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Cost Dynamics, Price Formation and Adjustment Control for Healthcare Plans in Brazil: the urgent need to revise the regulation[1]

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Summary

Historically, the policy of price control has delivered demonstrably negative effects on society, which often results in scarcity of products, reduced investment, poorer quality of the services provided, the emergence of black markets, among other undesirable side effects that always seem present under such arrangements. The private (supplementary) healthcare market shows some distortions that are prejudicial to the healthcare costs: the undisciplined adoption of technological innovation; amplification of the mandatory "coverage" provided without criteria; remuneration for medical assistance based on the quantity of procedures performed; and hospital services evaluated according to the profit margin on medicines and materials used, are just some of them. The formation of costs should focus on actions aimed at supporting the industry; controlling the adjustments of plans conducted amongst companies is not an appropriate policy for offering consumers the best conditions for the pricing and contracting of healthcare plans. As demonstrated by several cases discussed in the article, the effects of excessive intervention in private relations can be harmful, and a large portion of beneficiaries that, today, have the guarantee of private healthcare may, in the near future, see this benefit disappear. The article discusses the current adjustments policy of the ANS and reflects on this historic and inefficient mechanism. It also analyzes the dynamics of healthcare costs concluding that urgent change in the adjustments policy is necessary.

Key Words

Regulation, healthcare operators, price controls, adjustments, healthcare costs.

Contents

[1] The authors thank Solange Beatriz Palheiro Mendes for the comments and suggestions received.

Sinopse

Dinâmica dos Custos, Formação de Preços e Controle de Reajustes dos Planos de Saúde no Brasil: a urgência de se revisar a regulação[2]

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Resumo

Historicamente, a política de controle de preços apresenta efeitos comprovadamente ruins para a sociedade, que geralmente resultam em escassez de produtos, redução de investimentos, piora na qualidade dos serviços prestados, surgimento de mercados negros, dentre outros efeitos colaterais indesejáveis, porém sempre presentes quando da adoção desse expediente. O mercado de saúde suplementar apresenta algumas distorções que pressionam constantemente os custos da saúde: inovação tecnológica adotada sem disciplina; ampliação sem critérios das "coberturas" obrigatórias; remuneração da assistência médica pela quantidade de procedimentos realizados; e valoração dos serviços hospitalares segundo margem de lucro sobre preços de materiais e medicamentos usados são algumas delas. A atuação na formação de custos deveria ser o foco de ações que visem à sustentação do setor, e controlar os reajustes de planos celebrados entre empresas não é a política adequada para entregar aos consumidores melhores condições de preço e contratação de planos de assistência à saúde. Como demonstram diversos casos abordados no artigo, os efeitos da excessiva intervenção nas relações privadas podem ser nefastos, e esta grande parcela de beneficiários que hoje tem disponível a garantia de assistência suplementar à saúde, pode, num futuro próximo, ter este benefício suprimido. O artigo aborda a atual política de reajustes da ANS e tece considerações sobre este histórico e ineficiente mecanismo. Também analisa a dinâmica dos custos em saúde concluindo por uma alteração urgente na política de reajustes.

Palavras-Chave

Regulação, operadoras, controle de preços, reajustes, custos em saúde.

Sumário

[2] Os autores agradecem a Solange Beatriz Palheiro Mendes pelos comentários e sugestões recebidos.

Sinopsis

Dinámica de los Costos, Formación de Precios y Control de Ajustes de los Planes de Salud en Brasil: la urgencia de la revisión de la regulación

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Resumen

Históricamente, la política de control de precios presenta efectos comprobadamente perjudiciales para la sociedad y, generalmente, provocan escasez de productos, reducción de inversiones, empeoramiento de la calidad de los servicios prestados, surgimiento de mercados negros, entre otros efectos indeseables, pero siempre presentes cuando este expediente es adoptado. El mercado de salud suplementaria presenta algunas distorsiones que presionan constantemente los costos de la salud: innovación tecnológica adoptada sin disciplina; ampliación sin criterios de las "coberturas" obligatorias; remuneración de la asistencia médica por la cantidad de procedimientos realizados; y valoración de los servicios hospitalarios según la margen de lucro sobre precios de materiales y medicamentos utilizados son algunas de ellas. La actuación en la formación de costos debería ser el foco de acciones que busquen la sustentación del sector. Controlar los ajustes de planes celebrados entre las empresas no es la política adecuada para ofrecer a los consumidores, mejores condiciones de planes de asistencia a la salud. Tal como demuestran diversos casos abordados en el artículo, los efectos de la excesiva intervención en las relaciones privadas pueden ser negativos, siendo que gran parte de los beneficiarios que hoy disponen de la garantía de asistencia suplementaria a la salud, pueden tener este beneficio suprimido en un futuro cercano. El artículo aborda la actual política de ajustes de la ANS y plantea consideraciones sobre este histórico e ineficiente mecanismo. También analiza la dinámica de los costos en salud, concluyendo por cambios urgentes en la política de ajustes.

Palabras-Clave

Regulación, operadoras, control de precios, ajustes, costos en salud

Sumario

1. Introduction

With a view to protecting the consumers of individual and group health plans from adjustments to monthly installment fee applied by the Operators of Private Healthcare Plans, proposals are always arising, with some even becoming Bills, for Government control of such healthcare adjustments. In the case of individual plans, as the adjustments of regulated contracts are controlled by the National Regulatory Agency for Private Insurance and Plans (ANS), some proposals seek to link the price adjustments to the consumer price indexes, such as the Broad National Consumer Price Index – IPCA or the National Consumer Price Index – INPC. As for the corporate or subscription group plans, interventionist proposals continue in the same vein as price controls and adjustments, ignoring the fact that the economic relations are conducted between two private companies. As we shall discuss in this article, these initiatives have two major sources of error, and precisely because of this the result of their implementation inevitably fails to achieve the desired goal, namely, protecting the consumer. The first flaw is to disregard experience and history where , not just in Brazil but globally, the negative effects of such policies brings to the market, resulting in shortages, reduced investment, poor quality of services, emergence of black markets, among other undesirable side effects, but always present when this measure was adopted.

