Innovative Medicines South Africa

National Health Insurance Policy Brief 8

Reducing Fragmented Risk Pools

The purpose of this series of policy briefs on National Health Insurance (NHI) and the related IMSA web-site is to put in the public domain material and evidence that will progress the technical work of developing a National Health Insurance system in South Africa. This includes tools for costing NHI and evidence on where savings could be achieved in moving to a future mandatory system with universal coverage.

This policy brief deals with the question of pooling in the health system. The consequences of small or fragmented risk pools in reducing predictability of healthcare costs are discussed. Evidence is provided of the degree of fragmentation of risk pools in both private healthcare and the public sector. The role of risk adjustment (or risk equalisation as it is also called) is explained and suggestions made for risk-pooling under a National Health Insurance system.

1. The Function of Pooling

The World Health Organisation[1,2], using the Kutzin framework[3] approach, describes the functions of a health system as the collection of revenue, the pooling of revenue, the purchasing and the delivery of healthcare. Pooling is well described in Chapter 5 of the World Health Report of 2000 as follows[1]: "Pooling is the accumulation and management of revenues in such a way as to ensure that the risk of having to pay for health care is borne by all the members of the pool and not by each contributor individually. Pooling is traditionally known as the "insurance function" within the health system, whether the insurance is explicit (people knowingly subscribe to a scheme) or implicit (as with tax revenues). Its main purpose is to share the financial risk associated with health interventions for which the need is uncertain." The insurance function is illustrated below, showing the inherent cross-subsidy from low risk to high risk people as a risk cross-subsidy in the upper half of the diagram.

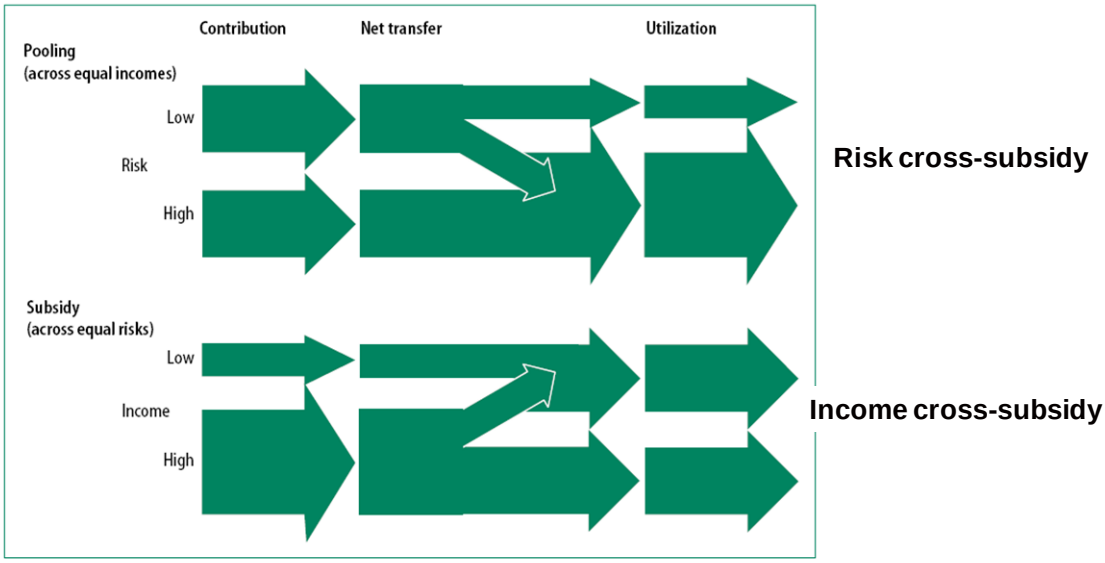

Figure 1: Risk Cross-Subsidies and Income Cross-Subsidies in Pooling Arrangements[1]

"Pooling reduces uncertainty for both citizens and providers. By increasing and stabilizing demand and the flow of funds, pooling can increase the likelihood that patients will be able to afford services and that a higher volume of services will justify new provider investments".

"When people pay entirely out of pocket, no pooling occurs. ... Although prepayment and pooling are a significant improvement over purely out-of-pocket financing, they do not take questions of income into account. As a result of large pools, society takes advantage of economies of scale, the law of large numbers, and cross-subsidies from low-risk to high-risk individuals. Pooling by itself allows for equalization of contributions among members of the pool regardless of their financial risk associated with service utilization. But it also allows the low-risk poor to subsidize the high-risk rich. Societies interested in equity are not indifferent to who is subsidized by whom. Therefore, health financing, in addition to ensuring cross-subsidies from low to high risk (which will happen in any pool, unless contributions are risk-related), should also ensure that such subsidies are not regressive".

"Health systems throughout the world attempt to spread risk and subsidize the poor through various combinations of organizational and technical arrangements." Figure 1 illustrates both risk and income-related cross-subsidies. "In practice, in the majority of health systems, risk and income cross-subsidization occurs via a combination of two approaches: pooling and government subsidy."

These "could occur among the members of the same pool, for example in single pool systems such as the Costa Rican social security organization and the National Health Service in the UK, or via government subsidies to a single or multiple pool arrangement. Cross-subsidization can also occur among members of different pools via explicit risk and income equalization mechanisms, such as those being used in the social security systems of Argentina, Colombia and the Netherlands."

"Even under single pool organizations, decentralization, unless accompanied by equalization mechanisms for resource allocation, may result in significant risk and income differences among decentralized regions. Brazil has introduced compensatory mechanisms in the allocation of revenues from the central government to the states to reduce such differences."

Thus although the pooling function has as its major role to create risk cross-subsidies from low risk to high risk people, the existence of a pool also plays a critical role in creating the mechanism for income cross-subsidies between high and low income people. This policy brief addresses issues to do with risk pooling, leaving the question of how best to arrange the income cross-subsidies for a future policy brief.

2. Risk Pool Size

The WHO[1] makes recommendations on the size of risk pools: "Large pools are better than small ones because they can increase resource availability for health services. The larger the pool, the bigger the share of contributions that can be allocated exclusively to health services. A large pool can take advantage of economies of scale in administration and reduce the level of the contributions required to protect against uncertain needs, while still ensuring that there are sufficient funds to pay for services. Given that needs vary unpredictably, the estimation for an individual could be unaffordably large. By reducing this uncertainty, the pool is able to reduce the amount set aside as a financial reserve to deal with variations in the health expenditure estimates for its members. It can then use the funds released for more and better services."

