Baseline Survey on Cost and Efficiency in Primary Health Care Centers (Dom zdravlja) before Provider Payment Reforms

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Context

- Transition since 2000, but crisis last longer
- Economic crisis – resources shrinked
- System burdened with inefficiencies

- Health financing:
  - Owner: Investments
  - HIF: Operational costs
- Line-item budgets, financing inputs
- Cost control, but reduction of quality, efficiency, access

Context

- Government plans to change provider payment system from line-item budgets to:
  - Capitation for primary healthcare
  - Case-based payments (DRGs) for secondary healthcare
- Primary Healthcare Centers – Dom zdravlja (DZ)

Reasons to conduct this survey

- MOH and HIF
  - Plan to change payment for primary health care and introduce capitation payment
  - Would like to know whether capitation payment will affect the provision of care
  - Therefore need to know how the situation in Dom zdravljas are *before* the payment change
  - Plan to conduct a follow-up survey about 1 year after capitation has been introduced

Purpose of the study

To conduct a basline survey on the cost and efficiency in Primary Health Care centers (Dom zdravlja – DZ) in Serbia before the implementation of the payment reforms.

Results can be used to inform the payment reform and to establish a baseline on health sector performance including utilization, quality, cost and efficiency against which the impact of the reforms could be assessed in a follow-up survey.

Who?

- MoH of Serbia
- The World Bank
- CeSID

Instrument for data collection

- The questionnaire for data collection was developed by representatives from the MOH, CeSID and the World Bank team and pilot-tested in February 2008

- Questionnaire was tested in three DZ:
  - Valjevo – within Health Center
  - Vračar - urban
  - Bačka Topola - rural

- After that, questionnaire was adjusted in accordance with experiences from test and from feedback given by representatives from those three DZ

Questionnaire

- **General Information**
- **Revenues** - *origin, donations, accounts receivable…*
- **Expenditures** - *wages, taxes, goods, services, debts and acc.payable…*
- **Staff and Equipment** - *workforce, beds, equipment, rooms…*
- **Services** - *consultations, gynecology, prevention, dental, home visits, diagnostics, referrals…*
- **Top diagnoses** - *most frequent reasons for visit*

Process of data collecting

- Training for 16 trainers – they further trained all collaborators that worked on data collection
- In total, 74 people participated in data collection – on average, one person per two DZ
- MOH sent to all DZ directors:
  - Letter of introduction with cooperation request
  - Questionnaire

Process of data collecting

- Associates then:
  - Called DZ to schedule visit
  - Offered explanations
  - Visited DZ to retrieve the data
- Sometimes more than one visit was necessary
  explanations, volume and type of data, completeness of data collected…
- Data collection – six-week period in May/June 2008
- 147 out of 157 DZs submitted valid questionnaires and were included in the study

The main conclusions from data collection phase

- Huge differences between DZs in response on the survey – process of communication with representatives of DZs and data collection reflected different type of internal organisation and internal communication within DZ

- The main difficulty was that DZs did not have all the data in the exact form that was required in questionnaire

- DZs that are part of Health Centers seem to have less possibility to respond on time and properly. Some of the data are collected in Health Centers for more than one DZ.

The main conclusions from data collection phase

- Data collection was much easier and efficient in DZs that have electronic databases. There were also huge differences between DZ in number of computers, quality of software and personnel that are trained to use this way of data processing

- Some DZ directors found the questionnaire to be a helpful management tool and decided to continue to use it for their own management purpose.

How was the analysis done?

- CeSID entered all questionnaires in Excel spreadsheet
- WB team
  - Transferred data into Stata statistical software to conduct analysis
  - Analysis included
    - Descriptive statistics for all DZs
    - Some econometric analysis to identify the level of efficiency

Characteristics of DZs included

Of the 147 DZs included:

Urban	51%
Rural	49%
Stand-alone	71%
Part of health center	29%
Owned by MOH	31.5%
Owned by municipality	68.5%
Privately owned	0%

Other common characteristics across all DZs

- Revenues in DZ
  - About 85% of their total revenues is from HIF
  - About 7.6% is from patient co-payments
- Space in DZ
  - Most of space (47%) is used for non-clinical purposes
  - About 43% of total DZ space is used for consultation rooms
- Equipments in working order
  - About 60% of DZs have some equipment such as X-ray or ultrasound