The second major source of error is disregarding the fact that the control of adjustment of plans does not reach the generating source of healthcare assistance and costs, that is, the network of medical service providers. An important part of the costs in healthcare are beyond the control of the operators and of the ANS regulation, and stem from the incorporation of new technologies that are not consistent with the best scientific evidence, and demographic and epidemiological factors that imply greater use of healthcare services.

This article presents some historical evidence of the effects of adjustment control applied to other industries and in other periods of time, always having a negative effect on society. Additionally, some indicators of the growth dynamics of healthcare costs will be presented that tend to evolve higher than the inflation indicators, an effect known to experts for some considerable time. Given the current regulatory framework, it seems fitting to ask what society wishes for its future. Would people be willing to accept individual plans that offer less than if the adjustment policy was not so restrictive? What is the best situation from the point of view of social welfare: a society that protects a group of beneficiaries to the detriment of the collective community? These and other questions should serve as weights and parameters in order that public policies to be questioned, measured and evaluated for effectiveness and the results achieved in an intertemporal manner. But would the policy of regulation generate the conditions for a long-range vision? The boundary conditions for the decision-making by so-called policymakers are very similar to the dilemmas existing in economic policy. It is appropriate to explain the objectives of the regulation to reduce the degree of arbitrariness in decisions which garner praise today, but create much greater problems in the future.

The methodology known as Regulatory Impact Analysis, already existing and utilized in other countries, should precede the formulation of regulations in the private healthcare market. Ultimately, regulation generate private and public costs which must be offset by the benefits. If we are not able to measure the impact that regulation has on the regulated sector, then regulation remains subject to ideological deviations of hollow words that inexorably do more harm than good as a regulator of prices.

In the case of Brazilian supplementary (private) healthcare, the current regulatory policy of individual pricing, by not giving predictability and security in the face of a Variation of Medical Cost that is systematically higher than the limit authorized by the government, inhibits the marketing of this product. There is an urgent need for revision of the current regulatory model for individual plans so that the market may regain its interest in the sector. It is symptomatic that, despite the resounding failure of price control policies and adjustments in various markets and periods in history, proposals proliferate in some spheres of society advocating the extension of this model to the group corporate plan market.

2. The Current Adjustment Policy

There are differences in the regulatory treatment of healthcare plans adjustment depending on the type of contract (individual or group), the period of employment (before or after the Healthcare Plan Law), healthcare segmentation (medical or dental care) and the size of the contracting company (more or less than 30 beneficiaries).

In the case of adjustment for change in age group, there are also several rules that govern the subject having as dividers the Consumer Protection Code, the Healthcare Plan Law and the Senior Citizens Statute.

Presented below are the main guidelines of these rules.

2.1 New Individual Plans

The new individual plans, namely, those individual plans contracted after the validity of Law Nº 9,656/98 (January 1, 1999) have their annual adjustments controlled by the ANS. The methodology applied by the ANS for setting the maximum rate for these plans has been the same since 2001 and considers the average percentage adjustment applied by operators to group plans with more than 30 beneficiaries[3]. Operators are required to inform the Regulatory Body of adjustments applied to group contracts which are input into the calculation of the adjustment of individual plans.

[3] In 2013, it is worth remembering, the impact of external factors was also considered, such as the use of 60 new procedures included in the list of procedures and health events throughout 2012. Source: ANS.

It is important to note that this is the price increase allowed by the Government due to variation of costs incurred. It is a completely different issue to the increase in price by age group. For obvious reasons, the older people become, the greater amount of healthcare they usually require. Normally, the costs for supplementary examinations and admissions for the elderly (59 years or older) is almost six times higher, seven times in other outpatient visits and nearly eight times in other healthcare costs compared to the costs found in the first age group (0- 18 years). The correction of fees by age group aims to match the price paid by consumers for their risk range, allowing people within the same age group to be mutual. Some of these people may have more needs while others may have less. The mutualism works because people who use the system less can pay for the people who need more healthcare services.

Unlike the annual adjustment authorized by the ANS, the adjustment for change in age groups varies according to the date of contracting, and the percentage of variation needs to be expressed in the contract. So, if the consumer changes age range, two adjustments in the same year can be expected: the change of age range and the annual ANS adjustment.

2.2 Old Individual Plans

Law Nº 9,656/98, in article Nº 35-E determines that the ANS authorizes the adjustment for both the old individual plans (signed before the start of the validity of the law), and for the new individual plans. However, since September 2003, this legal provision remains suspended, being ruled unconstitutional by a Supreme Court (STF) decision in response to a Direct Action of Unconstitutionality (ADIN). Given this, the ANS published Normative Precedent Nº 5 in 2003, stating that if the adjustment rule is not clear in the contract, the annual adjustment shall be limited to the maximum adjustments stipulated by the ANS or be defined by the Terms of Commitment agreed with the Regulator. In the latter case, prior approval by the ANS will be required.

In 2004, the ANS questioned the adjustment of individual plans practiced by some carriers with annual adjustment clauses based on the Variation of Medical Cost (VCMH). The ANS then proposed the signing of Terms of Commitment which began to be applied to individual contracts signed until 1 January 1999, and not adapted to Law Nº 9,656/98, and whose adjustment clauses do not provide clear and explicit indexes (IGP-M[4], IPCA, or any other publicly disclosed index that is still in force).

[4] IGP-M – General Index of Market Prices – FGV.

2.3 Group Plans with less than 30 beneficiaries

Normative Resolution Nº 309/2012 determines the adjustment rules for contracts of group plans with less than 30 beneficiaries. The Resolution obliges operators to place these contracts in the same risk pool to calculate the same adjustment. RN 309 provides for the pooling of all group corporate and group subscription contracts signed after 1 January 1999, or adapted to Law Nº 9,656/98, with less than 30 beneficiaries. However, this pooling may be divided into three subgroupings separated by the type of coverage[5], and up to three different adjustment percentages may occur.

There are exceptions in which the group contract agreement with less than 30 beneficiaries is not pooled. They are: contracts signed before January 1, 1999 and not adapted to Law Nº 9,656/98; contracts for exclusively dental plans; contracts for plans exclusively for employees that are laid off or dismissed without just cause or retired; contracts for plans with post-established price formation; and contracts signed before January 1, 2013 and not adapted to RN Nº 309/2012, at the option of the contracting entity.