"Fragmentation of the pool – in other words, the existence of too many small organizations involved in revenue collection, pooling and purchasing – damages performance of all three tasks, particularly pooling. In fragmented systems, it is not the number of existing pools and purchasers that matters, but that many of them are too small." ... "Predominantly out-of-pocket financing represents the highest degree of fragmentation. In such a case, each individual constitutes a pool and thus has to pay for his or her own health services." This fragmentation is also true of the use of personal medical savings accounts. The case of Argentina before 1996 is described where many of the 300 pools have "no more than 50 000 members".

"Larger is better for pooling and purchasing. But economies of scale show diminishing returns and, beyond a critical size, marginal benefits may be negligible. The argument for large pools is therefore not an argument for single pools when multiple pools can exist without fragmentation, and when their size and financing mechanisms allow for adequate spreading of risk and subsidization of the poor."

A comprehensive review of the choice between single and multiple payers was done by Hussey & Anderson[4]. Their analysis compares single-payer and multi-payer models for revenue collection, risk pooling, purchasing, and social solidarity. They argue that single-payer and multi-payer systems each have advantages: single-payer systems are usually financed more progressively, and rely on existing taxation systems; they effectively distribute risks throughout one large risk pool; and they offer governments a high degree of control over the total expenditure on health. Multi-payer systems sacrifice this control for a greater ability to meet the diverse preferences of beneficiaries through competition.

The argument for large pools is therefore not an argument for single pools when multiple pools can exist without fragmentation, and when their size and financing mechanisms allow for adequate spreading of risk and subsidization of the poor. WHO[1]

On the question of social solidarity, single-payer systems can[4] "foster citizens' trust in the ability of the government to protect their welfare, enhancing the population's view of the legitimacy of the government. However, in some cases multiple insurance pools might improve the political support of the government. For example, better-off individuals who feel that they are contributing more than their fair share towards insuring the health risks of others may oppose the health insurance system."

"Allowing them to opt out of a single-payer insurance system may provide greater social solidarity ..., by securing the political support of high-income earners for the public insurance system. This is particularly important in low- and middle-income countries where the high-income individuals and large industries must be willing to pay most of the cost of the reforms."

In a multiple pool system, how large do risk pools need to be? This can be answered from a technical actuarial perspective. The "law of large numbers" is at work in that the larger the risk pool, the greater the stability in the results from month to month. A useful study and recommendations on minimum risk pool size for different healthcare benefits was published by the actuarial and clinical consulting firm, Milliman USA[5], as reproduced below.

Table 1: Minimum Risk Pool Size[a] for Healthcare Providers to Accept Risk[5]

Recommended Minimum Number of Member Lives For Provider Organization Risk Acceptance	
Type of Risk	**Minimum Member Lives**
Primary Care Physician	500 - 1,000
All Physician Services	20,000 - 30,000
Hospital Services	60,000 - 100,000
All Risk	20,000+

[a] The terminology "member lives" in the USA is equivalent to the term "beneficiaries" in South Africa.

Millimans argue that: "Successful provider organization acceptance of insurance risk (i.e., claim fluctuation risk) requires a minimum number of member lives in order to provide a reasonably predictable result. This minimum number varies by scope of services and population covered. For example, the low cost, high frequency of primary care physician[b] services requires a relatively low number of member lives (500 to 1,000) for predictable claim cost. On the other hand, some specialty services (i.e., organ transplants) require a very high number (100,000 +) of covered lives before the associated risk becomes predictable."

Although the same studies have not been published on South African data, the pool sizes seem appropriate, based on experience. The table above illustrates that primary care services, which tend to be for high frequency low cost events, need the smallest pool size. Including specialist care increases the required pool size substantially from about 500-1,000 lives to 20,000-30,000 lives because some specialists services are rare and a few patients may need substantial specialist intervention. A risk pool providing only for hospital services needs the largest pool (60,000 to 100,000 lives) to cope with the low frequency very high cost events. But the most important point is that when all services are combined (the low frequency, high cost ones and the high frequency low-cost ones), then the minimum pool size reduces to about 20,000 lives.

In South Africa, the Council for Medical Schemes uses 30,000 beneficiaries (or lives) as the definition of a large medical scheme. This reflects the same thinking as in the Milliman study, that at about that size the results will be more predictable and thus the financial results of the risk pool will be more stable.

3. Risk Pooling in Medical Schemes

The number of medical schemes declined from 305 in 1974 to 170 in 1994. The trend towards greater consolidation continued in the last fifteen years with a reduction to 119 schemes in 2008 and a further six mergers or liquidations in the year to 113 schemes. Over the period since 1974, medical scheme beneficiaries have more than doubled to reach 7.875 million by end December 2008[6].