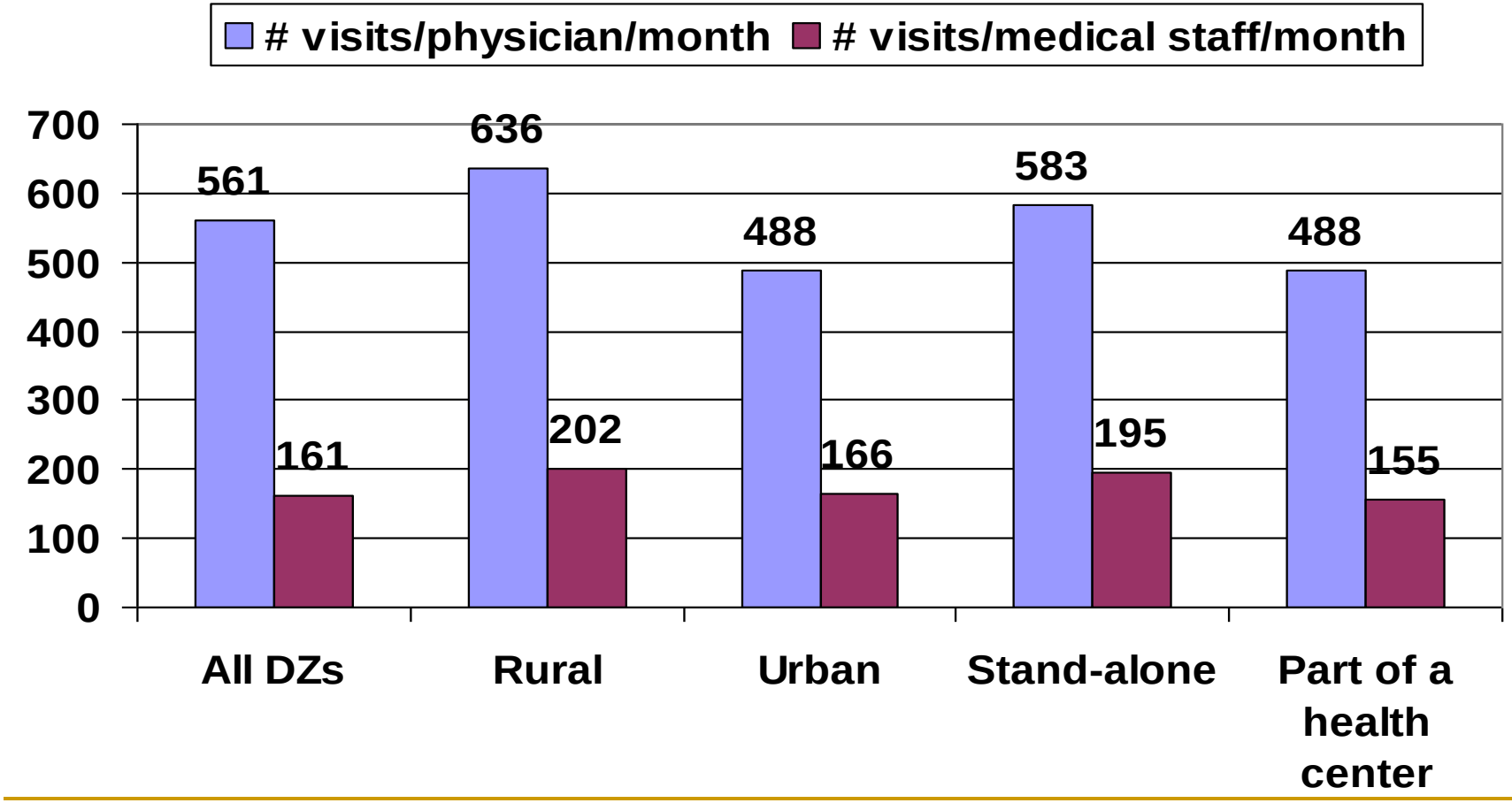
Personnel creates the highest costs in DZs

% of total expenditure on	All DZs	Rural	Urban	Stand-alone	Health Center
Personnel	72.6	70.9	74.3	69.3	81.4
Drugs	10.9	13.1	8.7	13.2	4.7
Supplies	3.2	3.1	3.3	3.3	2.8
Utilities	3.5	3.4	3.6	3.3	4.0
Transport	2.1	2.4	1.9	2.2	2.0
Maintenance	3.3	3.1	3.5	3.4	3.1
Other	4.4	4.1	4.6	5.3	1.9

There is some imbalance in staff distribution across DZs

In % of Staff Category	All DZs	Rural	Urban	Stand-alone	In Health Center
Physicians	25.4	24	26.8	25.5	25.1
Nurses	50.7	51	50.4	49.8	52.8
Paramedical	1.1	0.78	1.4	0.9	1.5
Admin. staff	6.4	7	5.9	7	4.9
Technical	16.5	17.3	15.6	16.8	15.7

