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Центар за Истражување и Креирање Политики

# Diagnosis related groups and unpaid care work of women



*Skopje, May 2008*



**Gender aware policy appraisal:**

**Diagnosis related groups and  
unpaid care work of women**

**Skopje, May 2008**

**Produced by:** Centre for Research and Policy Making (CRPM)  
In cooperation with OZO Sveti Nikole, Aureola – Struga and ESMA – Skopje

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## **ACRONYMS**

SSO – State Statistical Office  
SNA - System of National Accounts  
DRG – Diagnosis Related Groups  
TUS – time use survey  
MoH – Ministry of Health  
HIF – Health Insurance Fund  
MoF- Ministry of Finance  
ALOS – Average Length of Stay  
ICD - International Classification of Diseases  
UCCS - University Clinical Center – Skopje  
CEDAW - Convention on the Elimination of All Forms of Discrimination Against Women  
UNIFEM – United Nations Development Fund for Women  
CRPM – Centre for Research and Policy Making  
OZO Sveti Nikole – Organization of Women from Sveti Nikole

## Definitions

Note to the Reader:

When conducting this research, there was at times confusion among our partners about what was meant by women's "unpaid care work", "gender roles" and associated terms. The following is an in-depth explanation of the terms and concepts on which this study is grounded.

**Gender** is the socially constructed differences between men and women. This is different from sex, which is the biological difference between men and women.

When we say that men and women are not the same, we refer not only to differences in biology (biological/sex differences) but also to the different roles that have been created by society (gender differences)<sup>1</sup>.

**Gender roles** are in a constant state of flux in response to changing social and economic conditions. For example, in a crisis situation, women may take on traditional male roles, e.g. heads of families, industrial workers or soldiers. The gender roles we play change throughout the course of a day. For example, if a mother stays home from work to take care of her sick child, she is playing a traditionally "female gender role". That same mother, once the child is healthy, may go outside of the home to work and/or act as the main wage earner for the family – in this, she is playing a traditionally "male gender role". Society will determine how each role will change – but it should be understood that one role cannot change without impacting another. Because gender is constructed by society and not fixed, stereotypical notions of male and female roles can be challenged. In all societies, these roles have evolved and have changed throughout a culture's history. The term "**gender roles**" and "**gender stereotypes**" are often used interchangeably. These are the roles that tradition has created.<sup>2</sup>

**Unpaid Care Work:** The term 'unpaid care work' in this report refers to tasks carried out mainly by women in the home, such as housework, cooking, and caring for children, old people and sick people where the person doing this work is not paid. The term includes work done for the family as well as what is sometimes called 'volunteer' work, where individuals assist other households or the community more generally.<sup>3</sup> Many other terms have been used for what we call "unpaid care work" and these terms, as feminist economist Diane Elson explains, often lead to confusion. For example:

- "Domestic labour": Does this refer to what we call unpaid care work or does it refer to the work of paid domestic workers?

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<sup>1</sup> "Advancing Gender Equality – Using CEDAW and UN Security Council resolution 1325, *Training Module for Gender Equality Advocates*", UNIFEM Regional Project "Women for Conflict Prevention and Peace-Building in the Southern Caucasus", Dec 2006.

<sup>2</sup> Ibid

<sup>3</sup> D. Budlender, "Why should we care for unpaid care work?" published by UNIFEM, Harare, 2004

- “Unpaid labour”: Does this refer to what we call unpaid care work or does it refer to the work a woman does without pay in the family business and/or in the fields?
- “Reproductive work”: Does this refer to what we call unpaid care work or does it refer to giving birth and breast-feeding?
- “Home work” or “Home-based work”: Does this refer to what we call unpaid care work or does it refer to paid work done in the home? (as piecemeal labour taken in the home, such as sewing, rug-making, crafts, etc., or when preparing goods in the home through a subcontract from an employer)<sup>4</sup>

**Gender responsive budget:** "Gender responsive budgeting (GRB) is about ensuring that government budgets and the policies and programs that underlie them address the needs and interests of individuals that belong to different social groups. Thus, GRB looks at biases that can arise because a person is male or female, but at the same time considers disadvantage suffered as a result of ethnicity, caste, class or poverty status, location and age. GRB is not about separate budgets for women or men, nor about budgets divided equally. It is about determining where the needs of men and women are the same, and where they differ. Where the needs are different, allocations should be different."<sup>5</sup>