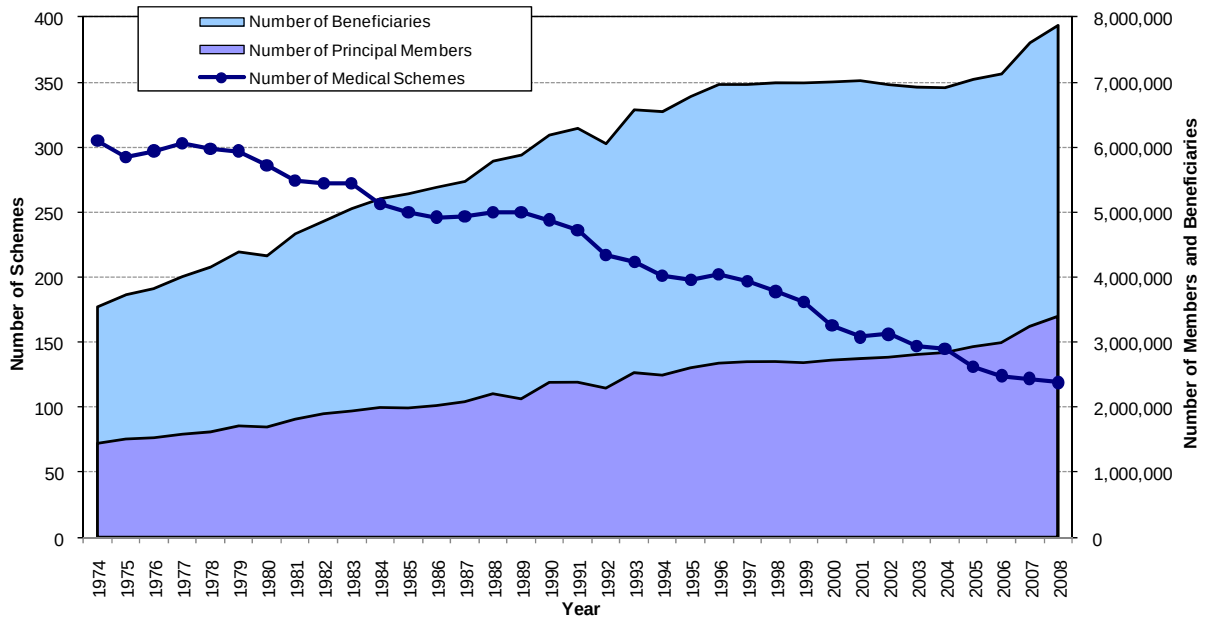

Figure 2: Historic Beneficiaries and Medical Schemes
Source: Annual Reports of the Council for Medical Schemes

[b] Primary care physicians in the USA are equivalent to GPs and obstetric and gynaecology services in South Africa.

The growth in beneficiary numbers and decline in number of schemes is good for risk pooling as it means that risk pools should be becoming larger. The average registered scheme size was under 10 000 beneficiaries in 1974, growing to some 31 000 by 1994 and 70 000 by 2008. However average figures are very misleading as there are substantial differences in sizes of schemes. The graph below shows scheme size at the end of 2008 and shows that open medical schemes (that anyone can join) are generally larger than restricted schemes (that are typically employer or union-based).

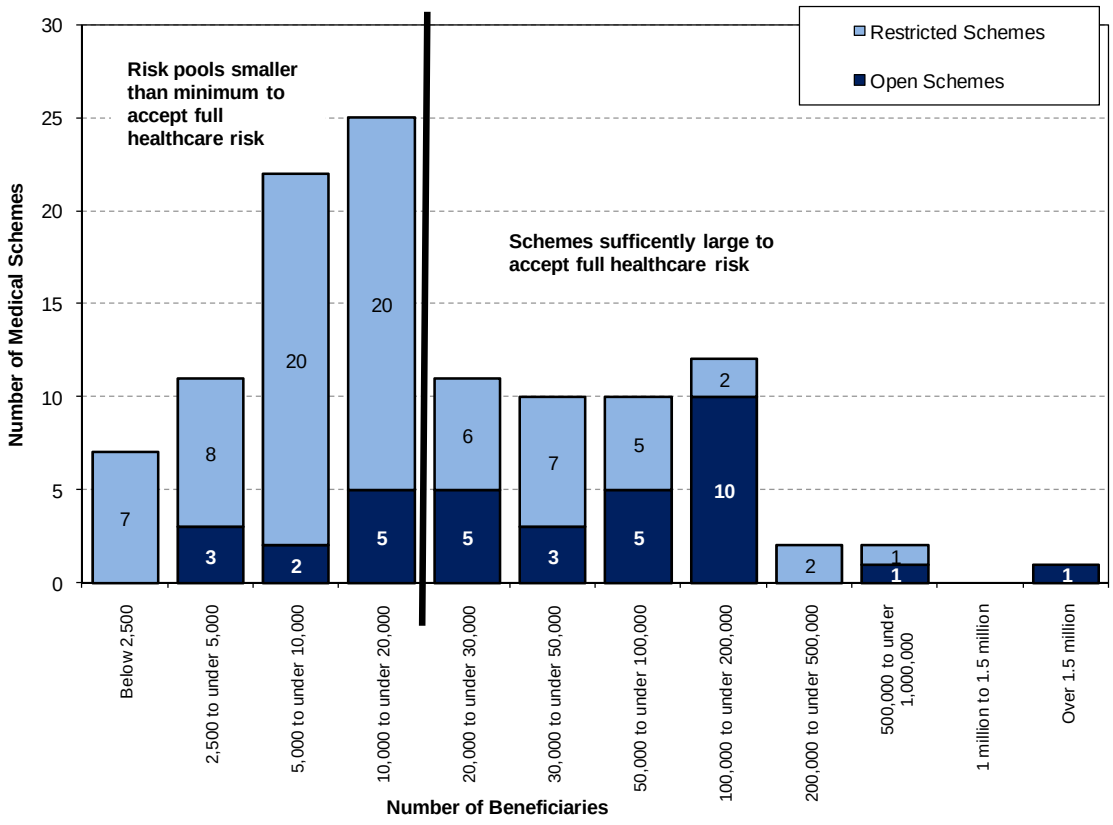

Figure 3: Size of Medical Schemes in December 2008[6]

McLeod & Ramjee[7] found that of the 146 schemes registered in 2000, only 117 (80.1%) were still registered at the end of 2005. Twelve of these schemes had liquidated and 17 had amalgamated with other schemes, with the majority of the activity occurring in the restricted scheme market. Consolidation activity has continued as schemes losing a large proportion of their members to the Government Employees Medical Scheme (GEMS) are typically left with smaller risk pools and higher claiming profiles which are unsustainable.

GEMS was registered in January 2005 and became operational in January 2006. Government has used a higher medical scheme subsidy for those choosing GEMS rather than an open scheme, as well as insisting that all new employees may only join GEMS, to grow membership rapidly. By December 2008 GEMS had reached 825,000 lives, making it the largest restricted scheme and the second largest medical scheme in South Africa.

One open scheme, Discovery Health Medical Scheme, now dominates the market having grown from its inception in 1993 to 1.953 million beneficiaries by December 2008. This scheme is more than three times the size of its nearest open scheme competitor, Bonitas Medical Fund at 608,000 lives. Discovery Health Medical Scheme alone accounts for 40% of the open scheme market and 25% of all medical scheme beneficiaries.

In USA the minimum risk pool size to accept full healthcare risk is at least 20,000 beneficiaries. In 2008 in South Africa, 71% of open medical schemes and only 29% of restricted schemes were that large, as illustrated above.

