



## Setting Incentives for Health Care Providers in Serbia

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### Key Messages<sup>1</sup>

- **The Serbian Government wants to change the way health care providers are paid by setting incentives for better provision of care.**
- **Currently, health care funds are allocated on the basis of number of staff and beds at health facilities; this system does not reward improvements in productivity, quality of care and health outcomes.**
- **The World Bank, on the request of the Serbian Government, conducted a cost and efficiency study of 147 Serbian Primary Health Care facilities (DZs) *before* the implementation of the payment reforms to determine how capitation would affect the provision of care.**
- **The survey showed that financial incentives may not be enough to bring about a behavioral change among DZs; other supporting policy changes are needed.**

### Introduction

The Serbian Government plans to reform its provider payment system for health care by setting incentives for providers to improve the quality and efficiency of care. Funds for health care are currently allocated on the basis of the number of staff and beds at health facilities. This encourages health care providers to use more staff and beds to define their budgets but does not reward improvements in productivity, quality of care or health outcomes.

<sup>1</sup> This Knowledge Brief summarizes the findings of the report, “Serbia: Baseline Survey on Cost and Efficiency in Primary Health Care Centers before Provider Payment Reforms”, The World Bank, 2009.

### How Will the Reforms Improve Health Care?

Serbian primary health centers (PHCs), known as Dom Zdravlja or DZ, are organized either as separate entities or as part of secondary care hospitals - Zdravstveni Centri. DZs provide basic primary services while patients needing specialized primary care are referred to one of the 19 specialized centers (Zavodi) or to one of the 120 hospitals. As part of a new decentralization strategy, all DZs are becoming independent from hospitals.

Under the planned reforms for provider payments, fund allocations to DZs will not be linked to the inputs used (beds and staff) or to the volume of services provided. Rather, the DZs will be paid, in advance, pre-determined fixed per capita payments. These payments will be based on the number of individuals enrolled with a DZ and the latter will be expected to provide a defined set of services for the enrolled individuals for a fixed period of time. This method would help shift some financial risk from the Health Insurance Fund (HIF) to the DZs. If a DZ’s expenditures are greater than the budget provided, it will be liable for the difference. If the DZ shows efficiency gains and its costs are lower than the capitation budget, it will be allowed to retain and reinvest the surplus for providing better health care.

The reforms are expected to improve efficiency by reducing inputs such as staff and infrastructure and increasing outputs such as the number of patients receiving preventive care. This method will also help combine inputs more effectively (for example, shift some expenditures from staff and utilities to medicines and supplies), increase preventive services, and decrease diagnostic services. The change in treatment behavior is expected to lead to increased productivity, better quality of care, and better health.

The Government also plans to make reforms in its hospital payment system and introduce case-based payments. Under case-based payments such as Diagnosis Related Groups (DRGs), hospitals are paid the average cost of producing a

‘case’ in an average hospital, which may be adjusted to account for regional economic conditions and include indirect costs such as teaching and capital costs. A shift from line-item budgets to case-based payment in hospitals is expected to lead to more inpatient admissions, shorter average length of stay, and higher patient turnover per bed, which may also lead to higher hospital expenditures for the HIF. However, as capitation is expected to improve access to DZ services, it may be expected also that hospitalization rates, particularly for conditions that can be prevented or managed at the DZs, will decline.

Per capita payments may also create unintended consequences. For example, there may be an incentive for DZs under the capitation payment system to under-provide services and keep costs low, or refer patients to hospitals or specialists who are paid fee-for-service. These adverse effects may be prevented to some extent with additional checks and balances in the system, such as open enrollment in DZs, a quality monitoring system, outcome-based bonuses for better quality compliance, or even penalties if DZs skimp on care for patients. Also, capitation rates are generally adjusted for age and gender of the population registered with the DZs, and other geographic criteria. Some capitation formulas would include quality-based components (for example, cancer screening rates, immunization rates) to set incentives to providers to improve quality of care and prevent adverse effects such as under-provision of care.

