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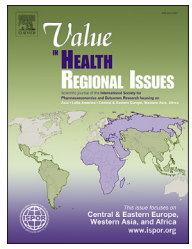

Health Policy Analysis

Impact of Disparities in Reimbursement Rules Between Public and Private Sectors on Accessibility to Care in Moroccan Mandatory Health Insurance: A Cross-Sectional Study

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ABSTRACT

Background: Disparities in the reimbursement rules between the 2 funds that manage mandatory health insurance in Morocco could negatively affect the accessibility of insured persons to healthcare services and products. **Objective:** The objective is to analyze the impact of these disparities on access to care and to assess the insured's copayment difference between the 2 funds. **Methods:** Healthcare utilization rates of the insured population in the 2 funds were analyzed by sector, sex, and age groups for 2014. We also looked at the percentage of copayment paid by the insured depending on the fund, methods of reimbursement, type of care, and nature of diseases. The analysis was based on data retrieved and aggregated at the National Agency for Health Insurance. **Results:** The healthcare utilization rate differs significantly between the 2 funds. It is higher for the insured in the public sector (45%) compared with those in the private sector (18.5%) ($P < .001$). The healthcare utilization rate differs significantly according to the age groups in the 2 sectors ($P < .001$, respectively), and according to the sex of the insured in the 2 sectors (the healthcare utilization rate is higher for women than for men [$P < .001$, respectively]). The copayment percentage incurred by insured persons was 32.1% for employees in the public sector and 36.4% for employees in the private sector. **Conclusion:** Differences in reimbursement rules between the 2 funds may be the cause of inequity in access to care between insured persons. This situation can jeopardize the objectives of a universal and equitable health insurance scheme.

Keywords: mandatory health insurance, healthcare utilization rate, copayment, disparities.

Introduction

All United Nations member states have agreed to achieve universal health coverage by 2030 as part of the Sustainable Development Goals.[1] Universal healthcare systems seek to ensure access to care on the basis of need rather than income and to improve the health status of all citizens.[2] In a world that is undergoing major environmental, societal, and economic changes, these latter fundamentally influence patterns of human health, international healthcare, and public health activities.[3] Despite the plea of political and health authorities, including the World Health Organization, to reduce health inequities, comparatively little information is available on the potential of health insurance systems to reduce inequalities in the treatment and outcome of specific diseases.[4,5]

Studies have shown that subsidies help low-income families to access health insurance, which improves both the health of these families and the economy as a result. With this health insurance, low-income families can save money and direct their expenses to other needed services and goods that will improve their quality of life.[6]

It also has been shown that many socioeconomic and racial inequalities in access to care have been recorded[7-9] despite the recognition that healthcare can be an important means of reducing inequalities in a given population.[10] Burstrom's conceptual framework of the continuum of healthcare states that

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inequalities of care can occur at any stage of the continuum.[11] This example can be observed even in the world's major powers, such as the United States, where patients who are affiliated with Medicaid find it difficult to find healthcare providers willing to accept their insurance.[12] Low-income people with chronic conditions are also less likely to receive care than those who have greater financial means.[13]

Basic Medical Coverage came into being in Morocco with the Law 65-00 in 2002 and more precisely with the publication of the implementing decrees in 2005.

Morocco's basic health insurance plan is made up of 2 schemes. The mandatory health insurance (MHI) scheme in 2018 covered around 34% of the Moroccan population, mainly public and private sector formal employees as well as self-employed persons. The Medical Assistance Scheme (RAMED) scheme covers the underprivileged population.

Despite that in the preamble to Law 65-00 it is clear that MHI in both funds—public employees managed by the National Fund for Social Welfare Organizations (NFSWO, named CNOPS in Morocco) and private employees managed by the National Social Security Fund (NFSS, named CNSS in Morocco)—should eventually converge on the same basket and the same rules for reimbursement, the differences between the 2 funds exist and persist. They have had an impact on the healthcare utilization rate (rate of use of care and reimbursement request thereafter) for the populations affiliated to the 2 funds and the rates of copayment (the share of cost paid by the insured and not covered by the health insurance funds) that remain the responsibility of the insured in both funds. Table 1 shows the difference in reimbursement rate between the 2 MHI funds in Morocco.[14,15]

Throughout this study, we analyzed whether the different reimbursement rules and the copayment incurred by the insured persons have an impact on access to healthcare services in the 2 MHI funds.