Despite substantial merger activity in recent years, there are still many small restricted membership schemes[c] clustered in industries that have not amalgamated. A good example of this is in the retail sector where there are separate schemes for Edcon, Foschini, Massmart, Shoprite, Pick 'n Pay and Wooltru. None of these is larger than 20,000 lives individually, but together would create a scheme of some 62,000 lives. While similar mergers have been discussed in this and other industries in the past, one of the issues that is not resolved is how to combine medical schemes with very different solvency levels. Each employer group typically feels their company and staff should benefit from a scheme with high solvency levels. This ring-fencing of assets is not feasible under existing medical scheme legislation but is a simple amendment that would facilitate and encourage larger risk pools.

An important point is that scheme size is not risk pool size in all cases as schemes are allowed to create separate packages of benefits called "options". Each option in a medical scheme is a separate risk pool as legislation[d] requires each option to be financially self-sufficient and self-sustaining. This means that risk pooling occurs at option level which results in even greater fragmentation of risk pools. The table below shows that there were 355 separate risk pools in 2008, of which only 80 were sufficiently large to accept full healthcare risk, using the USA definition. There were 1.7 million beneficiaries in risk pools that are too small by this definition.

Table 2: Size of Medical Schemes and Options in December 2008[6]

Type	Size	Total Beneficiaries	Number of schemes	Number of Schemes larger than 20,000 lives	Number of Options	Number of Options larger than 20,000 lives	Beneficiaries in Options larger than 20,000 lives
Open Schemes	Large	4,650,882	20	20	129	53	4,122,863
	Medium	181,270	8	5	37	0	0
	Small	56,754	7	0	25	0	0
Open Schemes Total		**4,888,906**	**35**	**25**	**191**	**53**	**4,122,863**
Restricted Schemes	Large	2,365,788	17	17	63	25	2,010,716
	Medium	319,309	17	6	35	2	42,513
	Small	300,823	44	0	66	0	0
Restricted Schemes Total		**2,985,920**	**78**	**23**	**164**	**27**	**2,053,229**
All Schemes Total		**7,874,826**	**113**	**48**	**355**	**80**	**6,176,092**

The Registrar is increasingly refusing to register minor variations in benefit package as separate options[7]. There were 435 options in the year 2000, reducing to 401 in 2005 and 355 options in 2008. Nearly half (47%) of all restricted schemes have only one option and only 13% have more than three options. Open schemes, in attempting to provide a wider choice for competitive reasons, typically have four to five or even more options. No open scheme in 2008 had less than three options and 71% had more than three options.

The highest number of options in one scheme was 21 in 2005 for Momentum Health, reducing to 16 in the same scheme since 2006. In 2008 only four of the 16 options in Momentum Health were larger than 20,000 beneficiaries. In contrast, while Discovery Health Medical Scheme had 14 options, 13 of these were larger than 20,000 beneficiaries and, by the Milliman definition, viable risk pools in their own right.

The very high number of options across all schemes is worrying as each represents a separate distinct package of benefits. A high number of options is not good for consumers as it makes comparisons between schemes very difficult for members. In the open scheme market in 2008, members had a choice of 191 distinct benefit packages. The lack of comparability means that brokers

[c] Restricted membership schemes are typically employer-based although legislation allows for membership or former membership of a union, industry or profession to be used as the basis for restricting membership.

[d] The Medical Schemes Act, No. 131 of 1998

become needed to assist in the choice and this also increases costs. Members find it difficult to compare products to see which offer the best value for money. The high number of options also means higher marketing costs by schemes as they attempt to differentiate themselves in the minds of consumers and competition becomes established on the basis of factors other than cost.

A high number of options is also not good for healthcare providers. Doctors, pharmacists and hospitals struggle to know whether a particular treatment or drug is covered and have to deal with the particulars of each benefit option in order to be sure. Prescribed Minimum Benefits (PMBs), in place since January 2000, cover only about half of medical scheme expenditure. Even PMBs, which are meant to be a common package of benefits offered by all options, have different administrative requirements in different schemes. All of this additional time and administration complexity adds to the costs of providing healthcare.

The International Panel that reviewed the work on risk equalisation in 2004[8], also commented on the very high number of options allowed in South Africa, recommending greater standardization[9]: "stakeholders should design a comprehensive basic benefit package to deal with deficiencies in the existing minimum benefit package. They recommended that funds be allowed to offer only a limited standard set of benefit packages above the new basic package. These standardized packages would mean a substantial reduction in the administration burden faced by practitioners and should also lower administration and acquisition costs in medical schemes. Consumers would no longer be confronted by a confusing array of options and would instead be able to compare packages and make decisions based on price, network availability and quality." While there was strong agreement with these recommendations in 2004, the intention to reform options in 2006[10] and a PMB review process in 2008[11], standardised packages have not been implemented.

4. Regulations and Risk Adjustment to Improve Pooling

The WHO[1] argues that: "Health system policy with regard to pooling needs to focus on creating conditions for the development of the largest possible pooling arrangements. Where a particular country for the moment lacks the organizational and institutional capacity to have a single pool or large pools for all citizens, policy-makers ... should try to create the enabling conditions for such pools. ... Introducing regulations such as community rating (adjusting for the average risk of a group), portable employment-based pooling (insurance that a worker keeps when changing jobs) and equal minimum benefit packages (access to the same services in all pools), in addition to protecting members of the pools, may pave the way for larger pooling in the future." ...

"Regulation may cover such aspects as mandatory participation, non-risk-related contributions or community rating (the same price for a group of members sharing the same geographical area or the same workplace), and prohibition of underwriting (requesting additional information regarding health risks). Financial incentives may include risk compensation mechanisms and subsidies for the poor to join a pool."

In competitive risk pool environments, the greatest danger is that funds compete on the basis of risk selection. Van der Ven & Ellis[12] describe "cream-skimming" (also called preferred risk selection or "cherry-picking") as the selection that occurs because health plans prefer low-risk consumers to high-risk consumers. The authors argue that "the larger the predictable profits resulting from cream skimming, the greater the chance that cream skimming will be more profitable than improving efficiency. At least in the short run, when a health plan has limited resources available to invest in cost-reducing activities, it may prefer to invest in cream skimming rather than in improving efficiency. ... Efficient health plans who do not cream skim applicants, may lose market share to inefficient health plans who do, resulting in a welfare loss to society." One mechanism to deal with the differences in risk pools created by competitive behaviour is to create a fund for risk-adjustment so that all plans face a more similar risk profile and cream-skimming becomes unprofitable or much less profitable.

