health related to the previous insurance program for the poor, and the new purchasing agency BPJS-K.⁶⁸ This has kept the new purchasing agency from being able to fully function as a single strategic purchaser and use its power to drive efficiency and quality in the system.⁶⁹ The implementation of JKN has improved health equity in a number of ways in Indonesia, however, including standardizing benefits that enrollees in public insurance receive, and improving equity in service utilization.⁷⁰

A number of countries unable to fully integrate multiple coverage schemes have attempted to improve redistribution and equity by consolidating a large number of programs into fewer programs with larger pools. The results in terms of improved redistribution and equity have been mixed. France has largely consolidated its insurance into three main programs, with more than 80 percent of the population covered by the largest (“Regime General”). Although the consolidation helped to improve equity, considerable equity gaps remain because of the high level of unpooled copayments that are required to access services, which are paid out-of-pocket by individuals who do not choose to purchase complementary private insurance that covers copayments in the social health insurance system.⁷¹ Thailand consolidated two major programs in 2001 under its Universal Coverage (UC) Scheme, which covers the largest number of beneficiaries and ensures cross-subsidization and equitable financial risk protection among beneficiaries within this group. However, Thailand still maintains three separate insurance programs, and per-beneficiary expenditure across the three is highly skewed because of the lack of redistribution across them.⁷²

Some countries are able to at least partially overcome the equity consequences of fragmented pooling by standardizing key features of programs across pools and employing redistributive mechanisms. Japan’s system still has over 3,000 insurance plans, in large part because better-off entrenched groups do not want their premium rates increased, reflecting the political economy challenges of improving fairness in a fragmented system.⁷³ Disparities in premium rates persist, with plans covering wealthier individuals able to offer lower premium rates.^{74,75} Although Japan has maintained multiple risk pools, the country still has managed to achieve substantial fairness through a combination of standardized benefits and standardized provider payments across plans, intergovernmental transfers of subsidies, as well as transfers between funds to maintain equity in contributions and expenditures. The insurance plans for large corporations actually transfer about 40 percent of the premiums they collect directly to the elderly care risk pool managed by the government. This transfer is on top of the general revenue subsidies going to these plans. The cross-subsidization is imperfect, however. These redistributive mechanisms are not keeping pace with Japan’s rapidly ageing population, and there are widening disparities in the premium rates collected by different risk pools and plans.⁷⁶

In Germany, imbalances in revenues and expenditures across sickness funds serving populations with different risk profiles led to a 2009 reform that required all funds collected by the sickness funds to

be pooled in a new central fund, and then redistributed back to the sickness funds according to a risk-adjusted capitation formula using information on individual risk such as age, sex and indicators of morbidity.^{77,78} The latest risk adjustment mechanism in Germany's sickness fund system is the result of a long journey begun in 1994 that has been both technically complex and politically challenging.⁷⁹ The redistribution mechanism has improved equity by reducing the variability in contribution rates across individuals enrolled in different sickness funds. The proportion of individuals paying highly variable rates (more than one percentage point from the average rate) was 27 percent in 1994, but contribution rates have now largely, but not entirely, converged.⁸⁰

Subsidization

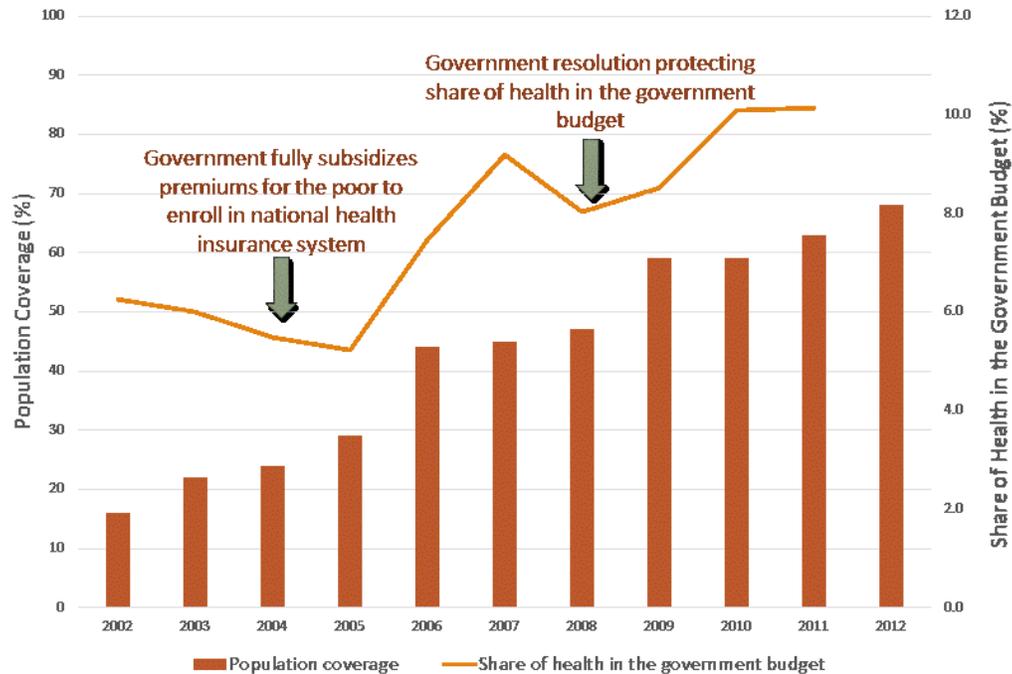
The principle of fairness and equity in health financing and the goal of UHC goal of financial protection require that individuals contribute based on their ability to pay and access funds according to need for health services.⁸¹ Furthermore, compulsory participation would not be fair or feasible for the poor without subsidies to make participation affordable. Subsidization is therefore an essential element of UHC policies to ensure the full and equitable inclusion of the poor in the health system.⁸²