**Gender aware policy appraisal:** The policy document that appraises certain policy for which gender analysis is made is called gender aware policy appraisal. *Gender Analysis* is the methodology applied to development problems to identify and understand the dimensions and relevance of gender issues and gender-based constraints. Analysis includes understanding the differences between men’s and women’s roles, rights and opportunities.<sup>6</sup> Gender analysis is a mandatory technical analysis for development of Strategic Plans and policy development. Analytical work performed under gender analysis

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<sup>4</sup> Elson stresses that the term ‘care’ does not mean that the work is always done willingly, or with love. Whether the work is done willingly depends on the relationship between the caregiver and the receiver and perhaps other people in the family or society. In some cases, the care is given unwillingly, because the woman feels forced by psychological, social or even physical pressures (in D. Budlender, “Why should we care for unpaid care work?” published by UNIFEM, Harare, 2004)

<sup>5</sup> Debbie Budlender, 2006, [www.gender-budgets.com](http://www.gender-budgets.com)

We can also find another definition of D. Budlender that defines GRB as involving “an analysis of the government budget in terms of its reach and impact on women and men, girls and boys. A GRB is thus, in effect, a form of policy analysis from a gender perspective. GRBs do not focus only on the numbers contained in the budget. They focus as much – if not more – on the policy and programs underlying those numbers. Ideally, they also focus on what happens when the policies and programs are implemented. The ‘added value’ of GRBs in terms of policy analysis is that they recognize that any other government policy or program will not be effective unless adequate resources are allocated to implement it”. D. Budlender “Expectations versus Realities in Gender responsive Budget Initiatives”, UNRISD, Final Version, March 2004, Cape Town

<sup>6</sup> A Guide to Gender Integration and Analysis: *Annex to ADS 200 Series*



must address at least two questions: (1) how will gender relations affect the achievement of sustainable results; and (2) how will proposed results affect the relative status of men and women. Addressing these questions involves taking into account not only the different roles of men and women, but also the relationship and balance between them and the institutional structures that support them.

## **Executive summary**

This document is the first gender aware policy appraisal prepared in Macedonia. It provides assessment of the implications of Diagnosis Related Groups (hereinafter: DRGs), policy measure introduced as payment tool at hospital level health care, on various groups of women and men (urban, rural and those belonging to an ethnic minority).

The working hypothesis of this research and analysis was that the introduction of the DRG measure will inevitably decrease the length of stay in Macedonian hospitals / clinics and that the recovery and therefore care work for the ill will transfer from the public sphere (hospitals) to the private sphere (households). This will eventually create savings for the public health system and will increase the unpaid care work performed in Macedonian households.

The research team has developed several research tools to depict who is affected by the shift emerging with the introduction of DRGs: times use survey of case study families who have ill family member discharged from DRG implementing hospital; nation-wide survey for care work including care for the ill; desktop review of legislative and policy framework of the health sector, the DRG system and unpaid work were employed in this study.

The evidence gathered through this research show that indeed with the introduction of the DRG payment system at hospital level health care, the average length of stay of patients in hospitals decreases. The study offers sound estimates of the savings of the health system that are up to 34% of the Ministry of Health's budget per year by using the DRG payment tool. What is more importantly this study proves the hypothesis that there is a link between the DRG system and unpaid care work as it shows that the care work as part of the domestic work increases once the system is used, even not in full capacity. The results of both times use survey and nation-wide survey of care work demonstrate that the burden of care work is disproportionately shared among female and male family members. Women spend 51% more time on unpaid care work for the ill family members than men (6 hours during weekends as compared to 3 hours for men). This work does not contribute to the country's GDP though the study estimates that it values as equivalent to the part time salary of a nurse.

The burden of care work taken by women has an effect on their professional and personal life. Women tend to decrease their working hours and therefore earn less in their formal employment, or even quit jobs; they have less time for themselves and for their children in particular.