The ANC Health Plan of 1994[13] called for medical schemes under a future NHI to be subject to the following:

- Schemes ... should be prohibited from excluding any member (e.g. on the basis of high risk).
- The basic package of care to be covered by the NHI should be statutorily defined.
- Contributions to cover the basic package would be income related ....
- This contribution revenue (covering the basic package) should be pooled in a central equalisation fund, out of which every scheme would be paid in terms of its overall risk profile i.e. a risk adjusted capitation fee.

South African regulation of medical schemes has already moved substantially in the direction advocated by the WHO and envisaged by the ANC Health Plan. The Medical Schemes Act of 1998, effective from January 2000, re-introduced[14] open enrolment[e], community-rating[f] and minimum benefits[g]. However while substantial work on the risk-adjustment mechanism has taken place, the proposed Risk Equalisation Fund[8,9,15,16] has not yet been implemented. South Africa is unusual in having implemented these three elements without risk equalisation. As described in section 1, pooling has two functions: to allow risk cross-subsidies and income cross-subsidies. Without the central pooling mechanism of the Risk Equalisation Fund it is not possible to introduce the industry-wide income cross-subsidies envisaged in the ANC Health Plan of 1994.

5. The Proposed Risk Equalisation Fund between Medical Schemes

The Risk Equalisation Fund (REF) was designed to create effectively one risk pool across all medical schemes in respect of the common benefits, the PMBs. In investigating the need for risk-adjusted payments to schemes[15], it was found that there were extreme differences in age profile between funds. The price for minimum benefits in open funds ranged from 38% cheaper than the industry community rate to 142% more expensive, based on the difference in age profile alone. This is unfair to members of medical schemes as the price that they pay for the same package of benefits differs depending on the scheme and option that they join.

A system of risk equalisation effectively creates one single pool for the defined benefit package so that all medical scheme members effectively pay the same amount for the same package of benefits. This means that risk cross-subsidies are fully operational across the industry. The graph below illustrates how some schemes (with a younger age profile) would contribute to REF and others (with an older age profile and thus more beneficiaries with chronic disease) would benefit from REF. The net effect is to create a single community rate[h] or common price for PMBs, which would have been R224.90 per beneficiary per month in this period.

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[e] Open enrolment means that open schemes (as opposed to employer or union-based restricted schemes) have to accept anyone who wants to become a member at standard rates. Only a limited form of underwriting is allowed and that may not stretch back further than the last twelve months.

[f] Community-rating means that everyone must be charged the same standard rate, regardless of age or state of health. Charging by risk or risk-rating is not allowed.

[g] Minimum benefits are a minimum package that must be offered by all options in all schemes. Beneficiaries must be covered in full for these conditions with no limits or co-payments. The Prescribed Minimum Benefit (PMB) package is a list of some 270 diagnosis-treatment pairs primarily offered in hospital (introduced January 2000); all emergency medical conditions (defined January 2003); diagnosis, treatment and medicine according to therapeutic algorithms for 25 defined chronic conditions on the Chronic Disease List (introduced January 2004).

[h] There would still be some differences in the price paid by each member according to the efficiency of the scheme chosen. Schemes that can deliver the PMBs more efficiently than the industry will be cheaper and those that are less efficient will need to charge an amount directly to members. This should encourage competition on the basis of efficiency in delivery. In the absence of risk adjustment, competition occurs on the selection of favourable risk pools which rewards the young and healthy and penalizes the elderly and those with chronic diseases.

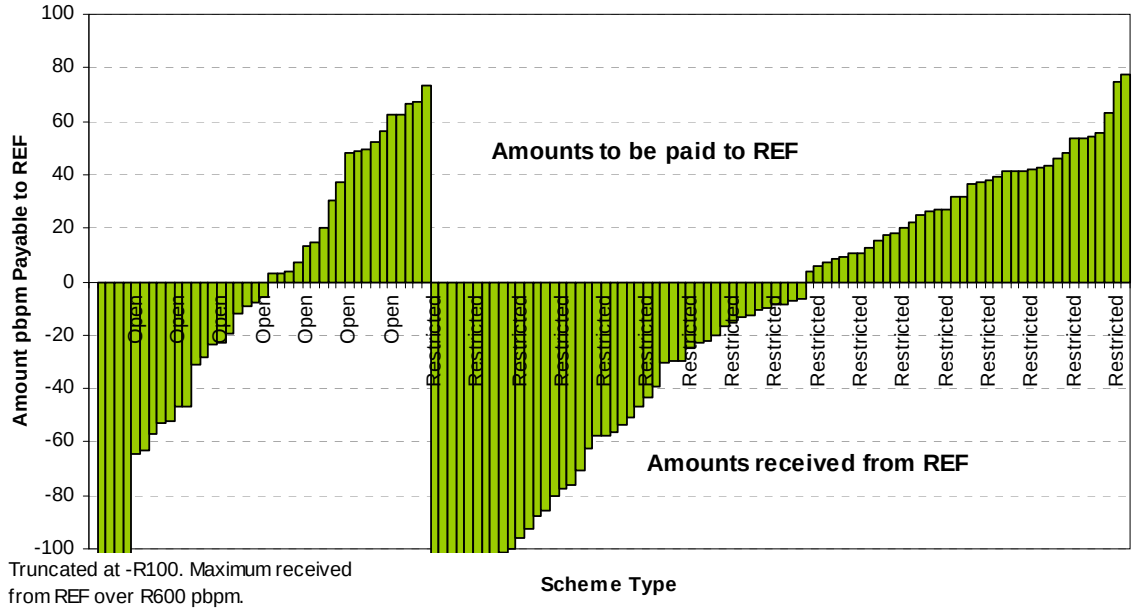

Figure 4: Expected Transfers to and from the Risk Equalisation Fund March 2006[17]
Industry Community Rate is R224.90 per beneficiary per month

The design of the REF formula[9] was performed by the Formula Consultative Task Team established by the Department of Health in July 2003. Stakeholders were invited to assist and some 60 people participated in the six teams that evolved during the stakeholder consultation process. The guiding principles for risk equalization and the choice of risk factors were developed and agreed. In the context of REF, risk was defined as the expected and predictable significant deviation from the theoretical national community-rated price for groups of beneficiaries with a measurable set of risk factors. The industry community rate is the reasonably efficient achievable price for the common set of benefits.