Countries allocate and apply subsidies in different ways depending on how UHC systems are organized. In the U.K.'s National Health Service (NHS), entitlement to access health services is universal for all residents, so subsidies from general revenues are allocated through the national budget and distributed at the time the national government approves the NHS budget. In Brazil, subsidized health care system is available to all citizens through the Unified Health System (SUS), but some implicit targeting occurs as wealthier individuals choose additional private coverage.⁸³ In Thailand, subsidies for coverage of the poor are allocated to the UC Scheme. The UC Scheme is funded by general revenues through an annual negotiated per capita funding level, the money is transferred to the NHSO in a lump sum through one grant line in the budget. In countries that have a largely public delivery system funded by the general budget but with large user fees at the point of service, subsidies focus on fee waivers or vouchers for the poor for services provided in public facilities. In Bangladesh, for example, a voucher program entitles women to access free antenatal care, delivery care, emergency referral, postpartum care services, and cash stipends to cover transportation costs and purchases of nutritious foods and medicines.⁸⁴

In countries with health financing for UHC organized through a social health insurance system, government subsidies are typically in the form of full or partial premium subsidies for the poor or other target population. Countries a variety of targeting methods based on income or other proxies to identify the vulnerable population.⁸⁵ In France the NHI system subsidizes premiums for the poor as well as supports a complementary program that covers patient cost sharing for the poor or vouchers for private complementary insurance coverage. In Vietnam, the government fully subsidizes health insurance premiums for children under 6, the elderly, and the poor, and partially subsidizes premiums for the near-poor and students. The poor are identified through local targeting that includes an economic survey and voting among community leaders.⁸⁶ Large increases in coverage were achieved when Vietnam committed to subsidize priority population groups, and again when a

commitment was made through a national government resolution to protect the share of the general budget that is allocated to health (Figure 3).

Figure 3. Trends in general budget financing and national health insurance coverage in Vietnam



Source: Cashin (2016) and Tandon et al. (2014)

In Ghana’s NHIS, poor and vulnerable groups are exempt from payment NHIS premiums, and although a direct premium is not paid on their behalf, they are subsidized through the earmarked funds from the VAT. Exempt groups include all seniors aged 70 and above, retirees who contributed to the social security program, children under 18, pregnant women, and indigents. Overall 65–68 percent of members fall into one of the exempt groups.⁸⁷

Where subsidies work well, they have been instrumental in expanding coverage. In China, for example, the government subsidizes 85 percent of premiums for farmers under the New Rural Cooperative Medical Scheme, which was instrumental in the increase in coverage for rural residents from 13 to 93 percent between 2003 and 2008.⁸⁸ In the Philippines, coverage by the PhilHealth national health insurance system had stagnated over the first decade of the system, but coverage expanded rapidly since 2010 when the national government took responsibility for subsidizing those identified as indigent in 2011, then further extended subsidies to the near poor in 2014 and to senior citizens in 2015. By 2016 over 90 percent of the population was covered by PhilHealth, although the depth of coverage remains inadequate and out-of-pocket payments still make up more than 50 percent of total health expenditure.⁸⁹