2.4 Group Subscription Plans and Group Corporate Plans

The ANS does not define the maximum adjustment percentage for the group plans considering that corporations have greater bargaining power with operators, which, of course, tends to result in obtaining advantageous percentages for the contracting party. The adjustment of group plans is calculated based on free negotiation between operators and companies, foundations, associations etc.

The group corporate plans with more than 30 beneficiaries are not subject to a waiting period, which reduces the burden of switching to another carrier, if the conditions currently offered are not satisfactory.

2.5 Individual Dental Plans

Since May 2005, exclusively dental plans, due to their specifics, do not depend on prior authorization of the ANS to apply any adjustments, since the adjustment index adopted by the operator is clearly stated in the contract (IGP-M, IPC[6], IPCA, amongst others). If there is no index established, the operator must offer the plan holder a contract addendum that defines this index. The non-acceptance of the term implies the adoption of IPCA.

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[5] – Without hospitalization: includes outpatient assistance and outpatient + dental plans;
– Hospitalization without obstetrics: includes plans that have hospitalization without obstetrics, hospitalization without obstetrics + dental, outpatient + hospitalization without obstetrics, and outpatient + hospitalization without obstetrics + dental; and
– Hospitalization with obstetrics: includes plans that have hospitalization with obstetrics, hospitalization with obstetrics + dental, outpatient + obstetrics with hospitalization, outpatient + obstetrics with hospitalization + dental +", and referral.

[6] Consumer Price Index – FGV.

3. The Inefficiency of Price Controls and Adjustments

The arguments against price controls are not merely academic, but also historical. Inefficiency and scarcity inherent in the adoption of this economic policy have been evidenced for thousands of years, as shown by Schuettinger, Robert L and Buder, Eamonn F. (1978). In ancient Egypt, 4,000 years ago, all prices were frozen at all levels. Bureaucrats oversaw the application of these decrees on a daily basis. In the face of such conditions, the Egyptian farmers revolted and simply abandoned their farms, culminating in economic collapse. In Babylon, also 4,000 years ago, the Code of Hammurabi implemented various forms of price regulation and control and the historical data shows that once these laws were enacted, a progressive economic setback was instigated.

In Greece, price controls also emerged with an army of inspectors. The culmination, however, was a shortage of cereals and an upsurge of the black market. The Emperor Diocletian, in a recognized high-inflation scenario of the Roman Empire, also tried to use price controls but Romans simply stopped selling their goods in the market as the fixed price approached a value less than the costs.

Despite the demonstrably bad effects, the policy of price control keeps getting revived from time to time. History reveals several failed experiences. Since the times of the Roman Empire, Medieval Europe has records of these unsuccessful attempts to regulate the market by controlling prices. The records continue through the 19th century, through two world wars, in addition to the implosion of the centralized and planned economy of the Soviet and Communist countries where the State decided what to produce, and how much it would cost. Surprisingly, even today the populist appeal of price controls can attract the attention and support of some groups, notwithstanding the current and dramatic effect of such policies in the case of Venezuela where widespread shortages resulting from price control and other interventionist policies have plunged the country in a position of humanitarian aid.

To understand the ineffectiveness of price administration, you don't have to go too far both history and geographically. Just start with a current policy – the restraining of electricity tariffs in the two years before the last presidential election. The result is well known: decapitalization of the companies in the sector, delays in works that leave wind farms without transmission lines and, now, the accented high tariffs, to the dismay and irritation of consumers.

In Brazil, records indicate that price control began during World War II, due to the shortage of essential products. Officially, the first phase of price-fixing in Brazil began in 1962, by means of Executive Law Nº 5, which established the National Superintendence of Supply (SUNAB), whose goal was, among other things, securing and controlling the prices of goods and commodities. The second phase began in 1965,

with Decree Nº 57,271, which created the National Commission for Stimulating Price Stabilization (CONEP) and introduced a system of incentives to stabilize domestic prices through voluntary membership of industrial and commercial companies in contrast to the special stimuli. In the ensuing years, between 1966 and 1967, price control became compulsory and tax incentives to companies remained. In the fourth phase, in 1968, the Interministerial Price Council (CIP) was created. Established by Decree Nº 63,196, the agency was responsible for the Federal Government's price control policy. During that time, it instituted the obligatory presentation of standardized cost plans for each product and legitimized the rule to peg price increases in proportion to the relative cost increases. The quest for price stability continued until 1979, with the creation of the Special Secretariat of Supply and Prices (SEAP), through Decree Nº 84,025. All these bodies failed to control the prices of the economy and have since been extinguished.

Another failed experiment was the Cruzado Plan of 1986: the notion that freezing prices and wages would eliminate inflation and force the stability of the currency. The people approved and promoted the measure, raising the president's popularity to unprecedented levels. But success was fleeting. Monetary stability increased the purchasing power, especially for those with lower levels of income – defenseless against inflation – and consumption accelerated. Misaligned prices discouraged production. In less than six months, there were shortages and an upsurge in the black market. Inflation returned at a gallop and general dissatisfaction brought down the approval of the president. The lesson of this failed experiment was not fully absorbed and other freezes followed with increasingly negligible and fleeting results, leaving a nefarious heritage for society.

It is worth mentioning the practice of controlling adjustments to the funding of the Housing Finance System (SFH) in the 80s, that had financial consequences that will extend for some decades. The SFH held the state insurance for the Salary Variation Compensation Fund to ensure the amortization period contracted by the assumption of the residual balance at the end of the contract. Successive crises since 1980, high interest rates and inflation, and low growth, meant that the benefits grew more than wages. To counter this challenge, the government initially set the adjustment of monthly payments at a fraction of the INPC, then prefixed at less than half the contractual rate and finally linked to the salary increase of the professional category of the borrower.

Result: a bottleneck in housing finance, financial deterioration of the system's agents and accumulation of huge liabilities that are the ultimate responsibility of the National Treasury – estimated at almost 100% of current net revenue of the Union in 1995. Around four million borrowers, especially the middle and upper classes, inherited homes at a very low cost. The bills? These will be repaid within 30 years, by all those who contribute, including those of lower income classes, who never even had access to the financing.