The highly competitive nature of the South African market and the need for certainty about net REF payments at the time of pricing for annual contribution increases led to the predominant use of prospective risk factors. The risk factors agreed for use in risk adjustment were as follows:

- Age last birthday on 1 January, summarised into age bands Under 1, 1-4, 5-9, 10-14, ..., 75-79, 80-84, 85+.;
- Gender (recommended for inclusion from 1 January 2007 but not yet implemented);
- The 25 PMB Chronic Disease List (CDL) conditions. Where a beneficiary has more than one chronic condition the fund may select the most expensive of the conditions.
- HIV/AIDS provided the beneficiary is receiving anti-retroviral therapy according to national guidelines;
- An additional factor for multiple chronic conditions with provision for 2, 3, or 4+ simultaneous chronic conditions; and
- A retrospective factor for maternity events, defined as the delivery of a single/multiple foetus, either stillborn or alive.

Initial work by stakeholders on the standardisation of disease definitions resulted in a comprehensive manual of Verification Criteria that is now in its fourth iteration[18]. The Verification Criteria have been developed with the emphasis on the verifiability of cases and are used to ensure that gaming of the REF is identified and addressed. There are two elements to the criteria[9]:

- the **diagnosis** of a particular disease, which includes specification of applicable ICD-10 codes and limitations on the practitioners that may diagnose certain complex conditions.

There may also be certain mandatory tests needed to differentiate between diseases and these test results must be retained by the fund; and

- a **proof of treatment** element which is based on paid claims data. Initially this was based on payment date information but was changed to service date information which is less open to manipulation. Data for at least two of the three calendar months prior to the month of submission is typically required in order to demonstrate proof of treatment.

A decision was taken[9] to publish the REF formula in the form of a contribution table rather than a mathematical formula which has made the risk equalization process more understandable and more accessible. Regular submissions of data in the form of grids in the same tabular format meant that any trustee or consultant could determine expected REF payments using simple spreadsheets.

The final report on a viable risk equalization formula[15] was delivered to government in January 2004. An International Review Panel of experts from six countries was invited to review the proposals[8]. They supported the findings on the formula but recommended the inclusion of gender and not only maternity events. Importantly, the panel found that the need to introduce risk equalization was urgent and recommend that the system should begin in 2005 if feasible.

The Department of Health formally adopted[9] the REF as policy in September 2004 and the testing phase of the REF was approved by Cabinet in January 2005. Responsibility for implementation was placed with the Council for Medical Schemes which embarked on a "shadow process" for REF (with no money changing hands) during 2005. This allowed for a process of developing and testing the central REF systems and also encouraged the administrators and funds to develop systems to handle the REF returns. The industry expected the full implementation of REF from 1 January 2007, but the legislative process has taken much longer than expected.

The systems for risk equalization have been developed but cannot be fully tested[9] and implemented without the enabling legislation and regulations that will allow for the collection of industry data. The draft Bill for an amendment to the Medical Schemes Act of 1998, which would establish the Risk Equalisation Fund, was gazetted in November 2006. Amendments to the bill were again delayed and the bill was not ready to be submitted to parliament until 2008. Consideration of the bill was then withdrawn. Detailed testing of REF has thus been delayed from 2007 to an unknown future date.

The delayed implementation of the REF has very adverse consequences[9] for schemes with high average age profiles and chronic disease. There have also been increasing attempts to lobby for exclusion from REF by certain funds on the grounds that as net payors to REF they would be adversely affected. While there is no legislation yet in place, legal challenges have not yet been possible. A rapid implementation of REF in 2005 or 2007 would arguably have had a smoother passage than can be expected if the legislation comes to parliament in 2011 or later. As REF is a key organisational component of the envisaged mandatory system[19], any delays in REF imply concomitant delays in any mandatory system.

A critical issue is the sequencing of health reforms including REF[17]. It is important that the per capita (per head) subsidy discussed in section 4 of Policy Brief 7[20] be implemented at least at the same time as REF. If REF is implemented before the per capita subsidy it will negatively affect the lower income groups. This impact on affordability will be explained in more detail in a future policy brief.

6. Risk Pooling in the Public Sector

The same issues about risk pool size affect all healthcare purchasers, whether public or private. The need for risk adjustment across different pools is also a feature of public systems. Rice & Smith[21] give several examples where there is formal risk-adjustment between public sector pools: "The archetype of the centralized public sector system is the National Health Service found in the four countries of the United Kingdom. Such systems are intended to overcome some of the market failures usually associated with health care, and are usually funded out of general taxation. They attach a high

priority to notions of equity, especially in the sense that all citizens should enjoy equal access to health care according to health care needs, rather than on the basis of any other personal characteristics such as income, employment status, or area of residence. The management of such systems is usually organized on a geographical basis, and the main purpose of risk-adjusted capitation is to offer local areas the means to secure uniform national health care objectives. Other examples .... are from Italy, New Zealand, the state of New South Wales in Australia, and Alberta Province in Canada."

"In devolved public sector systems, the management of health care is devolved from a national (or state) level of government to a lower tier of local government. Some or all health care is then funded by local taxes. If such devolution were complete, and a uniform package of care were specified, then local taxes would bear the entire burden of local need for health care, and would therefore depend on the health status of the local population and the size of the local tax base. In practice, this would result in great variations in local health care taxation. All such systems view the consequent variations in taxes as unacceptable, and so some intergovernmental transfers are effected, based on risk-adjusted capitation payments. The intention is to offer local areas the opportunity to levy a standard level of tax while delivering a standard package of health care. Examples ... are from Denmark, Finland, Norway, Spain, and Sweden".

"In many nations, the equitable distribution of health care resources plays a central role in securing widespread support for health services funded out of general taxation, and explicit equity objectives underlying health care capitation are therefore most frequently found in centrally controlled public sector health care systems. Examples of such objectives are:

- "to monitor progress towards the achievement of fairness in health funding"—New South Wales Resource Distribution Formula
- "to overcome territorial inequalities in social and health conditions" (Italian regional resource allocation mechanism)
- "to divide up funding equitably between the four . . . regions" (New Zealand Population Based Funding Formula)
- "to secure equal opportunity of access to those at equal risk" (English resource allocation formula)

"These objectives reflect two concerns: to secure equity of health, and to secure equity of access to health care. The former objective is largely rhetorical, and few practical attempts have been made so far to adjust capitation payments in order to address inequalities in health .... In practice, seeking to offer equal access to health care to those in equal need has hitherto been the equity objective - either explicit or implicit - underlying almost all schemes".