Effective targeting poses many challenges, however, and leakages or incomplete coverage of the target group are common.⁹⁰ In Ghana's NHIS, for example, A high degree of leakage of the subsidy to non-poor individuals in the exempt groups is suspected, while on the other hand many exempt individuals are not enrolled.⁹¹

A review of subsidized premiums for participation of low-income and other target group in social health insurance schemes in eight countries found that a key feature for equitable access and financial protection is an integrated pool for both the contributing and the subsidized population.⁹² Nonetheless, inequity is often found in utilization. Although utilization rates are higher for the subsidized insured relative to the uninsured, formal sector contributing participants typically have higher utilization rates than subsidized participants.⁹³ This further suggests that a consolidated pool relying less on contributory revenue and more on general revenues is the most equitable path to UHC.

Conclusions

UHC requires that an entire population has access to necessary services without facing financial hardship. This demands that individuals are protected against the uncertainty and financial risk of health need, which is the insurance function in any health system. The insurance function works best when the risk pool is large and diversified—a national pool with all risk shared and the burden distributed across the entire population provides the highest degree of predictability, risk-sharing, and equity. This requires a consolidated system that can collect funding from individuals based on their ability to pay and direct resources to those with the highest need. A consolidated risk pool can only exist if there is compulsory participation and subsidized coverage of the poor. The observation of Victor Fuchs in the 1990s after the failure of U.S. President Clinton's large-scale UHC reform effort has held up over the next two decades of UHC efforts and a large body of evidence:

“No nation achieves universal coverage without subsidization and compulsion. Both elements are essential. Subsidies without compulsion will not work; indeed they could make matters worse since the healthy flee from the subsidized common pool, only to return when they expect to use a great deal of care. Compulsion without subsidies would be a cruel hoax for the millions of poor and sick who cannot afford health insurance.”⁹⁴

References

- Ahmed S and Khan M (2011). A maternal health voucher scheme: what have we learned from the demand-side financing scheme in Bangladesh? *Health Policy and Planning* 26 (1): Pages 25–32.
- Alkenbrack S, Hanson K, and Lindelow M (2015). Evasion of “mandatory” social health insurance for the formal sector: evidence from Lao PDR. *BMC Health Serv Res* 15: 473.
- Alves J, Peraltab S, Perelman J. Efficiency and equity consequences of decentralization in health: an economic perspective. *Revista Portuguesa de Saude Publica*. 2013; 31(1): 74–83.
- Arrow K (1963). Uncertainty and the welfare economics of medical care. *American Economic Review* 53: 941-973.
- Barroy H, Or Z, Kumar A, and Bernstein D (2014). Sustaining universal health coverage in France: a perpetual challenge. Health, Nutrition, and Population Discussion Paper. Washington, D.C.: World Bank.
- Blake V (2012). The constitutionality of the Affordable Care Act: an update. *AMA Journal of Ethics* 14(11):873-876.
- Blümel M and Busse R. The German Health Care System. International Health Care System Profiles. The Commonwealth Fund. <https://international.commonwealthfund.org/countries/germany/>. Accessed August 2018.
- Bonfert A, Hennig J, Heymann M, Hussein K, Langenbrunner J, and Ozaltin A (2015). Closing the gap: health coverage for non-poor informal sector workers. Joint Learning Network for Universal Health Coverage.
- Bredenkamp C, Gomez V and Bales S (2017). Pooling health risks to protect people: an assessment of health insurance coverage in the Philippines. Washington, D.C.: World Bank.
- Busse R, Blümel M, Knieps F, and Barnighausen T (2017). Statutory health insurance in Germany: a health system shaped by 135 years of solidarity, self-governance, and competition. *Lancet* 390: 882-897.
- Busse R, and Stock S (2010). "The German Health Care System. 2009." In *International Profiles of Health Care Systems: Australia, Canada, Denmark, England, France, Germany, Italy, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*, ed. T. C. Fund, 28–31. Washington, DC: The Commonwealth Fund.
- Cashin C, Bloom D, Sparkes S, Barroy H, Kutzin J, O’Dougherty S (2017). Aligning public financial management and health financing: sustaining progress toward universal health coverage. Geneva: World Health Organization; (Health Financing Working Paper No. 4).
- Cashin C, Eichler R, Hartel L (2018). Unleashing the potential of strategic purchasing: beyond provider payment mechanisms to the institutional roles, systems and capacities required to implement them. HFG Series: Advances in Health Finance & Governance.