As a result of the analysis presented in this study we can conclude that the DRG policy measure is a budgetary tool that is not gender neutral. It creates significant gender inequality and will not contribute to the much needed change of patriarchal attitudes and deep-rooted stereotypes regarding the roles and responsibilities of women and men in the family and Macedonian society.

Therefore, this study provides several practical and evidence based policy recommendations that will ease the implementation of the DRG policy measure and achieve the genuine objectives of hospital efficiency and effectiveness; but will also neutralize the gender implications the DRG system will have with the shift of care work from the hospitals to the homes of the patients.

## **1. INTRODUCTION**

Generally, Macedonian authorities and non-state actors do not engage gender responsive budgeting and gender aware policy making activities. This project seeks to change this situation and to produce a gender aware policy appraisal document that will explore the gender implications of the Diagnosis Related Groups (DRG) policy measure recently promoted by the Macedonian Ministry of Health, a crucial sector under reform. The results of this study give a gender perspective of budgeting and policy making on national level.

To see the implications of DRG on various groups of women (and men) (urban, rural and those belonging to an ethnic minority), the Center for Research and Policy Making analysis took into consideration ethnic and development related characteristics of the population in three municipalities: Struga, Sveti Nikole, and Shuto Orizari. The case studies were carried out with the assistance of three local partner organizations working on gender issues - Organization of Women of Sveti Nikole, Aureola and Esma.

The working hypothesis of this endeavour was that the introduction of the DRG measure will inevitably decrease the length of stay in Macedonian hospitals / clinics. Therefore, our task was to firstly attempt to prove this, then assess whether these early discharges will create additional unpaid care work<sup>7</sup> for Macedonian households (performed by female family members in particular) as they will take over the care for patients from hospitals. Additionally, we wanted to estimate how much will the national health system save by decreasing the length of stay in hospitals and in

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<sup>7</sup> Swiebel defines unpaid care work as '*all productive activities outside the official labor market, done by individuals for their own households or for others*'

comparison see what the value of the unpaid care work transferred to households will be. Consequently, the study provides a comparative analysis of the public savings and the value of increased unpaid care work performed in households. This kind of labour is not accounted for in the system of national accounts and has no implications on the macroeconomic aggregates like the work force of the economy or the total national income.

This is the first of its kind evidence based gender analysis in Macedonia of a specific policy measure, DRG, that the Government has planned to introduce.

The aim of this document is also to inform policy. Therefore an overview of the DRG system and the debate on unpaid work receive much attention by our research team., and The study at the same time supports the growing civil society demands for more transparent and equitable distribution of government resources. However, this analysis does not provide full fledged impact assessment of the introduction of the DRG policy measure in the health sector. It looks at one particular aspect of impact on gender which is rarely considered when policies are being introduced.

The results of this analysis are expected to invigorate policy debates and dialogue with policy makers (primarily in the Ministry of Health, and Ministry of Finance) about the introduction of the DRG system, but also on the importance of introducing gender perspectives when evaluating the adequacy of new policy options for Macedonia.

## **2. Project's objective and research methodology**

The DRG policy measure is expected to rationalize hospital services, decrease public spending on health and increase efficiency in the sector's performance. The first and immediate result of the limited introduction of this policy measure in Macedonia is the decrease of average length of stay in hospitals from 8.2 to 7.8 days on average (six month period March – September 2007)<sup>8</sup> for the University Clinical Centre Skopje where the DRG policy measure is implemented in limited capacity (only for case/diagnosis recording).

What are the implications of this policy measure on women and men; will it influence the socio-economic status of male and female family members; will it produce more unpaid work in Macedonian households and who will be responsible for the provision of such work; how much of the budget will be saved with the introduction of this policy measure; and what is the scope and value of the care work performed in the families as a result of the introduction of DRG; will eventually

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<sup>8</sup> Annual report UCCS 2007

the introduction of the DRG system have an effect on gender equality are some of the research questions of this study?