7. Need for Risk Adjustment in the Public Sector in South Africa

The public sector in South Africa is financed from tax revenue. Tax funds are centrally collected by the South African Revenue Service (SARS) and amounts are allocated from central government to provinces (for all sectors) using a needs-based formula. Each of the nine provinces has relative autonomy to decide on how it will allocate these funds to individual sectors (e.g. health, transport and education) meaning that South Africa has a 'fiscal federal' system. McIntyre & Thiede found[22] "In more recent years, there has been progress towards greater equity in interprovincial health care expenditure. ... by 2005/06, total public sector health care expenditure per person dependent on public sector services was approximately twice as high in the Western Cape as in North West (compared to the fivefold difference between the best and worst resourced provinces in 1992/93)." The disparity improves marginally if spending on highly specialised services (central and tertiary hospitals) is excluded.

There are significant differences between the age profiles of the provinces, as illustrated in section 3 of Policy Brief 1[23]. The table in that brief illustrates the difference in payments needed by province on the basis of age and gender differences alone. "The Western Cape has a much older profile, with

fewer children and more middle to older age adults than the other provinces. This translates ... to a price difference of 9.4% more needed in the Western Cape than the price for the country as a whole. By comparison, Limpopo province has a very young profile with many children and few working age and older adults, thus needing 9.2% less for healthcare than the price for the country as a whole."

The ANC proposals for National Health Insurance[24,25] suggest that purchasing may be devolved to 52 health districts. These districts are of very unequal size, as illustrated in Figure 5 below. The Community Survey used does not differentiate between those receiving healthcare in the public and private sectors so the graph is drawn using the total population of each district.

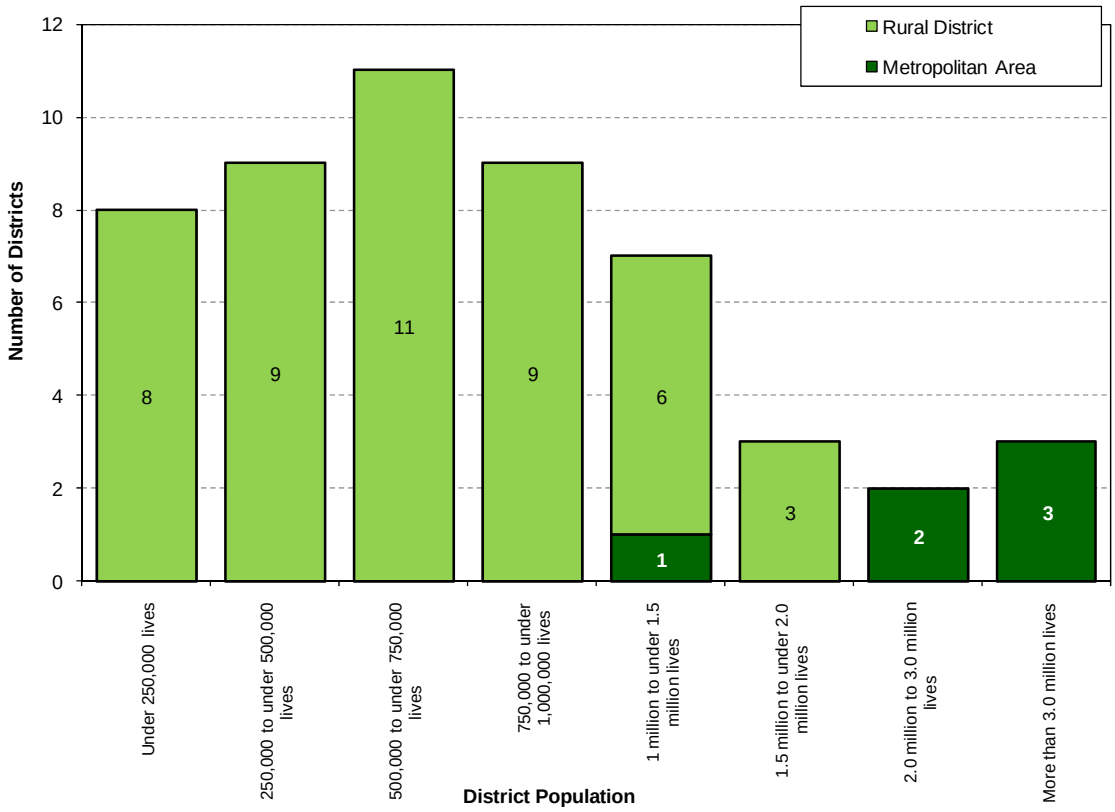

Figure 5: District Risk Pool Size in 2007, including Medical Scheme Beneficiaries
Source: StatsSA Community Survey 2007

The districts range in size from 56,000 lives in the Central Karoo to 3,888,000 lives in the City of Johannesburg. All are substantially larger than the minimum risk pool size of 20,000 lives discussed in section 2. However if District Health Authorities were to make fixed or capitation-like payments to clinics or facilities under their jurisdiction, then the issue of risk pool size will again become critical. A typical GP practice may have some 3,000 lives which is well below the minimum pool size of 20,000 lives advocated by Millimans.

An interesting issue in future pooling in the public sector is whether to develop an allocation formula at provincial level, effectively creating nine risk pools, or whether to consider the particular characteristics of each district, thus creating 52 risk pools. As with many such exercises, the decision may come down to the availability of reliable data. Good data on age and gender profiles at district level is only available at Census time, which is to be every ten years in future after the planned Census 2011.

8. Possible Risk Pooling between Public and Private Sectors

There is currently no risk pooling between the tax funded public sector and private medical schemes. While the future design of NHI is still not clear, it seems highly likely that a multi-tier system will remain for a considerable period of time, as discussed in sections 5, 6 and 8 of Policy Brief 7[20]. In section 4 of the same brief it was advocated that the existing tax subsidy for medical schemes be replaced by a per capita subsidy that is fixed at the same amount across the public and private sectors. This amount could be allocated per head or on some risk-adjusted basis. The design of the proposed mandatory system for medical schemes in 2005[19] would have allowed for a central equalisation fund to fulfil an additional role in providing risk-adjusted payments to the public sector as well as medical schemes, as illustrated below.