- Castillo-Laborde C, Aguilera-sanhueza X, Himas-Adaui M, et al. (2017). Health insurance scheme performance and effects on health and health inequalities in Chile. *MEDICC Review* 19(2-3):57-64.
- Chemouni B (2018). The political path to universal health coverage: power, ideas and community-based health insurance in Rwanda. *World Development* 106: 87-98.
- Clements J (2015). Regulatory redistribution in the market for health insurance. *American Economic Journal: Applied Economics* 7(2): 109-134.
- Couttolenc B and Dmytraczenko T (2013). Brazil's primary care strategy. Universal Health Coverage Study Series (UNICO). Washington, D.C.: World Bank.
- Duku S, Asenso-Boadi F, Amponsah E, and Arhinful D (2016). Utilization of healthcare services and renewal of health insurance membership: evidence of adverse selection in Ghana. *Health Econ Rev* 6: 43.
- Evans D, Elovainio R, Humphreys G (2010). World Health Report 2010. Health Systems Financing: the path to universal health coverage. Geneva: WHO.
- Fiedler M (2018). How did the ACA's individual mandate affect insurance coverage? Evidence from coverage decisions of higher income people. USC-Brookings Schaeffer Initiative for Health Policy.
- Fiedler M (2017). Repealing the individual mandate would do substantial harm. USC-Brookings Schaeffer Initiative for Health Policy.
- Figueras J, Robinson, R, and Jakubowski E, eds. (2005). *Purchasing to improve health system performance*. European Observatory on Health systems and Policies.
- Frean M, Gruber J, and Sommers B (2016). Premium subsidies, the mandate, and Medicaid expansion: coverage effects of the Affordable Care Act. National Bureau of Economic Research. Working Paper 22213.
- Frenk J, Gómez-Dantés O, and Knaul F (2009). The democratization of health in Mexico: financial innovations for universal coverage. *Bulletin of the World Health Organization* 87:542-548.
- Fuchs V (1996). What every philosopher should know about health economics. *Proc Am Philos Soc* 140: 186-9.
- Fuchs V (2010). Health care is different—that's why expenditures matter. *JAMA* 303(18): 1859-1850.
- García-díaz R and Sosa-Rubi S (2018). Welfare effects of health insurance in Mexico: the case of Seguro Popular de Salud. *PLoS ONE* 13(7): e0199876. <https://doi.org/10.1371/journal.pone.0199876>
- Gaskins M and Busse R (2009). Morbidity-based risk adjustment in Germany: long in coming but worth the wait *Eurohealth* 15(3): 29-32.
- Ikegami N, Yoo B-K, Hashimoto H, Mtsumoto M, Ogata H, Babazono A, Watanabe R, Shibuya K, Yan B-M, Reich M, and Kobayashi Y (2011). *Lancet* 378: 1106-1115.

- Knaul F, Gonzalez-Pier E, Garcio-Junco D, et al. (2012). The quest for universal health coverage: achieving social protection for all in Mexico. *Lancet* 380: 1259-1279.
- Kutzin J (2001). A descriptive framework for country-level analysis of health care financing arrangement. *Health Policy* 56(3): 171-204.
- Kutzin J (2012). Anything goes on the path to universal health coverage? No. *Bulletin of the World Health Organization* 90:867-86.
- Kwon S. and Dodd R., eds. (2011). *The Philippines Health System Review*. Health Systems in Transition. Health Systems in Transition: Asia Pacific Observatory on Health Systems and Policies.
- Maeda A, Araujo E, Cashin C, Harris J, Ikegami N, and Reich M (2014). *Universal Health Coverage for Inclusive and Sustainable Development :A Synthesis of 11 Country Case Studies*. Washington, DC: The World Bank.
- Mondaca A and Chi C (2017). Equity in out-of-pocket payment in Chile. *Revista de Saude Publica* 51:44.
- Nigenda G, Wirtz V, González-Robledo L, and Reich M (2015). *Health Systems & Reform* 1(3): A Special Issue on the Mexican Health System and Reforms pp 217-228.
- OECD (2016). *Universal health coverage and health outcome*. Paris: Organization for Economic Cooperation and Development.
- Pardo C and Schott W (2014). Health insurance selection in Chile: a cross-sectional and panel analysis. *Health Policy and Planning* 29(3): 302–312.
- Patcharanarumol W, Panichkriangkrai W, Sommanuttawechai A, Hanson K, Wanwong Y, and Tangcharoensathien V (2018). Strategic purchasing and health system efficiency: A comparison of two financing schemes in Thailand. *PLoS ONE* 13(4): e0195179. <https://doi.org/10.1371/journal.pone.0195179>.
- Pisani E, Kok M, and Nugroho Kharisma (2017). Indonesia's road to universal health coverage: a political journey. *Health Policy and Planning* 32: 267-276.
- Reich, M., Cashin, C., et al. (2016). Moving towards universal health coverage: lessons from 11 country studies. *Lancet* 387(10020):8011-16 .
- Rothschild M and Stiglitz J (1976). Equilibrium in competitive insurance markets.
- Ruangratanatrai W, Lertmaharit S, Hanvoravongchai P (2015). Equity in health personnel financing after universal coverage: evidence from Thai Ministry of Public Health's hospitals from 2008–2012. *Hum Resour Health* 13:59–67.
- Shihab A, Nurdin A, Kadir A, Thabrany H, and Paturusi I (2017). Equity in utilization of inpatient Services for the National Health Insurance (JKN) Program in Indonesia. *International Journal of Sciences: Basic and Applied Research* 31(2): 58-74.
- Silva H, Strucchi L, Bazan F, Tadiri E, and Ratcliffe H (2016). Plan Nacer/Programa SUMAR: Measurement to ensure effective universal health coverage. *Primary Health Care Performance*