Methods

We analyzed the recourse of the insured population, according to sex and age groups, in the 2 MHI funds in Morocco for the reimbursement of their care costs paid directly or through the third-party payer mode in 2014. For each health insurance fund, we defined the percentage of people who had at least 1 episode of care and filed for a refund at the level of the corresponding health insurance fund. We also analyzed the percentage of copayment incurred by insured persons in both funds (NFSWO and NFSS) in relation to the amounts committed to the type of care (outpatient or inpatient) and pathology (chronic diseases or not). The data were retrieved from the 2 MHI funds information systems. The analysis was based on data collected and aggregated at the National Agency for Health Insurance, responsible for the regulation and oversight of the mandatory health insurance system.

Comparisons between the qualitative variables were performed using the chi-square or Fisher exact test, and the study of the parameters influencing the healthcare utilization rate was done through a logistic regression. The statistical analysis was carried out using the SPSS 13.0 software.

We excluded from the study 497 935 insured persons affiliated with the NFSS, the fund that manages private-sector employees, who had closed files (that is, they are not up to date with their contributions). The population of the study is, therefore, 7 930 224 insured within the 2 national health insurance funds.

In this work, the self-employed population is excluded because they have not yet officially been integrated into any MHI scheme. The RAMED population is also excluded because there is such kind of data on this. The population included in our work and for which we have data thus represents 23.4% of the Moroccan population.

Table 1 – Differences in the reimbursement rates of the NFSWO and NFSS services in Morocco.[14,15]

Type of medical services	NFSWO (reimbursement rate) (%)	NFSS (reimbursement rate) (%)
Hospitalization in private sector	90	70
Hospitalization in public sector	100	70
Ambulatory care	80	70
Chronic diseases	100	70-99

NFSS indicates National Social Security Fund; NFSWO, National Fund for Social Welfare Organizations.

Because the study is retrospective and the data used in this article are anonymous, we did not need ethics approval.

Results

At the end of 2014, 8.4 million citizens were beneficiaries of the MHI scheme: 5.4 million in the private sector (managed by NFSS) and 3 million in the public sector (managed by NFSWO), with an increase of 102% between 2006 and 2014 (from 4.2 to 8.4 million insured citizens).

The population in the NFSS,[16] whose average age is 29 years, is represented in Figure 1.

The population in the NFSWO,[16] whose average age is 35 years, is represented in Figure 2.

The distribution of the MHI population by region is represented in Table 2.

Nevertheless, in some regions, the share of the public sector-insured scheme managed by the NFSWO is greater than that of the private sector-insured managed by the NFSS, for example, Guelmim Es-semara, Laayoune Boujdour Es-sakia El Hamra, and Rabat Salé Zemmour Zear. In other regions, it is the opposite, with the share of the private sector insured by NFSS greater than the

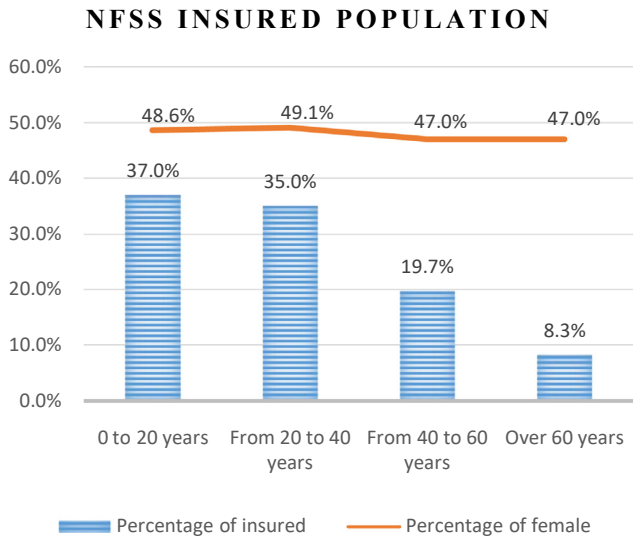

Fig. 1 – Percentage of NFSS insured by age group and the proportion of female patients. NFSS indicates National Social Security Fund.