### World Bank Survey on Cost and Efficiency in Serbian DZs

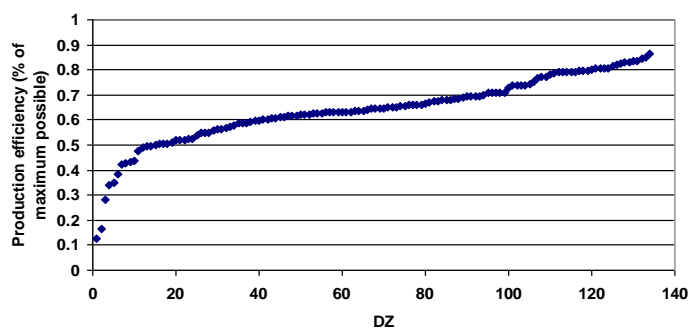
In order to determine whether capitation payments will affect the provision of care, the Government asked the World Bank to conduct a cost and efficiency study of 147 DZs *before* the implementation of the payment reforms, with a planned follow-up survey about two years after capitation is introduced. The purpose of this survey was to inform the payment reforms and to establish a baseline on health sector performance—including utilization, quality, and cost and efficiency against which the impact of the reforms can be assessed in a follow-up survey. The methodology used in the baseline survey included descriptive analysis of key performance measures in PHC centers, as well as an econometric analysis of the current production efficiency and cost efficiency functions in PHC centers. The analysis aimed to provide insights into the current level of efficiency, as well as the determinants of the factors that influence efficiency.

### Survey Findings

The main finding from this baseline survey was that DZs differ substantially in their efficiency. Although DZs generally work with the same level of staff, medical equipment and space—which are largely dictated by the system—they produce different levels of output such as numbers of consultations, etc. To some extent, the level of productivity in DZs may be affected by the age/gender structure of the populations, particularly by the number of children in the DZ catchment area.

Figure 1 shows the level of relative production efficiency for DZs, which is the ratio of the total number of consultations to the maximum possible output. An efficiency score of 1 indicates that the maximum possible output has been achieved in a DZ, so scores closer to 1 indicate more efficient DZs. Survey findings suggest that efficiency scores for DZs range from 0.136 to 0.866, with a mean of 0.641 (median=0.640). Six DZs have efficiency scores below 0.40, raising concerns about their levels of inefficiency, whereas 14 DZs report rather high levels of efficiency with scores above 0.80.

**Figure 1: Ranking of Serbian DZs by Production Efficiency Score**



Source: “Serbia Baseline Survey on Cost and Efficiency in Primary Health Care Centers before Provider Payment Reforms”. The World Bank, January 2009.

Some inefficiency is related to overstaffing in the DZs as indicated by the very low population-to-physician ratio of only 782 people per physician in Serbia, a number that is much lower than in WHO’s Europe region which has 3,500 people per primary care physician. DZs can become more efficient by reducing their staff numbers and space used, without reducing the total number of visits by patients.

There are large areas of unused space in DZs that contribute towards overall DZ inefficiency. About 50% of the DZs have at least some equipment that is used for relatively few diagnostic tests. The DZs mainly produce curative visits, provide relatively few preventive services and use excessive

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laboratory tests, injections, etc. Referral rates for DZs are generally low but it is not possible to determine from the data whether patients are being referred more or less than necessary.

There is very little variation in the cost-efficiency of DZs, because DZ expenditures are largely pre-determined as prices of input factors (for example, wages) and are defined on a national level.

Additional findings show that expenditures in DZs are dominated by personnel costs (which make up 70% of total cost). This is at the expense of medicines and supplies which are also needed to improve the scope and quality of DZ services. DZs are currently very constrained by their fixed costs and thus in their ability to improve cost efficiency, as their personnel costs are determined externally by the system. If personnel costs are excluded from capitation and the HIF continues to pay for staff based on a line-item budget, then only about 30% of total DZ costs can be managed by DZs under capitation.

There is currently unequal allocation of public resources for primary care across DZs. This is likely the result of the way funds are currently allocated based on the number of staff and other factors.