What these episodes have in common is that the damage, ultimately, punishes the citizen – even when losses are covered with public money. Beneficiaries of healthcare plans are the only resource providers in the industry. Thus, a disastrous policy of price control affects the whole of society.

There are many distortions that put pressure on health costs. The undisciplined adoption of technological innovation; amplification without criteria of obligatory "covers, remuneration for medical assistance by the quantity of procedures performed; and hospital services according to the profit margin on prices of materials and medicines used, are just some. These should be the focus of actions that aim to support the industry. Price control is always an illusion, no matter the industry to which it is applied, as necessary as it may seem.

4. Dynamics of Healthcare Costs

In June of this year, the ANS set at 13.57% the maximum adjustment rate to be applied to individual or family plans contracted from January 1999, or adapted to Law Nº 9,656/98. Firstly, it should be noted that this is not a price index, but an expenditure index, comprising the variation in prices of healthcare services and the variation in the frequency of use of these services, and also by the combined effects of these two variations. For many operators, this figure is insufficient to cover significant increases in per capita healthcare expenditure. The variation in per capita healthcare expenditure, inadequately referred to as medical inflation is, on average, twice as high as the inflation that measures other prices in the economy.

Over the past decade, healthcare spending has grown at a pace faster than general consumer inflation. The series, from the year 2007, highlights an accumulation of 158.7% in per capita expenditure in the healthcare market, while the variation of the IPCA was 74.7% during the same period (Table 1). There are many distortions and market failures that have a bearing on healthcare costs, and the regulation of tariff adjustments without intervention in these factors that influence the growth of costs provokes a mismatch between revenue and expenditure. No company can continue to operate for an extended period in a scenario of imbalance because if so, it will affect their solvency and then bankruptcy is inevitable.

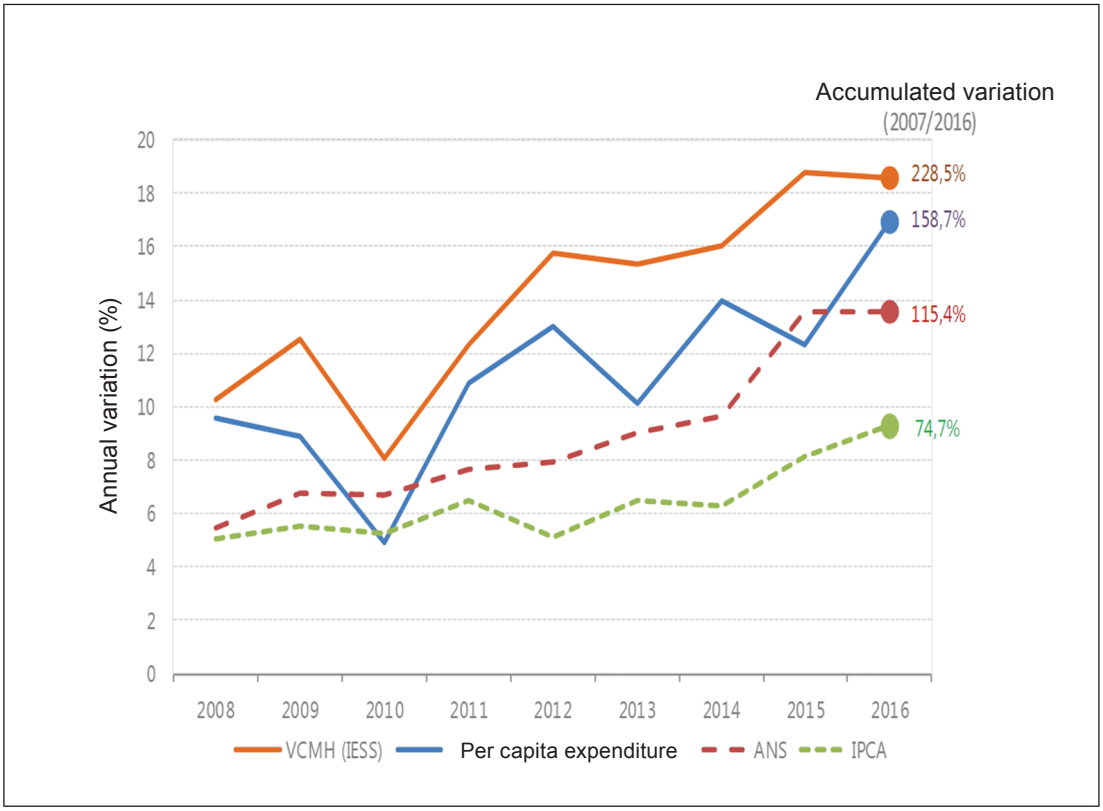
Table 1 – Annual variation in per capita expenditure in private healthcare, ANS, IPCA and VCMH (IESS) (2007/2016) adjustment

Year	ANS adjustment	IPCA[1]	Per capita expenditure[2]	VCMH[3]
2007	5,76	3,00	17,01	8,30
2008	5,48	5,04	9,60	10,25
2009	6,76	5,53	8,89	12,50
2010	6,73	5,26	4,95	8,05
2011	7,69	6,51	10,89	12,35
2012	7,93	5,10	13,03	15,75
2013	9,04	6,49	10,16	15,35
2014	9,65	6,28	13,94	16,00
2015	13,55	8,17	12,30	18,80
2016	13,57	9,28	16,92	18,56
Δ (%) Accumulated 2007 - 2016	115,39	74,74	158,74	228,46

Sources: Beneficiary Information System – SIB/ANS/MS – Tabnet – Extracted on 6/6/16. IBGE – National System of Consumer Price Indices IPCA – Extracted on 6/6/16. ANS – annual permitted adjustment index for individual or family healthcare plans contracted from January 1999. Extracted on 6/6/16.
Notes:
[1] IPCA – the past 12 months ending in April/16.
[2] to calculate the accumulated variation of per capita healthcare expenditure, expenditure and the number of beneficiaries of the following modalities were not considered: Group and cooperative dental. The average of beneficiaries in four quarters of each year was considered. Healthcare expenditure – considers the value projected for the year 2016.
[3] VCMH (IESS) average variation as in the months of October and November each year. ANS – ANS adjustment considers the period from May to April every year.