To depict the relationship between DRG and unpaid care work provided at home the research team of CRPM developed several techniques: (i) a nation-wide survey on who is care giver at home; (ii) a case study of patients who have been discharged from DRG implementing hospital (their families were asked to complete Time Use Survey); (iii) focus groups with doctors and nurses working in DRG hospitals/clinics; (iv) interviews with policy makers from the Ministry of Health and Health Insurance Fund.

In order to allow for comparisons among people living in rural and urban areas, as well as those belonging to different ethnic communities and therefore cultures, CRPM organized the research activities in municipalities in three regions: (i) Struga – in the south west of the country ethnically heterogeneous inhabited by Macedonians, Albanians and other minorities (ii) Sveti Nikole – in the eastern part of the country, inhabited almost exclusively by Macedonians; (iii) Shuto Orizari – part of the city of Skopje inhabited mainly by Roma with small minorities of Albanians and Macedonians. The research activities were conducted with the assistance of three local women’s rights non-for profit organizations: (i) AUREOLA in Struga; (ii) OZO Sveti Nikole in Sveti Nikole; and (iii) ESMA in Shuto Orizari.<sup>9</sup>

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<sup>9</sup> The local partners were firstly trained in policy research and analysis and later on in the project actively participated in the development of research tools, identification of case studies as well as overall research work.

## Map of Macedonia with case study municipalities



The nationwide survey was conducted through telephone interviews with 1100 randomly chosen respondents whereas the time use survey was conducted with 11 families whose family member has been discharged from DRG implementing hospital in the course of January 2008. The patients have various diagnoses and were treated in different clinics<sup>10</sup> in Skopje but come from one of the studied municipalities.

<sup>10</sup> Skopje clinical centre was until August 2007 one legal entity made of 33 individual clinics. The clinics are providing specialist-consultative health care services and have inpatient and outpatient departments. Because researchers and professors work in these facilities they are called clinics rather than hospitals recognizing the educational role of the Skopje Clinical Centre.

### 3. DIAGNOSIS RELATED GROUPS

To inform ongoing policy debates on the introduction of the DRG payment system we provide overview of the development of this method of financing hospital services, its positive and negative effects and results in number of European and non European countries. Based on international experience and by analyzing current situation in the system of health providers in Macedonia, this section of the study presents a kind of roadmap for policy makers working on the introduction of this policy measure, as it outlines the main challenges with which the Macedonian health system will be faced during the DRG reform process. This section also identifies the policy problem created with the introduction of the DRG system – the transfer of recovery from hospitals to the patient’s home and emergence of unpaid care work in Macedonian families.

#### ***3.1. What is DRG?***

The DRG<sup>11</sup> based payment system has been introduced in USA in 1983 as a way for paying of health services. DRG is system which classifies diagnostically related patients in smaller groups based on an approximately equal level of expected hospital resource utilization. The DRG system serves as a frame which enables hospitals to predict easily the costs according to the type of sickness within the DRG system into which the patient is classified. Each DRG has a specific cost and previously indicated maximum length of stay according to the severity of the diagnosis. If a hospital cures the patient in a shorter time period than initially predicted, the hospital is entitled to keep the rest of the finances. In case the hospital does not succeed to cure the patient on time, and meanwhile the length of hospital stay is extended, the hospital would not receive additional payment from the public payment system.

The objective of the DRG system is to control the public expenditures in the health sector, and at the same time to provide an incentive for the public health institutions to operate in a profitable manner using efficient allocation of hospital resources utilization and cost based analysis for each service provided. In such a way, the hospitals are motivated to enhance their efficiency by gradually decreasing the hospital length of stay, while increasing the number of patient admissions, and at the same time reducing hospital staff if necessary.

Hence, efficiency is measured according to whether hospitals succeed to admit and cure many patients in less time. The hospitals operate as an institution providing only medical treatment to patients, and further on, the process of recovering and

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<sup>11</sup> **Diagnosis-related group (DRG)** is a system to classify hospital cases into one of approximately 500 groups, also referred to as DRGs.

health care is transferred to outside centers, regardless of whether it is home care or primary level facilities, daily hospitals and etc. The introduction of the DRG is thus premised on the assumption that institutions, other than hospitals, will take over the additional care needs of discharged patients.