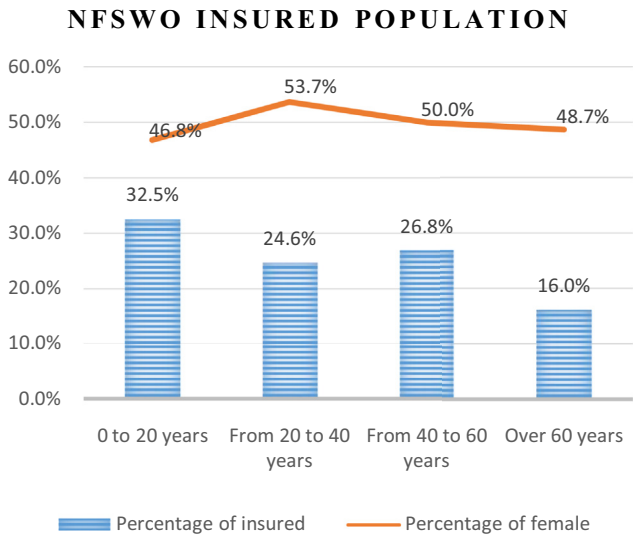

Fig. 2 – Percentage of NFSWO insured by age group and the share of female. NFSWO indicates National Fund for Social Welfare Organizations.

public sector insured by the NFSWO, for example, Grand Casablanca, Souss Massa Draa, Doukkala Abda, and Gharb Chrarda Beni Hssen.[16]

The wage level of the public-sector employees affiliated with the NFSWO and private-sector employees affiliated with the NFSS were as follows: less than 280 euros per month: 0% NFSWO versus 68% NFSS, between 280 and 500 euros per month: 22% NFSWO versus 22% NFSS, between 500 and 1000 euros per month: 30% NFSWO versus 7% NFSS, between 1000 and 1600 euros per month: 14% NFSWO versus 2% NFSS, more than 1600 euros per month: 10% NFSWO versus 2% NFSS, and undetermined: 24% NFSWO versus 0% NFSS.[16]

The healthcare utilization rate or the use of healthcare followed by the filing of a refund file with a health insurance fund varies considerably according to the MHI fund (public or private sector) and sex of the insured. It is higher for employees and those insured in the public sector (45% for the NFSWO) than those in the private sector (18.5% for the NFSS) ($P < .001$). The rate also differs significantly according to the age groups in the 2 sectors ($P < .001$ in both groups) and according the sex of the insured. The healthcare utilization rate is higher for women than men in both the public sector (62.1% vs 37.9%) and private sector (59.1% vs 40.9%) funds ($P < .001$, respectively). Table 3 summarizes healthcare utilization rates in each sector by sex and age group.

There is no difference between the 2 funds in copayment, although the rates of reimbursement are different. It was 32.1% for the public sector (NFSWO) and 36.4% for the private sector (NFSS). The rate of copayment differs according to the situation; for example, it was 41% and 47% for ambulatory care in NFSWO and NFSS, respectively. For hospital care, copayment is 10% for NFSWO and 23% for NFSS.

Copayments are also higher for direct disbursements: 44% and 48% in NFSWO and NFSS, respectively, compared with 5% and 18% for third-party payment. For chronic diseases, copayments represent 18% and 23% of policyholder spending in the NFSWO and NFSS, respectively, against 41% for the 2 funds for other pathologies.

The logistic regression table shows that healthcare utilization was greater in the NFSWO than in the NFSS (odds ratio: 3.46, 95% CI 3.45-3.47, $P < .001$) and in female than in male users (odds ratio: 1.59, 95% CI 1.58-1.59, $P < .001$), and increased with age of the insured.