Private healthcare plans and insurance operators face growing escalations in the per capita healthcare expenditure of its beneficiaries, which, passed on to buyers, compromise the income and budget of families and businesses. The difficulty of passing on costs squeezes the margins and investments of the operators. It is notable that the variation in per capita healthcare expenditure at levels well above the inflation rate has not been fully offset by the adjustments to the monthly installments of individual or family plans (chart 1).

Chart 1 – Annual variation in per capita expenditure in private healthcare, ANS, IPCA and VCMH (IESS) (2007/2016) adjustment



Sources: Beneficiaries Information System – SIB/ANS/MS – Tabnet – Extracted on 6/6/16. IBGE – National Consumer Price Index IPCA – Extracted on 6/6/16. ANS – annual permitted adjustment Index for individual and family healthcare plans contracted from January 1999. Extracted on 6/6/16.

Data for a longer period (2001-2016) revealed an alarming trend. Table 2 shows that while the IPCA increased 170.1% in the period 2001-2016, the per capita healthcare expenditure for beneficiaries of private healthcare grew 393.6%. Thus, the per capita medical and hospital spending grew at an average annual rate of 4.1% in real terms. In the same period, in the United States, the average annual rate was 2.8% in real terms.

Table 2 – Variation in per capita healthcare expenditure and inflation 2001/2016 (Brazil and United States)

	Brazil	USA
Per capita healthcare expenditure	393,6%	101,8%
Inflation	170,1%	34,3%
Real per capita healthcare expenditure	82,7%	50,3%

Sources: Beneficiaries Information System – SIB/ANS/MS – Tabnet – Extracted on 6/6/16. IBGE – National Consumer Price Index IPCA – Extracted on 6/6/16. ANS – annual permitted adjustment Index for individual and family healthcare plans contracted from January 1999. Extracted on 6/6/16. Centers for Medicare & Medicaid Services, Office of the Actuary. U.S. Bureau of Labor Statistics (CPI – Consumer Price Index – EUA).

New technologies, materials and medicines are designed and offered in the market very frequently and can play a significant role in increasing the quality of life and reducing the suffering of people. However, they are often expensive and there is a shortage of evidence as to their cost-effectiveness that might assist the physician and the patient in decision-making. In addition, the increase in revenues associated with changes in the demographic and epidemiological profile of the population puts pressure on healthcare expenditure. Innovation in healthcare is welcome, but their prescription requires evaluation prior to being incorporated and some guidelines for use based on scientific evidence. This makes the assessment of health technologies (ATS) essential, considering the cost-effectiveness criteria, avoiding the use of technologies that do not have proven efficacy, and others that have no effect or have negative effects and are not utilizing really efficient technologies.

Price increases created by cartel-like behavior, by both medical labor cooperatives and manufacturers and distributors of materials and medicines also highlights the issue of increased costs. Sometimes price increases seek justification through claims of innovation or quality. It turns out that in many cases the innovations are small and with no noticeable effects on the clinical outcome. In the healthcare market the significant and unjustified increase in cost of hospital consumables can be observed at rates much higher than the inflation indices that measure the price changes in the economy. Among the materials used in hospital admissions are the EQUIPOS[7], signified by their high frequency of use and significant variation of prices well above the consumer price inflation. It was observed that 358 items analyzed (76.2% of the total) in the period from 2007 to 2015 have risen above the INPC, which was 65.9% between 10/15 and 10/07. The average value of these items has gone from R$ 91.92 (Dec/07) to R$ 401.59 (10/15), an increase of 336.9%, i.e. more than five times above the IPCA accumulated in the same period.

[7] The equipos are among the most widely used medical items. Indicated to help hydrate or feed a patient, transfuse blood or dialysis solution as well as infuse medications in parenteral solution, these products are associated with significant risks to patient safety. These technologies consist of a complex of connected parts, becoming a conduit capable of allowing the accurate control of the number of drops per minute during infusion, according to the patient's needs. Source: BIT – Technovigilance newsletter – Número Especial, Dec 2010. ISSN 2178-440X. Multicenter study of pre-qualification: case study on equipos.

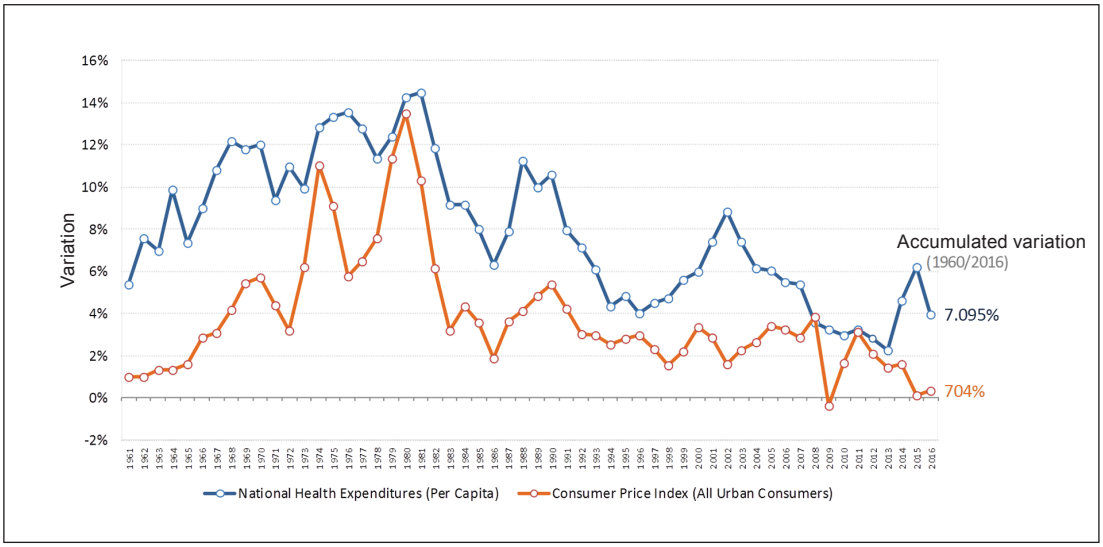
Table 3 – Equipos – Quantity of items according to the variation class INPC (2007-2015)

Item interval of variation (INPC 65,9%)	Itens	Frequency (%)	Frequency (accumulated)	Average price 2007 (R$)	Average price 2015 (R$)
<=0	42	8,9	8,9	1.408,2	1.403,7
Até 1xINPC	70	14,9	23,8	97,7	128,5
1 |----- 10	270	57,4	81,3	99,9	396,6
>10x INPC	88	18,7	100,0	17,9	178,5
Total	**470**	**100,0**	**100,0**	**192,8**	**354,0**

Source: Simpro magazine. Elaborated by the authors.