To develop DRGs, hospitals have to document and report all diagnosis cases. The clinical data for each case that are necessary to develop DRGs include age and sex of the patient, the International Classification of Diseases (ICD-9 or ICD-10) code for the primary diagnosis, the length of stay, and other details of the case, such as whether there was a surgery and whether the patient spent time in intensive care, which may be associated with the cost of treatment.

Diagnoses cases are sorted into groups of diagnoses. Classification criteria include principle diagnosis, co-morbidities, specific procedures, age and other parameters. A relative weight is assigned to each group based on the case complexity and intensity of services required to treat patients given their diagnosis, disease severity, and patient characteristics.

DRG payments at average costs increase the awareness of resource utilization and set the incentive to increase the number of discharges and productivity. Paying actual cost for each case would create little or no incentive for increased efficiency. In a DRG payment system, the hospital revenue is the total sum of DRG points multiplied by the base rate, which reflects the aggregated average cost per hospital case across all or a representative group of hospitals.<sup>12</sup>

Adjustment parameters (e.g. region-specific adjustment coefficients or facility-type adjustment coefficients) may be added to the DRG formula to determine the final payment rate. A coefficient may be added to increase payment to teaching hospitals or hospitals serving a disproportionate share of socially vulnerable patients, or to reflect regional variations in the cost of hospital inputs, such as heating costs.

### **3.1.1. Reasons for introduction of DRG policy measure**

In recent times the main reason for introducing a DRG policy measure is to limit the continuous increase of health sector public expenditures due, among others, to the ageing population (older people are part of the population which mostly needs health care services).

The methodological approach based on hospital payment according to their real costs for the services they charge actually provides an additional incentive for them

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<sup>12</sup> Cashin, C. et al.: Case-based hospital payment systems. December 2004. *Abt Assoc. Inc.* USAID.

to offer more and more services and thus increase public spending. This is the second reason for introducing DRGs.

The two reasons imply to increasing public spending in the health sector: older population creates more patients; and the payment system creates incentives to offer more services to these patients. Therefore many countries decided to introduce DRG payment system to control spending and continue increasing service delivery.

### ***3.2. Main characteristics of DRG (strengths and weaknesses) according to different country experiences***

The resulting effect of the introduction of the DRG measure in the USA was decreased hospital resources utilization in the period between 1976 and 1983 in USA.<sup>13</sup> However, the individual decrease of patient costs did not reflect an overall decrease of hospital costs. This was due to the fact that the decreased length of stay resulted in an increased rate of patient admission. Hospitals which operated efficiently before the implementation of the measure remained at the same surplus level; whereas, hospitals that operated with continuous financial shortages previously, managed to create surpluses under the new measure.

Therefore some of the end users (hospitals) perceived that this model is not fair enough. This led to the initial revision of the DRG system through differentiation of the existing system into more such DRG systems and continuous modification and renewing of the DRG weights, for the purpose of adjusting to the ongoing changes within the health care institutions. One of the main weaknesses of the system identified in the USA was the incentives it provided to the hospitals to treat only profitable patients, while avoiding the so called expensive patients<sup>14</sup>.

Many of the European countries, such as Germany, Hungary, Slovenia, Croatia and etc. introduced DRGs recently; based on the Australian experience with the AR DRG<sup>15</sup> model. However, the Australian experience has indicated that based on the existing DRG system, a fair reimbursement for health departments such as intensive care is almost impossible. Therefore, hospitals with a high proportion of intensive

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<sup>13</sup> The average length of stay in 1976 was 8.6 days, and seven years later in 1983 came to a point 7.9 days.

<sup>14</sup> The hospitals realized that if they increase the number of admissions for those medical treatments that are not much resource demandable, they would make bigger profits. For this reason, they started to purposely avoid admission of patients with severe illnesses due to the fact that they would cost the hospital more.

<sup>15</sup> Australian Refined Diagnostic Related Groups



care in comparison with the rest of the health departments are predestined to receive fewer finances.