Once capitation has been introduced, it may be expected that DZs will provide more preventive care visits to patients to reduce the need for more expensive diagnostic and curative visits; in addition, unnecessary laboratory tests and injections may also be reduced. Also, capitation may lead to higher referral rates to hospitals as DZs will have the incentive to reduce their costs and hospitals paid by DRGs will have an incentive to hospitalize more patients. Therefore, additional measures may be needed to make sure that capitation does not lead to adverse effects on quality and access to care and on hospital spending.

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### Implementation of Provider Payment Reforms

The Government, in collaboration with health sector partners, has already started implementing several measures to prepare the sector for the planned provider payment reforms:

- The Government is currently reviewing proposals to adjust the capitation rate according to the age and gender of the enrolled population, and to include additional incentives for preventive services, such as bonus payment to DZs that achieve an agreed level for childhood immunization or maternal care. Also, the Government is considering

adjustments in the capitation payments to adjust for higher utility costs in DZs in mountainous areas.

- The Ministry of Health (MOH) has started a review of clinical guidelines to ensure that they are compatible with the scope of services that will be financed by capitation, and provide appropriate guidance to staff on laboratory tests, injections, other procedures, and referrals.
- The MOH and HIF, in collaboration with partners, have provided extensive management support to DZ managers so they will be able to successfully respond to the incentives set by the new per capita payment system. This collaboration is ongoing and includes management training and new accounting systems in all DZs.
- The Government is undertaking major investment in the data systems in DZs and HIF in collaboration with the World Bank and other partners. The HIF has started to strengthen reporting and analysis of key data related to DZ performance, including population size and demographic structure, services provided, and resource use.

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### Further Recommendations

Financial incentives set by the capitation payment system may not be enough to trigger a behavioral change among DZs that leads to more efficient care. Based on the conclusion from this baseline analysis, several additional steps could support the development of capitation payment in DZs, prevent adverse effects in reaction to the financial incentives set by the payment reforms, and improve the efficiency of the sector. These measures could be implemented in a phased approach with *Phase 1* focusing on the following seven steps:

- Pool PHC funds from the HIF and other public sources, and pay all DZs a unified capitation rate with appropriate adjustments for cost variations caused by age, gender and geographic differences.
- Include salaries in the capitation amount and adjust related human resources policies and laws to give more flexibility to DZs to improve their cost efficiency.

- Specify in referral guidelines the scope of services at the PHC level and appropriate referral pattern to prevent unnecessary referrals to higher-cost hospitals. In addition, the capitation system should include measures such as a quality monitoring system, outcome-based bonuses and penalties for unjustified referrals.
- While the Serbian health insurance law already sets the legal frame for co-payments, the Government may consider developing a revised cost-sharing policy as part of overall provider payment reforms.
- Assess the regulations and constraints that affect the ability of DZs to manage their resources more efficiently, including regulations affecting the scope of service at different levels of care, public procurement laws, and the public labor laws according to which public sector employees in DZs are still on the HIF payroll.
- Conduct an assessment of essential medicines that are necessary for effective PHCs, and consider the potential for limited financing of essential medicines within the context of capitation.
- Develop a cost-effective package of medical equipment that should be available at the PHC level. Consider reducing the numbers of equipment in DZs that are in the vicinity of hospitals to which patients could be referred. Examine whether more basic equipment is available that may contribute to DZ productivity (for example, blood pressure cuffs and scales)

During *Phase II*, additional attention could be given to the following measures:

- Consider reorganizing space in DZs, moving them to smaller buildings, or redirecting excess space to other purposes. DZs could rent out non-clinical space to private doctors, dentists, or day-care centers for individuals who need supervision such as the elderly and disabled.
- Hospital payment reforms such as DRGs stimulate changes in hospital care such as shorter hospital stays. As a result, DZs and community care, as well as long-term care departments, will have to be ready to provide a greater degree of follow-up to patients who have been discharged from hospitals.
- Collect information on the disease profiles of the populations served, outcomes, and overall access to essential medicines in the country. Develop quality and outcome measures that can be monitored by DZs on their own for internal management purposes, and at the system level by the HIF and MOH.

### About the Authors

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