Discussion

The Basic Medical Coverage scheme is an ambitious project set up by Morocco in 2002 that started at the end of 2005 after the publication of the application decree. The ultimate objective is to cover the entire Moroccan population with a medical coverage scheme adapted to each socioeconomic category of the population.[17]

This system includes 2 sub-schemes: MHI, which covers the salaried population in both the public and private sectors and the independent population composed of professionals such as doctors, pharmacists, lawyers, and traders. The second scheme is the

Table 2 – Percentage of the population covered by MHI by region and by fund.[16]

Region	Percentage of the population covered by MHI (%)	NFSWO (public sector) (%)	NFSS (private sector) (%)
Greater Casablanca	19.9	23.6	76.4
Rabat Salé Zemmour Zear	12.5	56.3	43.7
Souss Massa Draa	11.6	26.3	73.7
Marrakech Tensift Al-Haouz	8.1	30.5	69.5
Tangier Tetouan	7.8	30.0	70.0
Meknes Tafilalet	6.5	43.1	56.9
Gharb Chrarda Beni Hssen	5.3	29.9	70.1
Doukkala Abda	5.2	29.2	70.8
Oriental	5.2	45.5	54.5
Fès Boulemane	5	40.1	59.9
Chaouia Ouardigha	4.2	38.4	61.6
Tadla Azilal	3	44.1	55.9
Taza Al Hoceima Taounate	2.6	46.8	53.2
Guelmim Es-semara	1.4	67.3	32.7
Laayoune Boujdour Es-sakia El Hamra	1.3	59.1	40.9
Oued Eddahab-Lagouira	0.4	53	47

MHI indicates mandatory health insurance; NFSS, National Social Security Fund; NFSWO, National Fund for Social Welfare Organizations.

Table 3 – Number and percentage of healthcare utilization by sector, sex and age range of insured persons who have addressed a refund file compared with all insured.

Age (Year)	Healthcare utilization rate and reimbursement file deposed in NFSWO			Healthcare utilization rate and reimbursement file deposed in NFSS		
	Female (%)	Male (%)	Total (%)	Female (%)	Male (%)	Total (%)
0-25	212 593 (34.5)	204 054 (29.6)	416 647 (31.9)	141 365 (12.9)	121 233 (10.7)	262 598 (11.8)
25-40	162 947 (66.5)	81 998 (45.2)	244 945 (57.5)	158.081 (24.9)	67 246 (10.6)	225 327 (17.7)
40-60	275 766 (67.8)	179 209 (44.1)	454 975 (56)	149 298 (32.5)	91 729 (18)	241 027 (27.9)
60 +	196 082 (48.7)	51 152 (62.0)	247 234 (50.9)	87 780 (43.4)	91 079 (39.6)	178 859 (41.4)
Total	847 388 (50.7)	516 413 (38)	1 363 801 (45)	536 524 (22.4)	371 287 (14.8)	907 811 (18.5)

NFSS indicates National Social Security Fund; NFSWO, National Fund for Social Welfare Organizations.

Medical Assistance Scheme (RAMED), which covers the economically deprived population. The effective start of the first scheme was in 2005 and the second was in 2008.

At the beginning of the MHI scheme, the 2 baskets of care of the 2 funds were different from each other. The NFSWO care basket, the fund that manages public-sector employees and has managed health insurance for more than 50 years, is more extensive and includes ambulatory care, hospital care, and chronic disease-related care. Nevertheless, the care basket of the NFSS, the fund that manages the private-sector employees and which entered the health insurance business with the MHI startup, was more restrictive and covered only hospital care, pregnant women and children under 12 years, and care related to chronic diseases. This was to control MHI expenditures so as to perpetuate the system and control its balance for as long as possible.

The healthcare utilization rate was significantly different between the public-sector and private-sector funds. This could be the cause of unequal access to healthcare among the MHI insured, a situation that is inconsistent with the vision and objective of Law 65-00 and international conventions and norms in this field. The preamble of the law specified that the 2 baskets of care reimbursed by the 2 funds and the reimbursement rates should converge to minimize differences in access to care. The difference in the benefit package basket of care between the 2 funds and in the reimbursement rates was certainly the cause of inequality in access to care in addition to other causes that could be confirmed by other studies.