Initiative <https://phcperformanceinitiative.org/plan-nacerprograma-sumar-measurement-ensure-effective-universal-health-coverage> accessed September 2018.

Smith P and Witter S (2004). Risk pooling and health care financing: implications for health system performance. Health, Population, and Nutrition Discussion Paper. Washington, D.C.: The World Bank.

Takaku, R, Bessho S, Nishimura S, and Ikegami N (2015). Fiscal disparities among social health insurance programs in Japan. Chapter 3 in *Achieving and Maintaining Universal Health Coverage for Inclusive and Sustainable Growth: Lessons from Japan*. Washington, DC: World Bank. manuscript in preparation.

Tandon, A., L. Fleisher, R. Li, and W. Yap. 2014. Reprioritizing Government Spending on Health: Pushing an Elephant Up the Stairs? Washington, DC: World Bank.

The Board of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (2017). 2017 Annual Report.

Tracking universal health coverage: 2017 global monitoring report. World Health Organization and International Bank for Reconstruction and Development/The World Bank.

UK Department of Health. Resource Allocation: Weighted Capitation Formula. 7th ed. London. 2011.

Vilcu I, Probst L, Dorjsuren B, and Mathauer I (2016). Subsidized health insurance coverage of people in the informal sector and vulnerable population groups: trends in institutional design in Asia. *International Journal for Equity in Health* 15:165.

Vrangbaek K. The Danish health care system. In: *International profiles of health care systems: Australia, Canada, Denmark, England, France, Germany, Italy, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. Washington (DC): Commonwealth Fund; 2010; 16–18.

Wagstaff A, Flores G, Smits M-F, Chepynoga K, and Eozenou P (2018). Progress on impoverishing health spending in 122 countries: a retrospective observational study. *The Lancet* 6:e180-e192.

Wang H, Zhang L, Yip W, and Hsiao W (2006). Adverse selection in voluntary Rural Mutual Health Care health insurance scheme in China. *Social Science and Medicine* 63(5): 1236-1245.

World Health Organization (2015). *Health workforce 2030: towards a global strategy on human resources for health*. Geneva: World Health Organization.

World Health Organisation (2010). *World Health Report: Health Systems Financing: the path to universal coverage*. Geneva: World Health Organization.

World Health Organization (2000). *The World Health Report 2000 – Health Systems: Improving Performance*. Geneva: World Health Organization.

Yee E (2001). The effects of fiscal decentralization on health care in China. *Univ Ave Undergrad J Econ* (5)1.