The evolution of health expenditure above the inflation indexes is not only a Brazilian phenomenon. Chart 2 below demonstrates the evolution of the consumer price index (CPI*)* and per capita healthcare expenditure in the United States, between 1960 and 2016. It is observed that the variation in healthcare spending exceeded the rate of inflation every year, except in 2008 and 2011. It is estimated that since 1960, the incorporation of new technologies was responsible for expanding healthcare expenditure between 27% and 48% in the United States (SMITH et al., 2009).

Chart 2 – Variation of per capita health expenditure and inflation (CPI – Consumer Price Index – EUA) (1960 – 2016)



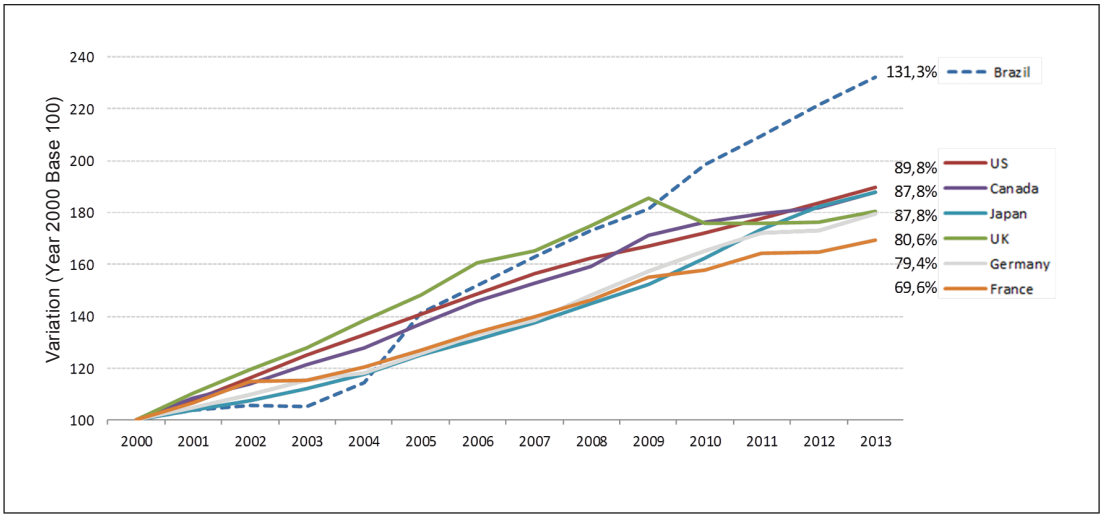
Sources: Centers for Medicare & Medicaid Services, Office of the Actuary. U.S. Bureau of Labor Statistics. Note: 2015 and 2016 – Projection – Centers for Disease Control and Prevention's (CDC). CPI 2016 – average for Jan to April 16.

In the United States, in 2009, under the effects of the economic crisis, the variation in per capita healthcare expenditure was 3.0%, one of the lowest rates recorded since the series began in 1960. In this situation, two factors can be indicated to explain the reduction: the consequences of the economic crisis of 2008 and the use of risk sharing mechanisms such as a Health Saving Account with high deductibles and co-participation where the clients assume part of the risk for medical and hospital services, making them more responsible in the use and supervision of healthcare spending.

In Brazil, the per capita healthcare expenditure is growing stronger than in many developed countries. Between 2000 and 2013, the cumulative variation in Brazil was 131.3% higher than in the United States, 89.8%; UK, 80.6%; Canada and Japan, 87.8% and France 69.6% (Chart 3).

This increase is primarily attributed to the increasing incorporation of technology without proof of cost-efficacy. In addition, the increase in frequency or in the use of tests, consultations and procedures of high complexity, demographic change and the waste of resources, contribute to this scenario.

Chart 3 – Accumulated Variation of per capita healthcare expenditure (PPC US$)* – 2000-2013



Source: World Health Organization (OMS). Extracted on: 7/6/2016.
Note: * Purchasing power parity – US$.

New drugs, imaging and diagnostic equipment are designed and offered on the market with great frequency. These new technologies can play a significant role in increasing the longevity and improving quality of life. However, they are often expensive, and there is a lack of evidence as to their cost-efficacy to assist the physician and the patient in decision-making. The decision to use technology is often based on the past experience of a physician. In addition, the current payment structure Fee for Service[8] (FFS) encourages, in some cases, the unnecessary use of these new technologies.

5. Price Formation and Variation of the Costs

The pricing of the private insurance and health plans must consider the economic-financial balance of the product and the service provider. Thus, the value of the monthly fees must be appropriate to the risk that the insured represents added to costs of expenses, considering all the beneficiaries in that group that will pay the same fee.

For healthcare plans, the only factor that is provided the regulation of the premium[9] is the age (age groups), with other factors that might influence the risk (gender, lifestyle, occupation etc.) being barred. Therefore, the risk profile of age, and other factors related to coverage and contracted network, defines the pricing structure of healthcare plans.

The ANS requires operators to prepare a Product Registration Technical Note (NTRP) as a prerequisite for the registration of plans and maintenance of their marketing. This document must contain the terms of the contract for the provision of healthcare service: target audience and scope; product coverage; specific information relating to waiting periods, franchises, coparticipation, methodology adopted for pricing of the plan or product; description of the safety margin statistics; profit margin and non-assistance expenses including marketing expenses, administrative expenses, taxes and other expenses. It is forbidden for operators to market plans and products charging values lower than those itemized in the NTRP.

[8] It is a term used to define a form of compensation to physicians. For each hospital or medical procedure, a specific value is defined and charged.