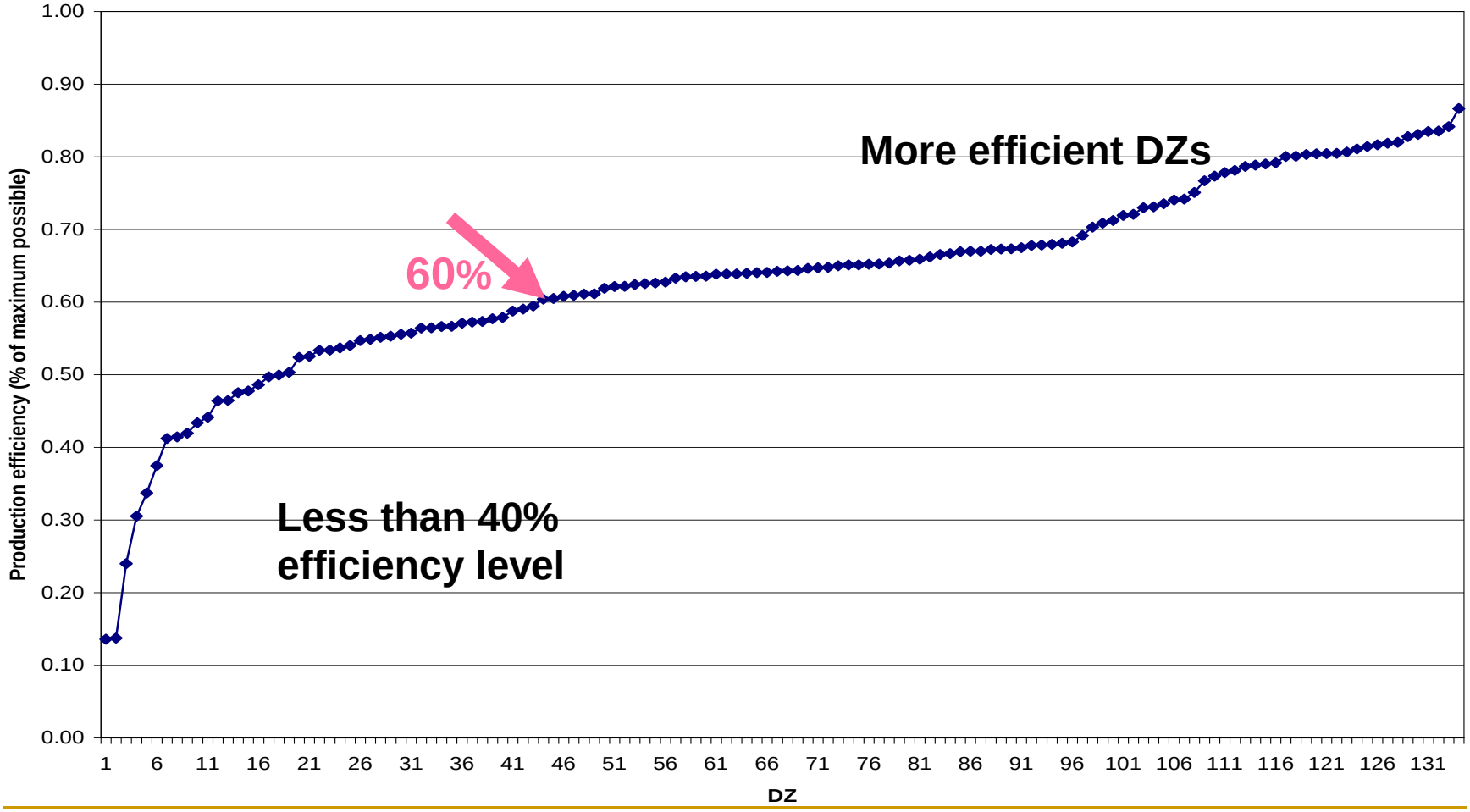
Urban DZs report fewer visits per physician. Could this be because urban DZs have more doctors or patients go elsewhere?



Patient visits are similar across DZs and mostly for curative care

- Most patients come for curative care services
- Only about 9% of all visits are for preventive care
- Home visits reflect only about 4.5% of all visits
- DZs have very few emergency care visits (2%)

DZs operate at an average efficiency level of 60%. About 20 DZs are considerably less efficient



Efficiency level = Ratio of the total number of consultations to the maximum possible output

What affects the level of efficiency in DZs?

- Operating at 60% efficiency means that most DZs could treat more patients with their current resources
- DZs with more space are slightly less productive. Reducing space could reduce their costs (maintenance and utility)
- Other factors, such as management style or motivation of the staff may be affecting production efficiency in DZs

Does the provider payment system influence results?

- Do DZs react to the incentive set by the line-item budget?
  - Incentive to increase items based on which budget is defined, e.g. number of staff
  - No incentive to treat more patients

- Or does the quality of data affect results?
  - The analysis is only as good as the data submitted by the DZs
  - Some DZs may appear to be less productive but in reality their patients might be more severely ill and thus need more time
  - But we do not really know as DZs do not have data to identify case-mix severity of patients treated in DZs

Plan for the future

- Follow-up survey after the payment changes take place
- Comparison of the results to show effects of a change
- That comparison will also point out areas for improvement

Thank you

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