Endnotes

- ¹ Evans D, Elovainio R, Humphreys G (2010). World Health Report 2010. Health Systems Financing: the path to universal health coverage. Geneva: WHO.
- ² Fuchs V (1996). What every philosopher should know about health economics. *Proc Am Philos Soc* 140: 186-9.
- ³ Kutzin J (2012). Anything goes on the path to universal health coverage? No. *Bulletin of the World Health Organization* 90:867-86.
- ⁴ OECD (2016). Universal health coverage and health outcome. Paris: Organization for Economic Cooperation and Development.
- ⁵ Fuchs V (2010). Health care is different—that’s why expenditures matter. *JAMA* 303(18): 1859-1850.
- ⁶ World Health Organisation (2010). World Health Report: “Health Systems Financing: the path to universal coverage” WHO, Geneva.
- ⁷ Kutzin J (2001). A descriptive framework for country-level analysis of health care financing arrangement. *Health Policy* 56(3): 171-204.
- ⁸ Arrow K (1963). Uncertainty and the welfare economics of medical care. *American Economic Review* 53: 941-973.
- ⁹ Smith P and Witter S (2004). Risk pooling and health care financing: implications for health system performance. Health, Population, and Nutrition Discussion Paper. Washington, D.C.: The World Bank.
- ¹⁰ Kutzin J (2012). Anything goes on the road to UHC? No. *Bulletin of the World Health Organization* 90:867-868.
- ¹¹ American Academy of Actuaries (2009). Critical issues in health reform: risk pooling. Washington, D.C.
- ¹² Arrow (1963).
- ¹³ Rothschild M and Stiglitz J (1976). Equilibrium in competitive insurance markets.
- ¹⁴ Clements J (2015). Regulatory redistribution in the market for health insurance. *American Economic Journal: Applied Economics* 7(2): 109-134.
- ¹⁵ Wang H, Zhang L, Yip W, and Hsiao W (2006). Adverse selection in voluntary Rural Mutual Health Care health insurance scheme in China. *Social Science and Medicine* 63(5): 1236-1245.
- ¹⁶ Duku S, Asenso-Boadi F, Amponsah E, and Arhinful D (2016). Utilization of healthcare services and renewal of health insurance membership: evidence of adverse selection in Ghana. *Health Econ Rev* 6: 43.
- ¹⁷ Pardo C and Schott W (2014). Health insurance selection in Chile: a cross-sectional and panel analysis. *Health Policy and Planning* 29(3): 302–312.
- ¹⁸ Castillo-Laborde C, Aguilera-sanhueza X, Himas-Adaay M, et al. (2017). Health insurance scheme performance and effects on health and health inequalities in Chile. *MEDICC Review* 19(2-3):57-64.
- ¹⁹ Mondaca A and Chi C (2017). Equity in out-of-pocket payment in Chile. *Revista de Saude Publica* 51:44.
- ²⁰ Frean M, Gruber J, and Sommers B (2016). Premium subsidies, the mandate, and Medicaid expansion: coverage effects of the Affordable Care Act. National Bureau of Economic Research. Working Paper 22213.
- ²¹ Fiedler M (2017). Repealing the individual mandate would do substantial harm. USC-Brookings Schaeffer Initiative for Health Policy.
- ²² Bonfert A, Hennig J, Heymann M, Hussein K, Langenbrunner J, and Ozaltin A (2015). Closing the gap: health coverage for non-poor informal sector workers. Joint Learning Network for Universal Health Coverage.
- ²³ OECD (2016).

-
- ²⁴ OECD (2016).
- ²⁵ Pisani E, Kok M, and Nugroho Kharisma (2017). Indonesia's road to universal health coverage: a political journey. *Health Policy and Planning* 32: 267-276.
- ²⁶ Blake V (2012). The constitutionality of the Affordable Care Act: an update. *AMA Journal of Ethics* 14(11):873-876.
- ²⁷ Chemouni B (2018). The political path to universal health coverage: power, ideas and community-based health insurance in Rwanda. *World Development* 106: 87-98.
- ²⁸ Alkenbrack S, Hanson K, and Lindelow M (2015). Evasion of "mandatory" social health insurance for the formal sector: evidence from Lao PDR. *BMC Health Serv Res* 15: 473.
- ²⁹ Frenk J, Gómez-Dantés O, and Knaul F (2009). The democratization of health in Mexico: financial innovations for universal coverage. *Bulletin of the World Health Organization* 87:542-548.
- ³⁰ OECD (2016).
- ³¹ Knaul F, Gonzalez-Pier E, Garcia-Junco D, et al. (2012). The quest for universal health coverage: achieving social protection for all in Mexico. *Lancet* 380: 1259-1279.
- ³² Garcia-diaz R and Sosa-Rubi S (2018). Welfare effects of health insurance in Mexico: the case of Seguro Popular de Salud. *PLoS ONE* 13(7): e0199876. <https://doi.org/10.1371/journal.pone.0199876>
- ³³ Silva H, Strucchi L, Bazan F, Tadiri E, and Ratcliffe H (2016). Plan Nacer/Programa SUMAR: Measurement to ensure effective universal health coverage. Primary Health Care Performance Initiative <https://phcperformanceinitiative.org/plan-nacerprograma-sumar-measurement-ensure-effective-universal-health-coverage> accessed September 2018.
- ³⁴ Smith and Witter (2004).
- ³⁵ Maeda A, Araujo E, Cashin C, Harris J, Ikegami N, and Reich M (2014). Universal Health Coverage for Inclusive and Sustainable Development: A Synthesis of 11 Country Case Studies. Washington, DC: The World Bank.
- ³⁶ Cashin et al. (2016).
- ³⁷ Figueras J, Robinson, R, and Jakubowski E, eds. (2005). *Purchasing to improve health system performance*. European Observatory on Health systems and Policies.
- ³⁸ Cashin C, Bloom D, Sparkes S, Barroy H, Kutzin J, O'Dougherty S (2017). Aligning public financial management and health financing: sustaining progress toward universal health coverage. Geneva: World Health Organization; (Health Financing Working Paper No. 4).
- ³⁹ The Board of Trustees, Federal Hospital Insurance and Federal Supplementary Medical Insurance Trust Funds (2017). 2017 Annual Report.
- ⁴⁰ UK Department of Health. Resource Allocation: Weighted Capitation Formula. 7th ed. London. 2011.
- ⁴¹ Takaku, R, Bessho S, Nishimura S, and Ikegami N (2015). Fiscal disparities among social health insurance programs in Japan. Chapter 3 in *Achieving and Maintaining Universal Health Coverage for Inclusive and Sustainable Growth: Lessons from Japan*. Washington, DC: World Bank. manuscript in preparation.
- ⁴² Vrangbaek K. The Danish health care system. In: *International profiles of health care systems: Australia, Canada, Denmark, England, France, Germany, Italy, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*. Washington (DC): Commonwealth Fund; 2010; 16–18.
- ⁴³ Kutzin (2012).
- ⁴⁴ Maeda et al. (2014).
- ⁴⁵ Kutzin (2012).