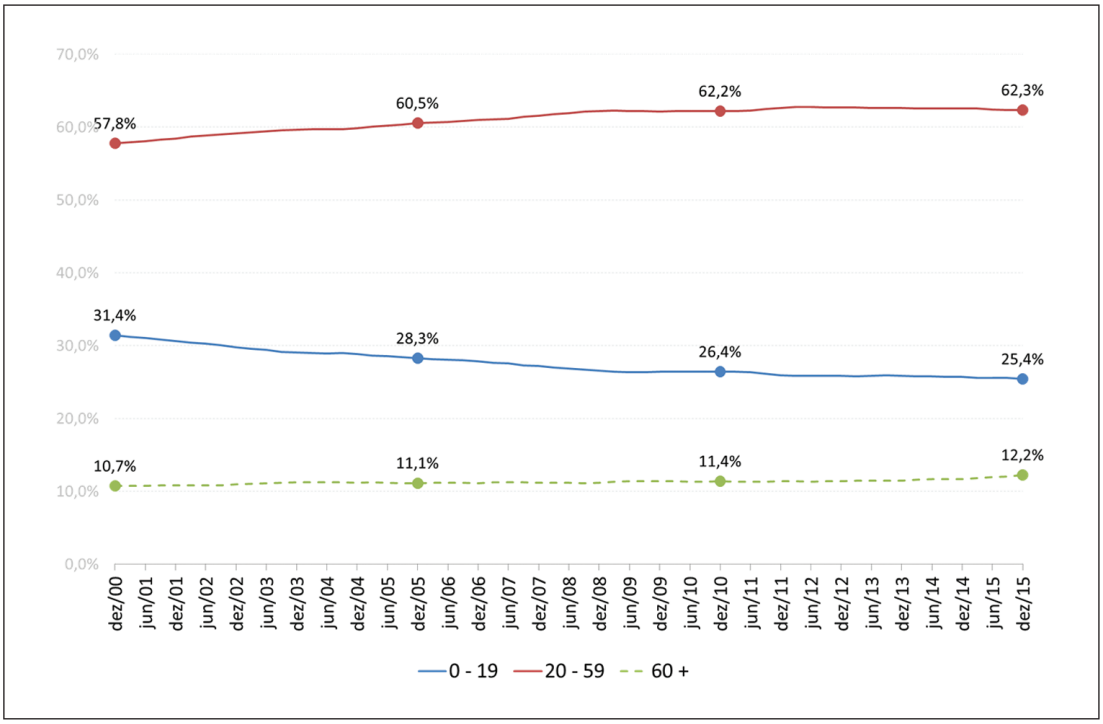
[9] Also, referred to as monthly fees or pecuniary compensation is the amount paid by the insured, or policyholder, to the insurer, in exchange for the transfer of the contracted risk.

The actuary responsible must calculate the price from the statistical experience, i.e. actual historical data for a population as close as possible to the profile of the target population to which the product is offered, to estimate the frequency of use (Nº of events / Nº of exposed) and severity (cost / Nº of events) for each item of coverage: consultations, tests, hospitalizations, therapies etc. This is done for each of the ten age groups. The pricing should also consider a margin of statistical safety, to be added to the risk premium to cover fluctuations in assumed risks and costs. Then, expense costs should be added to the price contemplating not only the cost of risk (and the statistical safety) but also administrative expenditure, trading, taxes and profit margins expected by the entrepreneur. Arriving, therefore, at the commercial price.

The regulation allows the price to be marketed within a 30% variation band on the commercial value of the monthly fee. Operators should, at intervals, follow the operating costs of their products, updating the NTRP whenever changes in epidemiological assumptions, actuarial and other costs that can change the values of monthly fee are observed. Moreover, the variation between the commercial value of each age group must maintain a perfect relationship with the variation by age group, as well as the tables of sales prices as specified in contract. The regulator may suspend the marketing of a product when its NTRP presents inconsistency in the actuarial and epidemiological parameters used for determining the market value.

The age of the beneficiaries is the main influential factor on pricing and on the variation of the medical costs. In this context, it should be noted that in the healthcare market the participation of the young and the elderly has been systematically altered over time, in line with the demographic transitions observed in the country. The participation in healthcare plans for beneficiaries of 60 years of age or more increased from 11.1% in December 2005, to 12.2%, in December 2015, an increase of 1.1 percentage point. In contrast, the participation of beneficiaries aged between zero and 19 years, went from 28.3% to 25.4%, on the same basis of comparison, with a reduction of 2.9 percentage points. This increased growth in the number of beneficiaries of 60 years or more has changed the ratio of young and old in the healthcare market. In December 2000, for each beneficiary of 60 years or older, there were three aged between zero and 19 years, currently that ratio is 2 to 1 (Chart 4).

Chart 4 – Proportion of beneficiaries of healthcare plans by age group (Dec/00 – Dec/15)



Source: FenaSaúde – Supplementary Healthcare Bulletin. Special Edition – April/16. Available at http://www.cnseg.org.br/fenasaude/publicacoes/boletim-da-saude-suplementar.

A person age between zero and 18 years, according to studies published [10] costs R$ 1.303,92 annually. An individual who is in the last age group has an annual healthcare cost of R$ 8.036,35 (Chart 5). The rule establishes that the established for the monthly fee in the last age range cannot be greater than six times the value of the first age range. And the accumulated variation between the 7th and the 10th range must be less than or equal to the variance between the 1st and 7th.

As the cost variation between the 1st and 10th age range is greater than six times, the rule establishes an implicit intergenerational pact, with young financing the cost of the elderly, or, in other words, the people who are in the last age range (59 or older) pay a monthly fee that is lower than the cost of the risk. With this, we are not claiming that the healthcare plan is cheap, especially considering that for this age group working income will be replaced by retirement income and, thus, is reduced for the vast majority of people. Nevertheless, if we consider how much a person in this age range costs, it appears, by the rule of age, they end up paying slightly less than the average cost.

[10] Unidas National Survey 2015. The sample consisted of 57 self-management institutions, which account for more than 3.5 million lives.

People in the lower age groups, instead, end up paying a little more than they cost. This can be seen in Figure 5, shown below. It is possible to verify that healthcare costs increase with age. The jump from the penultimate track (54-58) to last age group (59 or more) is very high: more than double. Hence, a high adjustment for this change of age would be fully justified by the change in the cost.

Chart 5 – Medical assistance cost per beneficiary according to age range and line of pricing

Source: Unidas Survey 2015. Prepared by the Authors.