In Sweden in the 1990's some local municipalities initiated market oriented mechanisms aiming to address the necessity of more efficient health care system. It was identified that as a result of the DRG system, the patients were discharged after a short stay at the hospital while the number of admitted patients increased. The patient's negative experience with the received medical care and their quality of life after being discharged also increased by inadequate post-hospital care by other providers. The so called "health-related quality of life" was assessed in terms of psychological well-being and physical functioning of the patients. In Sweden scientific research showed patient's instability after being discharged from a hospital working within the DRG system. This resulted in growing dissatisfaction with the care patients have received in Swedish hospitals.

Table 1: DRG system- strengths and weaknesses

## **DRG system**

### ***Strengths***

Decreases or controls public spending on health  
 Increases number of health services delivered to more patients  
 Increases motivation of medical staff  
 Stimulates advancement in medical equipment and procedures in hospitals

### ***Weaknesses***

Fair reimbursement for intensive care is almost impossible  
 Nursing staff decreases as recovery transfers to outside centers and at home  
 Patient dissatisfaction of hospital services increases  
 Provides incentives to treat only profitable patients and creates inequality

However as it can be seen from the above examples the general literature is assessing the DRG payment system, its strengths and weaknesses, and evaluates the system's performance and outcomes based on the business approach: how much savings are made, how many customers are treated and are they satisfied? Unfortunately the whole academic, policy and business community that works (supports or not) the introduction of the DRG system around the world did not yet provide comprehensive impact assessment of the system to society, family, gender, and household economy. What is more the literature remains blind of the unpaid care work that is being created for families with the transfer of the recovery from hospitals to patient's home.

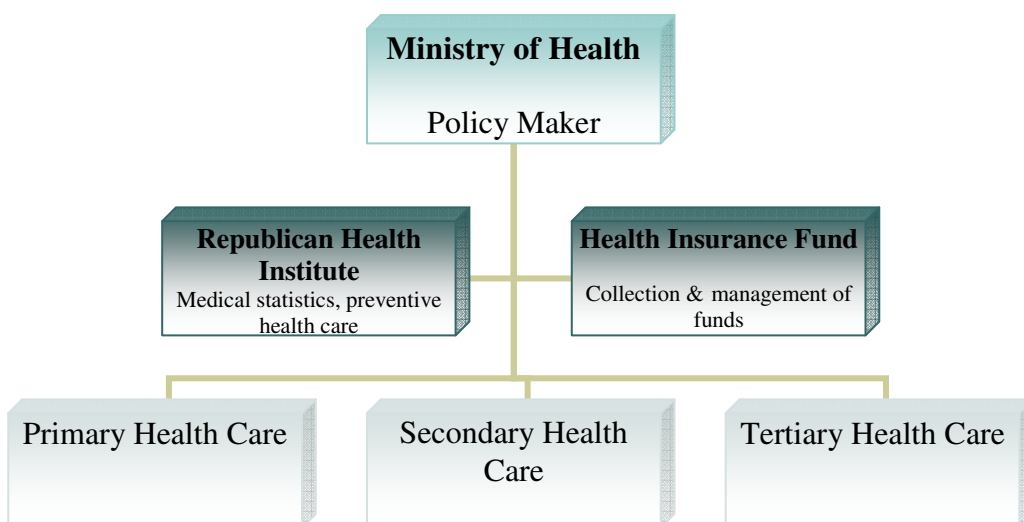
Therefore with this study we want to contribute to provide kind of a roadmap for Macedonia on the difficulties it might face in the process of introducing the DRG payment system. We specifically want to research and analyze the issue of unpaid care work and provide policy recommendations to our Government as to establish an efficient DRG system that will eventually improve health service provision in Macedonia and will not have negative side effects on gender equality.

### 3.3. Macedonia and DRG

#### 3.3.1. The Macedonian health system explained

Health care in Macedonia is delivered through a system of health care institutions (HCI), organized in three tiers: primary, secondary and tertiary health care. The Macedonian health care system is insurance-based, with the Government through the Ministry of Health providing the legal framework for operation and stewardship, with the Health Insurance Fund (HIF) being responsible for the collection of contributions, allocations of funds and the supervision and contracting of providers. Equity, solidarity and reciprocity as well as the provision of universal coverage for the population have been defined as the core values of the system.