-
- ⁴⁶ Patcharanarumol W, Panichkriangkrai W, Sommanuttaweechai A, Hanson K, Wanwong Y, and Tangcharoensathien V (2018). Strategic purchasing and health system efficiency: A comparison of two financing schemes in Thailand. *PLoS ONE* 13(4): e0195179. <https://doi.org/10.1371/journal.pone.0195179>.
- ⁴⁷ Cashin et al. (2016).
- ⁴⁸ Kwon S. and Dodd R., eds. (2011). *The Philippines Health System Review*. Health Systems in Transition. Health Systems in Transition: Asia Pacific Observatory on Health Systems and Policies.
- ⁴⁹ Nigenda G, Wirtz V, González-Robledo L, and Reich M (2015). *Health Systems & Reform* 1(3): A Special Issue on the Mexican Health System and Reforms pp 217-228.
- ⁵⁰ Cashin et al. (2017)
- ⁵¹ Yee E. The effects of fiscal decentralization on health care in China. *Univ Ave Undergrad J Econ*. 2001; (5)1.
- ⁵² Alves J, Peraltab S, Perelman J. Efficiency and equity consequences of decentralization in health: an economic perspective. *Revista Portuguesa de Saude Publica*. 2013; 31(1): 74–83.
- ⁵³ World Health Organization (2015). *Health workforce 2030: towards a global strategy on human resources for health*. Geneva: World Health Organization.
- ⁵⁴ Hernandez P, Dräger S, Evans D. *Measuring expenditure for the health workforce: evidence and challenges*. Evidence and Information for Policy. Geneva: World Health Organization; 2006.
- ⁵⁵ Cashin et al. (2017).
- ⁵⁶ Maeda et al. (2014).
- ⁵⁷ Maeda et al. (2014).
- ⁵⁸ Kwon S (2015). Republic of Korea: Merger of statutory health insurance funds. Geneva: World Health Organization.
- ⁵⁹ Kwon (2015).
- ⁶⁰ Ibid.
- ⁶¹ Ibid.
- ⁶² Atun et al. 2013.
- ⁶³ Blanchet N and Acheampong O (2013). Building on community-based health insurance to expand national coverage: the case of Ghana. Health Finance and Governance Project. Bethesda, MD: Health Finance & Governance Project, Abt Associates Inc.
- ⁶⁴ Akazili, J., Gyapong, J., & McIntyre, D. (2011). Who pays for health care in Ghana? *International Journal for Equity in Health*, 10:26.
- ⁶⁵ Source: Source: Shishkin and Jowett (2012). A Review of Health Financing Reforms in the Republic of Moldova. Health financing policy paper 2012/1. WHO Regional Office for Europe.
- ⁶⁶ Somanathan A, Tandon A, Dao H, Hurt K, Fuenzalida H (2014). Moving toward universal coverage of social health insurance in Vietnam: assessment and options. Washington (DC): World Bank; 2014.
- ⁶⁷ Phuong N, Oanh T, Phuong, H, Tien T, and Cashin C (2015). Assessment of systems for paying health care providers in Vietnam: implications for equity, efficiency and expanding effective health coverage. *Global Public Health Journal*. Special Supplement on Health Systems Research in Vietnam.
- ⁶⁸ Cashin C, Eichler R, Hartel L (2018). Unleashing the potential of strategic purchasing: beyond provider payment mechanisms to the institutional roles, systems and capacities required to implement them. HFG Series: Advances in Health Finance & Governance.