Although the pricing rule does not permit differentiating the monthly fee for people above that age, the costs for the septuagenarian, octogenarian and nonagenarian are much higher than for sexagenarians, and these than for quinquagenarians. The aging population will increase the difference between the costs of the first age range and the range of the elderly. This is due to the increased proportion of octogenarians and septuagenarian in this older age group. With this the average cost of the last age also increases.

Among the conditions for the insurability of risks is the requirement of homogeneity. It is not possible to insure risks that are vastly different from each other. In the case of healthcare, this requirement is linked to the age groups. The risk, or the per capita average expenditure varies significantly between the different ages. To protect the elderly, the law has established the age rule limiting the price of the last to that of six times the price of the first. Operators should consider this relationship in their pricing policy. Ideally, one can imagine that the 59 years or more age range should be better targeted, since it encompasses a great diversity of risks. From a technical point of view it makes sense for the pricing. However, if this range were segmented, for example, 60 to 65, 66, 71 to 70 to 76 etc, these new age groups would have higher fees, which further complicates the maintenance of plans for this age cohort.

The accelerated advance of the number of elderly in private healthcare will bring major consequences and challenges for the sector's financing mechanisms in the coming years. The current pricing model and coverage of healthcare plans and private health insurance may not be sufficient to face the challenges of demographic transition, in order to ensure the sustainability of the sector facing the impacts generated by the current limit of intergenerational pact.

6. Conclusion

In order to protect consumers of healthcare plans from potentially high adjustments in the monthly fee, there are several bills under discussion in Congress that seek to control the adjustments of these products. Given the importance of the subject, and as a contribution to the debate, this article addresses two fundamental errors in the arguments used by those who advocate the control of adjustments, both in individual and group plans.

The first flaw is to disregard experience and history that, not just in Brazil but globally, the negative effects of such a policy brings to the market, resulting in shortages, reduced investment, poor quality of services, emergence of black markets, among other undesirable side effects, but always present when this measure was adopted.

The second major source of error is that those who advocate the control of adjustment disregard the dynamics of growth as a significant portion of the costs in healthcare are generated by factors unrelated to the performance of the operators and also of the ANS regulation, and stem from the incorporation of new technologies which are not consistent with the best scientific evidence, demographic and epidemiological factors that imply greater use of healthcare services, increase in the cost of supplies such as Equipos, replacing cheaper techniques for other more expensive, the use technology services on a large scale, among others.

Finally, price regulation and adjustment of group plans is an inadequate regulatory policy for the type of problem that it seeks to address and the consequences of this unwanted policy may worsen the situation for consumers, precisely those that it seeking to protect.

This is because price regulation is only indicated in cases of complete absence of competition, these cases known in the literature as natural monopolies. In this case, when for technical reasons of efficiency, there is only one bidder in the market, price regulation is needed to prevent this company abusing its monopolistic power and raising market prices to undesirable levels.

The healthcare insurance market is not a monopolistic sector and is not, therefore, a case for price control. The literature reports information asymmetry as the main failure of the existing market in this sector. In markets of this type, the recommended measure is the broad transparency and dissemination of information and not price regulation and adjustments.

Based on the recent experience of control of adjustments in the individual plans, there is an urgent need to promote discussion about the social costs that this policy has imposed on consumers seeking healthcare plans, but are not able to find them on the market. The adjustment is imposing a higher cost on future generations. For this reason, it is urgent to revise the current policy and not allow interventionist initiatives to thrive that protect certain groups by imposing social costs a whole.

Some of the proposals conveyed provide that the adjustments of group plans are subject to the prior approval of the ANS. They ignore, for example, that the contracting of group plans has very different characteristics to the contracting of individual plans because they are negotiations deducted between two companies, with full knowledge as to the relevant characteristics of the product, and bargaining power and equivalent trading. There is no need to talk about information asymmetry between the parties and lack of sufficiency in the consumer relationship, characteristics commonly used as an argument for state intervention in private economic relations. No, rather, market failures that justify the regulation of adjustments by the government.

The group corporate plan, it should be noted, is taken by the beneficiaries as the most important component in a package of benefits to employees, who mostly contribute in small parcels or don't contribute to the continuity of the contract, and the financial allowance is subsidized by the employer. The group healthcare plan market is sufficiently competitive from an economic point of view, even considering the relevant markets as being local and regional authorities. And existing information asymmetries must be corrected with other mechanisms rather than the price regulation of group plans.

Moreover, even more effective than imposing control over the adjustment of the collective agreement would be to establish measures to curb the excessive rise in medical and hospital costs, which is advancing much faster than the general prices in the economy, as shown above. Acting on the source of the increased costs would bring benefits to all participants of healthcare plans, including individual contracts, and also to the state, which is also affected by rising medical costs.

Controlling adjustments of plans negotiated between companies does not seem be an initiative that might provide consumers with better pricing and contraction of healthcare plans. On the contrary, the effects of excessive intervention in private relations can be harmful, and a large portion of beneficiaries that, today, have the guarantee of private healthcare may, in the near future, see this benefit disappear.

It is important to review the current policy for all the reasons stated throughout the article. Any economic activity, whatever it is, should have an income stream compatible with its expenses so that it can operate in the market. Private healthcare is no different.

It is necessary to overcome the current model that relies on a negotiation process between companies to allocate the adjustment to individual plans on the argument that the process of negotiation between companies offers gains in efficiencies derived from the bargaining power of both sides which should be passed on to consumers of individual plans. It turns out that the outcome of negotiations also considers other contract conditions that often need to be adjusted such as the network, coverage, the use of regulatory mechanisms such as co-participation, among others. The result expressed in adjustments does not only consider the change in healthcare costs, therefore.

No one imagines that the Regulator would allow the simple passing on of costs such as the Cost-Plus models that do not promote the pursuit of efficiency within companies.

On the other hand, regulatory regimes of maximum price – Price Cap, links the remuneration earned by companies to increases in their productivity, inducing the private sector to search for more efficient and productive business models, which involves reducing the unnecessary inefficiencies and expenses. The Agency, with the participation of all stakeholders in the industry supply chain, has advanced studies in this direction. It is time to resume the debate.

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