**Figure 1. Health Care System in Macedonia – Organizational Chart**



The *primary level health care* is delivered in health stations (mostly to be found in rural settlements with a permanent presence of a nurse and visiting physician), health care centers (to be found on the municipal level with a permanent presence of a number of nurses and physicians), and private general practitioners. According

to the law, primary health care physicians are responsible for the delivery of the following services: general medical examinations; drug prescription; issuance of referrals for specialized out-patient services; issuance of referrals for in-patient treatment; issuance of sick leave for temporary inability to work for a period of up to 15 days; issuance of sick leave for a period longer than 16 days.

The *secondary level health care* is delivered through a system of general hospitals and 6 specialist hospitals. They offer outpatient services that include diagnostics, treatment and rehabilitation; and inpatient services that include accommodation, nursing and catering services and 24 hours specialist supervision for patients.

The *tertiary level health care* is delivered in specialized hospitals and institutes, that in addition might also have educational and research functions. Access to tertiary health care institutions is facilitated through referrals issued by doctors in primary health care. The Clinical Center in Skopje is the biggest provider of tertiary health care in a number of specialties. It comprises 32 clinics and institutes with almost 2400 beds. More than half of the patients come from outside the capital. Citizens of Skopje also use it as a general hospital as one does not exist in the capital.

The functional divide between the three levels of health care service delivery is made to ensure quality health care services at primary level and therefore perform gatekeeping for the higher level, more expensive health services. The current regulatory framework however does not allow for treatment at primary level and therefore referral practices occur often and cause distortion of this 'gate keeping' scheme creating significant workload and expenses for the tertiary level health care institutions<sup>16</sup>. The statistics confirm the underutilization of the primary health and other outpatient services as in 2001 Macedonians had 3.0 out-patient visits per capita/per year which is one of the lowest utilization rates of outpatient services in Europe (compared with an EU15 average of 6.8 and an EU10 average of 8.6)<sup>17</sup>.

### **3.3.2. Financing of the Macedonian health system**

Macedonian health care is financed through various approaches: primary health is financed by HIF on capitation basis (in accordance with the number of patients primary practitioners serve); the secondary and tertiary health institutions sign contracts with the Health Insurance Fund annually and these contracts regulate the

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<sup>16</sup> On the problematic aspects of the Macedonian referral system see CRPM policy study: Rationalization of hospital services-case studies Tetovo, Sveti Nikole, Kumanovo and Skopje

<sup>17</sup> WHO, Health for all database 2005

services that the institutions will deliver as well as the budget they will receive for the execution of these services. The health care institutions charge the HIF (through an invoicing system) for the services they deliver based on the price list of services defined in 1992 (based on the German point system).

Needless to say, the price list is outdated. The transfers made from the HIF to the health care institutions cannot exceed a budget ceiling determined at the beginning of every year based on historic expenses of the institutions. The survey results from the costing of the basic benefit package exercise, undertaken in the summer 2007 by CRPM and Oxford Policy Management, show that many of the health care facilities are in debt as their annual costs based on accrual basis exceed the funding received from HIF. Consequently, various health care institutions have many outstanding obligations. The survey also indicates that the budget received by the facilities from the HIF is not adequate to fund the true economic costs for delivery of healthcare services. This is so because it does not include the annual cost of equipment depreciation/replacement and facility. Therefore, the financing scheme in the health sector contributes to the low quality of health care services<sup>18</sup>.

This type of financing is called *passive purchasing of health services*, where contracts between purchasers and providers are defined based on providers' working plan for the future year and the related input factors (i.e. number of staff and beds). Under passive purchasing, provider performance or outcome results (i.e. patient satisfaction, infection rates, ALOS, or bed occupancy rate) have little relevance in contracting or provider payment. As a result, consumers [patients] lack the necessary information to choose better performing and quality providers. Thus, purchasing does not include yet consumer behavior as a strategic factor in selective contracting with providers.

In 2004 the Government of Macedonia adopted a new bylaw for financing secondary and tertiary health services based on diagnosis related groups that should redefine the current financing procedures from passive to case based purchasing. The diagnosis related groups type of financing of health services is expected to begin full fledged implementation during 2008. The pilot activities however have already started by using the DRG groups for recording cases (treatments) in clinics (at UCCS) since February 2007.