-
- ⁶⁹ Cashin, Eichler and Hartel (2018).
- ⁷⁰ Shihab A, Nurdin A, Kadir A, Thabrany H, and Paturusi I (2017). Equity in utilization of inpatient Services for the National Health Insurance (JKN) Program in Indonesia. *International Journal of Sciences: Basic and Applied Research* 31(2): 58-74.
- ⁷¹ Barroy H, Or Z, Kumar A, and Bernstein D (2014). Sustaining universal health coverage in France: a perpetual challenge. Health, Nutrition, and Population Discussion Paper. Washington, D.C.: World Bank.
- ⁷² Patcharanarumol et al. (2018).
- ⁷³ Maeda et al. (2014).
- ⁷⁴ Ikegami N, Yoo B-K, Hashimoto H, Mtsumoto M, Ogata H, Babazono A, Watanabe R, Shibuya K, Yan B-M, Reich M, and Kobayashi Y (2011). *Lancet* 378: 1106-1115.
- ⁷⁵ Takaku, R, Bessho S, Nishimura S, and Ikegami N (2015).
- ⁷⁶ Takaku et al. (2015).
- ⁷⁷ Busse R, and Stock S (2010). "The German Health Care System. 2009." In *International Profiles of Health Care Systems: Australia, Canada, Denmark, England, France, Germany, Italy, the Netherlands, New Zealand, Norway, Sweden, Switzerland, and the United States*, ed. T. C. Fund, 28–31. Washington, DC: The Commonwealth Fund.
- ⁷⁸ Blümel M and Busse R. The German Health Care System. *International Health Care System Profiles*. The Commonwealth Fund. <https://international.commonwealthfund.org/countries/germany/>. Accessed August 2018.
- ⁷⁹ Gaskins M and Busse R (2009). Moridity-based risk adjustment in Germany: long in coming but worth the wait *Eurohealth* 15(3): 29-32.
- ⁸⁰ Busse R, Blumel M, Knieps F, and Barnighausen T (2017). Statutory health insurance in Germany: a health system shaped by 135 years of solidarity, self-governance, and competition. *Lancet* 390: 882-897.
- ⁸¹ World Health Organization (2000). *The World Health Report 2000 – Health Systems: Improving Performance*. Geneva, Switzerland: World Health Organization.
- ⁸² Reich M, Cashin C, et al. (2016). Moving towards universal health coverage: lessons from 11 country studies. *Lancet* 387(10020):8011-16.
- ⁸³ Couttolenc B and Dmytraczenko T (2013). Brazil's primary care strategy. *Universal Health Coverage Study Series (UNICO)*. Washington, D.C.: World Bank.
- ⁸⁴ Ahmed S and Khan M (2011). A maternal health voucher scheme: what have we learned from the demand-side financing scheme in Bangladesh? *Health Policy and Planning* 26 (1): Pages 25–32.
- ⁸⁵ INKE's paper
- ⁸⁶ Somanathan A, Tandon A, Dao H, Hurt K, Fuenzalida H (2014). Moving toward universal coverage of social health insurance in Vietnam: assessment and options. Washington (DC): World Bank; 2014.
- ⁸⁷ Schieber et al. (2012).
- ⁸⁸ Barber and Yao (2010).
- ⁸⁹ Bredenkamp C, Gomez V and Bales S (2017). Pooling health risks to protect people: an assessment of health insurance coverage in the Philippines. Washington, D.C.: World Bank.
- ⁹⁰ Maed et al. (2014).
- ⁹¹ Schieber et al. (2012).

⁹² Vilcu I, Probst L, Dorjsuren B, and Mathauer I (2016). Subsidized health insurance coverage of people in the informal sector and vulnerable population groups: trends in institutional design in Asia. *International Journal for Equity in Health* 15:165.

⁹³ Vilcu (2016).

⁹⁴ Fuchs (1996).