The assumptions made to explain these differences are numerous. We can cite, among others, the higher repayment rate in the public sector compared with the private sector in addition to complementary health insurance (mutual)s, to which public-sector employees are affiliated, which reduce to a minimum the level of copayment and encourage people to seek care and be fully reimbursed. Insured persons of the NFSWO have the right to be affiliated systematically with a mutual according to their professions. These mutuals reimburse part of the nonreimbursable expenses by the NFSWO. The situation is different for the NFSS insured, who have the right to subscribe to private insurance to cover part of their nonreimbursable expenses, but this could be costly compared to the amounts paid for by the NFSWO mutuals.

Public insured persons are more accustomed to seeking care and being reimbursed because their medical coverage dates back to the 1960s, whereas the NFSS did not implement health insurance before 2006.

Moreover, the low income level of insured persons in the private sector and the absence of certain benefits in the basket of care covered by the NFSS, such as dental care, until 2014 hampers the financial accessibility of these insured to care.[16]

The regional differences between the percentage of insured persons in the public and private sectors are mainly due to that in some cities, there are more insured persons in the public sector because more public administrations are established. This is the case in the administrative capital of the kingdom, Rabat. In other cities, the insured of the private sector are more numerous because of the abundance of private companies, such as for the economic capital of the kingdom (Casablanca).

The discrepancy in the reimbursement rate between the 2 funds is worrisome because it could lead to delays or withdrawal of care from insured persons working in private sector, justified by their low income. The insured working in the private sector who are affiliated with the NFSS have low wages and are therefore unable to pay the costs of care and then get reimbursed by their health insurance fund. These people prefer the third-party model that allows them to access care when they get sick without having to pay for the healthcare costs. Their lower income often does not allow for advance payments, and the NFSS has lower reimbursement rates than the NFSWO. For the year 2015, about half of the public-sector population recorded 1 or more episodes of care from the health insurance fund, compared with less than one-fifth of the private-sector population.[18]

The results of our study show that the healthcare utilization rate increases with age (Table 4). This result would seem logical because heavy and expensive pathologies (chronic renal insufficiency, type II diabetes, high blood pressure, cancer, etc.) and poly-pathologies generally begin at a fairly advanced age. Also, expensive cardiovascular, visceral, and oncological surgeries are more frequent in the elderly than in young people.

Moreover, we found that the disparity in healthcare utilization rate becomes more pronounced for women than for men in both

Table 4 – Influencing factors for healthcare utilization through a binary logistic regression.

Variable	Odds ratio	CI 95%	P value
Sex			
Male	1		
Female	1.59	1.58-1.59	<.001
Health insurance fund			
NFSS	1		
NFSWO	3.46	3.45-3.47	<.001
Age (year)			
0-25	1		
25-40	1.94	1.93-1.95	<.001
40-60	2.62	2.61-2.63	<.001
65+	3.05	3.03-3.06	<.001

NFSS indicates National Social Security Fund; NFSWO, National Fund for Social Welfare Organizations.

funds. This is probably related to the multitude of files submitted by women in relation to pregnancy and childbirth and other more female-related diseases (breast and cervical cancer, multiple sclerosis, rheumatologic diseases).

According to the logistic regression analysis (Table 4), it is clear that healthcare utilization was influenced by several parameters: health insurance sector, sex, and age. If the latter 2 are natural factors related to humans, the first factor (health insurance scheme) should not be a determinant of the healthcare utilization of the population covered by the MHI. We can thus deduce that a homogenization of the basket of care and reimbursement rates between the 2 MHI funds could minimize this inequality and allow equitable access for both populations to quality care regardless of their financial means.