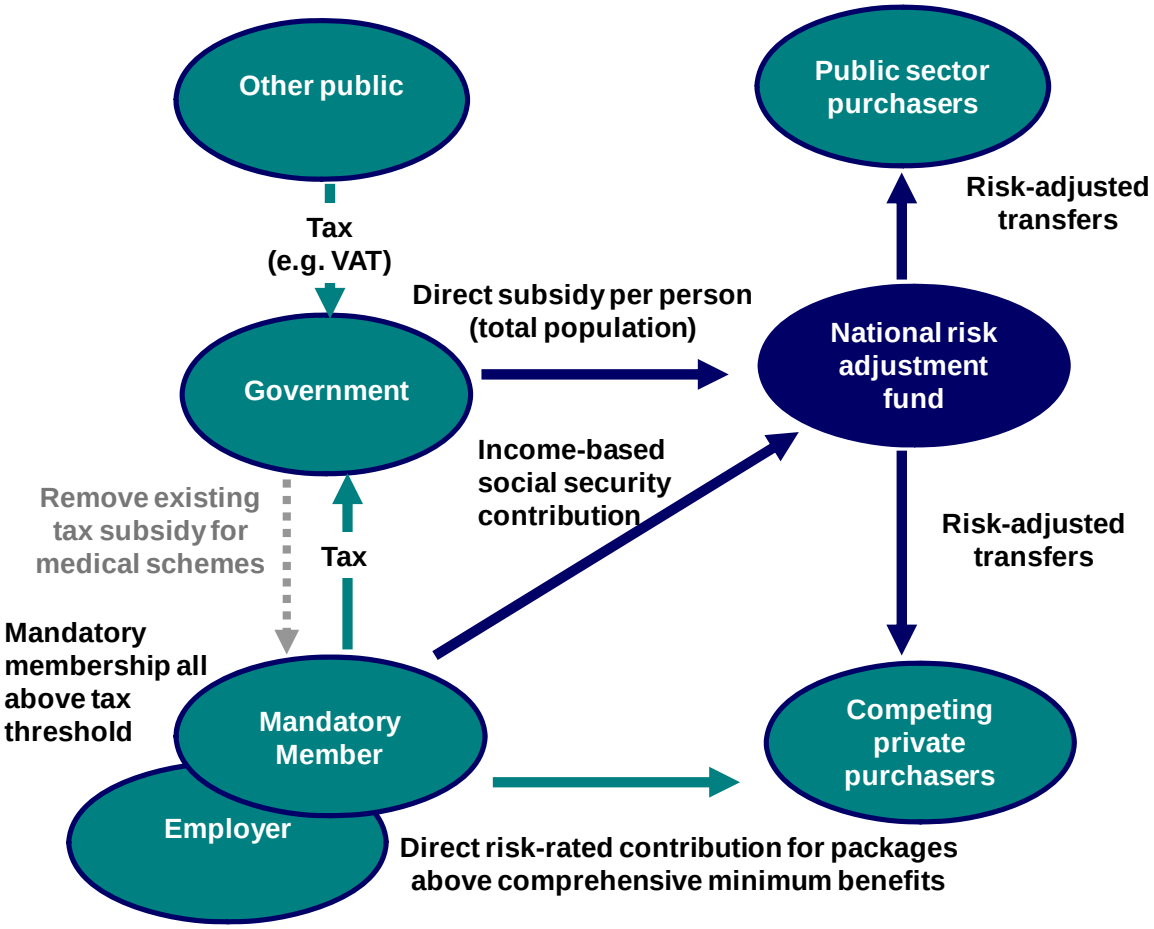

Figure 6: Possible Risk-Adjustment between Public and Private Purchasers

The age and gender profile of people in medical schemes was shown to be older than that in the public sector in sections 5 and 6 of Policy Brief 2[26]. Thus a formula for risk-adjustment of the per capita subsidy based only on age and gender would result in a transfer from the public to the private sectors. This is unlikely to be politically palatable. However there are substantial differences in the incidence and prevalence of HIV between the provinces, as illustrated in section 3 of Policy Brief 4[27]. This is also an example of a disease where risk adjustment between the public and private sectors would benefit the public sector. Prevalence of this disease in medical schemes is of the order of 1/3 of that in the general population.

9. Conclusions and Actions Needed

Risk pooling is a function of health systems, regardless of how they are designed. Larger risk pools are preferable to small ones but as the WHO has argued, the argument for large pools is not an argument for a single pool. While there are many arguments in favour of a single pool, the reality of transforming the current multi-tier South African system is that there is likely to be a continuation of a multi-tier system. In other words, a tax-funded public sector will co-exist alongside some sort of mandatory health insurance system for those earning a sufficient amount to be able to contribute to healthcare in the form of some sort of social security contribution. As in the ANC Health Plan of 1994, competitive risk pools are envisaged as the vehicles for this mandatory system.

In regulating multiple competitive pools it is important to encourage the formation of the largest possible pools. In South African medical schemes there is still substantial fragmentation due to the proliferation of options, the design of options and the lack of legislation facilitating mergers in particular industries. These are all issues that can be tackled by the Council for Medical Schemes. Implementation of more standardised benefit packages would assist consumers and providers of healthcare and should substantially reduce the complexity of administration.

The most critical element for the medical schemes environment is to introduce a system of risk-adjustment between medical schemes, as envisaged since 1994. This will effectively create a single risk pool amongst all medical scheme beneficiaries for the common benefits. The mechanism needed for risk adjustment, named the Risk Equalisation Fund, will not only improve risk cross-subsidies between medical schemes but can also be the vehicle for implementing income cross-subsidies between medical scheme members, again as envisaged by the ANC Health Plan of 1994. The absence of a risk adjustment mechanism severely undermines both risk cross-subsidies and income cross-subsidies which are the desired results of pooling in healthcare financing.

A risk adjustment mechanism between provinces and perhaps health districts will also be needed to ensure equity between the regions. This approach is commonly found in public systems and further work is needed in South Africa on the design of a suitable formula. A national risk adjustment fund is postulated as a way to ensure equity between public sector purchasers and private competing funds. This would be a logical way to distribute the per capita subsidy which is envisaged might replace the current tax break given to medical scheme members.

The most critical element of reform that is needed in 2010 in medical schemes is to implement the long-awaited Risk Equalisation Fund.

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All views expressed are those of the author.
31 January 2010

Resources on the IMSA Web-site

The following is available on the NHI section of the IMSA web-site: www.imsa.org.za

- The slides and tables used in this policy brief [PowerPoint slides].

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