The results of our study showed that despite the disparity in the reimbursement rates of the various services between the public-sector and private-sector funds, the user fees incurred by the insured did not differ significantly between the 2 sectors: it is 32.1% for the public sector and 36.4% for the private sector. This situation is the result of the large number of nonreimbursable medical benefits and products under the MHI. Only 3800 drugs are refundable among the 5200 marketed in Morocco. In addition, vitamins and food complements are not refundable under the MHI. This is also the case with some functional explorations (such as positron emission tomography/computerized tomography), radiological examinations, and medical devices.

The rate of copayment varies between ambulatory and hospital care: it was 41% and 47% for ambulatory care and 10% and 23% for hospital care in the NFSWO and NFSS, respectively. This is because hospital care is generally refundable and forfeited in contrast to ambulatory care. The tariffs of the ambulatory care are defined within the framework of the agreements but not respected by the providers of care, which increases the copayment borne by the insured. Copayments are also higher for direct disbursements (in cases where services are prepaid by the insured and subsequently reimbursed by the funds): around 44% and 48% for NFSWO and NFSS, respectively, compared with 5% and 18% for third-party payment. This is because healthcare providers are more respectful of health insurance tariffs when the payment method is third-party payers because they fear not being reimbursed by the funds. This is not the case when the insured pay first and then are reimbursed by their funds.

For chronic diseases, copayments represent 18% and 23% of the total expenses (in NFSWO and NFSS, respectively), against 41% in both funds for non-chronic diseases. Normally, chronic diseases are 100% supported in the NFSWO and between 70% and 100% in the NFSS depending on pathology. The percentage remaining is probably due to nonrefundable medical benefits and products under the MHI scheme.

To reduce this gap and establish equity between the 2 populations, it is necessary to harmonize the reimbursement rates and to stem the discrepancies between management procedures, in particular admission to chronic diseases, care agreement, rejection and liquidation of reimbursement files, medical checkup, and reimbursement periods, all of which could be incentives (or disincentives) to the use of care.

In addition, a study should be conducted to identify the determinants of care utilization among the populations in the 2 funds and their nature according to whether they are intrinsic to the population covered (demographic profile, sociocultural factors, consumption habits, etc.), linked to reimbursement rates and management performance of the funds (management procedures, implementation of regional offices), or related to the provision of care.

Concerning copayment supported by insured persons, observations of health expenditures in Morocco before the introduction of this basic medical coverage often showed that households bore the highest share of expenditure (50.7% in 2013). Currently, the figures show that this percentage has not dropped much even after the introduction of the MHI scheme, and households still pay the largest share of healthcare expenditure.

People who had their files closed (497 935 insured who are affiliated with the NFSS) were excluded from the study because they do not have the right to claim reimbursement for the costs of their care and therefore did not file any reimbursement in the period of the study. This does not affect the results of the study given their small percentage compared with the overall population and because their data are not included in the National Agency for Health Insurance database.

According to a study of 22 European countries, low socioeconomic status implied higher rates of death and poorer self-assessed health.[19]

Schoen et al have reported the experience of 5 countries in health insurance markets and income inequality and concluded that care experiences are more unequal in countries where systems have relatively greater reliance on private health insurance and markets such as the United States, Australia, and New Zealand. Nevertheless, in other countries, such as Canada and the UK, where care experiences are more equal, healthcare experiences are similar across income groups.[20] In the same way, Dickman and colleagues have concluded that many households run into debt and even incur catastrophic expenses to cope with the higher premiums imposed by private insurance.[21]

Veugelers and Yip[22] have concluded that universal coverage of family physician and hospital services in the province of Nova Scotia in Canada ameliorates the socioeconomic differences in mortality, but they concluded also that specialist services are underused in lower socioeconomic groups. This situation creates a potential socioeconomic gap in health.[22] The Turkish experience has also reported that despite universal health coverage and significant progress in the fight against maternal and infant mortality, sex and socioeconomic inequalities persist and represent one of the most important priorities of the health system in this country.[23]

Conclusion

In addition to differences related to age, sex, and genetic profile (ie, the intrinsic determinants of people), the differences in care baskets and reimbursement rules between the funds that manage the MHI scheme may lead to inequity in access to health services between insured persons and to the increase of their copayment for health expenses. This can create a situation that is totally contradictory to the objectives of a universal medical coverage scheme, that is, equity and equality in access to quality care for all insured according to their needs and regardless of their income.

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REFERENCES

1. Universal health coverage (UHC). Fact sheet. http://www.who.int/mediacentre/factsheets/fs395/en/. Accessed January 24, 2019.
2. Alter DA, Naylor CD, Austin P, Tu JV. Effects of socioeconomic status on access to invasive cardiac procedures and on mortality after acute myocardial infarction. *N Engl J Med*. 1999;341:1359–1367.

3. Labonté R, Mohindra K, Schrecker T. The growing impact of globalization on health and public health practice. *Annu Rev Public Health*. 2011;32:263–283.
4. Addressing the inequities in health: a new and vital mandate. *Lancet*. 2008;372:689.
5. Blas E, Gilson L, Kelly MP, et al. Addressing social determinants of health inequities: what can the state and civil society do? *Lancet*. 2008;372:1684–1689.
6. Gruber J. Universal health insurance coverage or economic relief a false choice. *N Engl J Med*. 2009;360(5):437–439.
7. Roos NP, Mustard CA. Variation in health care use by socioeconomic status in Winnipeg, Canada: does the system work well? Yes and no. *Milbank Q*. 1997;75(1):89–111.
8. Katz SJ, Hofer TP, Manning WG. Hospital utilization in Ontario and the United States: the impact of socioeconomic status and health status. *Can J Public Health*. 1996;87:253–256.
9. Cairney J, Arnold R. Social class, health and aging: socioeconomic determinants of self-reported morbidity among the noninstitutionalized elderly in Canada. *Can J Public Health*. 1996;87:199–203.
10. Tao W, Agerholm J, Burström B. The impact of reimbursement systems on equity in access and quality of primary care: a systematic literature review. *BMC Health Serv Res*. 2016;16:542.
11. Burstrom B. Market-oriented, demand-driven health care reforms and equity in health and health care utilization in Sweden. *Int J Health Serv*. 2009;39(2):271–285.
12. Porell FW. A comparison of ambulatory care sensitive hospital discharge rates for Medicaid HMO enrollees and nonenrollees. *Med Care Res Rev*. 2001;58(4):404–424.
13. Asch SM, Kerr EA, Keesey J, et al. Who is at greatest risk for receiving poor-quality health care? *N Engl J Med*. 2006;354(11):1147–1156.
14. Decree No. 2-05-736 fixing the rates of coverage of medical benefits payable by the National Fund of Social Welfare Organizations under the basic compulsory health insurance scheme.
15. Decree No. 2-05-737 fixing the coverage rates for medical benefits payable by the National Social Security Fund under the basic compulsory health insurance scheme.
16. Annual report of Mandatory Health Insurance 2014. National Agency of Health Insurance. www.anam.ma. Accessed August 14, 2019.
17. Loi 65-00 portant code de la couverture médicale de base. http://www.sante.gov.ma/Reglementation/Pages/ASSURANCE-MALADIE.aspx. Accessed August 14, 2019.
18. Annual report of Mandatory Health Insurance 2015. National Agency of Health Insurance. www.anam.ma. Accessed August 14, 2019.
19. Mackenbach JP, Stirbu I, Roskam AJ, et al. Socioeconomic inequalities in health in 22 European countries. *N Engl J Med*. 2008;358(23):2468–2481.
20. Schoen C, Davis K, DesRoches C, Donelan K, Blendon R. Health insurance markets and income inequality: findings from an international health policy survey. *Health Policy*. 2000;51(2):67–85.
21. Dickman SL, Himmelstein DU, Woolhandler S. Inequality and the health-care system in the USA. Lancet. 389(10077):1431-1441.
22. Veugelers PJ, Yip AM. Socioeconomic disparities in health care use: does universal coverage reduce inequalities in health? *J Epidemiol Community Health*. 2003;57:424–428.
23. Atun R, Aydın S, Chakraborty S, et al. Universal health coverage in Turkey: enhancement of equity. *Lancet*. 2013;382:65–99.