### **3.3.3. Reasons for introduction of DRG policy measure in Macedonia**

In Macedonia the spending on health (8.7% of GDP), when public spending and out of pocket expenditures is combined, is comparable with the spending in OECD

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<sup>18</sup> Oxford Policy Management, Second progress report – Costing of the basic benefit package of health care services, December 2007

countries (8.9%), but is bigger than the EU 8 average (as in Table XX). The spending per person however is much lower and suggests low quality of services.

As suggested by international financial institutions the Macedonian Government needs to strengthen the efficiency in the health sector in the area of distribution of public resources (better use of the public resources for achieving the goals of the government in the health sector) and achieving technical efficiency (value for money)<sup>19</sup> as to improve quality of health care services.

Table 2: Health spending

	<b>% from GDP</b>	<b>Public, % of GDP</b>	<b>Private, % of GDP</b>	<b>Per person, \$USD</b>
Macedonia	8.7	5.7	3.0	208
EU 8 average	6.9	5.1	1.8	488
OECD average	8.9	6.1	2.8	NA

Source: HDI 2006 and Macedonia household survey

The DRG system allows for standardization of the medical procedures to be undertaken for each diagnosis and payment per the actual cost of the treatment. "The DRG system is expected to increase efficiency, number of services delivered, number of patients admitted and motivation of the medical staff (as it is foreseen to be paid by the services they deliver)"<sup>20</sup>.

### **3.3.4. How is DRG introduced in Macedonia?**

The introduction of the DRG system was master minded in the Ministry of Health, or more particularly, it is one of the outputs from the work of the Health Sector Management Project financed through a World Bank loan. The master plan is being produced by a foreign consulting company, Karol Consultants, contracted to purchase the Australian DRG grouper<sup>21</sup>, adapt it to Macedonian circumstances and pilot DRG payment system in several secondary and tertiary health institutions. Twinning this policy operation the Health Insurance Fund in autumn 2007 established a task force of its own to control the data (in particular the financial information) that is populated into the DRG software. The title of the personnel working on this task is 'budget controllers'. At the moment analysis of the introduction of the DRG measure and its implications on the health budget, the work of the health institutions, the quality of the services and the impact it will have

<sup>19</sup> World Bank - Macedonia Public Expenditure Review 2007

<sup>20</sup> Annual report 2006 – Health Insurance Fund

<sup>21</sup> DRG grouper is a software used to group medical records for acute hospital stays into Diagnostic Related Groups (DRGs) and Major Diagnostic Categories (MDCs) for case-mix purposes.

on patients and their families, including around the provision of care, does not exist.

The full-scale introduction of the DRG was supposed to take place in the beginning of 2008 (as indicated in the Bylaw for financing specialist consultative health care services). However, due to delays such as the late contracting of international consultants, it has only been introduced on pilot basis in March 2007 and is since used for medical recording of cases. It is still uncertain when the DRG will be introduced in all hospitals.

The Clinical Centre in Skopje, however, has already used the DRG system as a medical recording but not a financing tool for the last 10 months (since March 2007). The Center's management distributed the free of charge American DRG grouper, easily accessible on the internet, to all individual Clinics and asked them to record patients, and services related information, using the diagnosis group codes. Following these instructions and applying the standard procedures for treating each diagnosis specific for the specialty of the Clinic, as well as striving to achieve comparative to international practice average length of stay in hospital, the Clinics achieved several results:

- (i) decreased hospital length of stay;
- (ii) increased the bed occupancy; and
- (iii) attended to more patients as compared to the same period last year<sup>22</sup>.

In February 2008, the Ministry of Health purchased the Australian DRG grouper and started adapting it to Macedonian circumstances. The health providers were asked to use the Macedonian DRG system<sup>23</sup> in the course of February, test it and report all inconsistency and problems to the Health Insurance Fund.

### ***3.4. What do we know and what do we think of the DRG system?***

The success of the DRG system depends on how it is designed, implemented and utilized. The policy options decision makers choose should be implemented by main stakeholders: doctors and nurses. To learn about the problems in implementation of the DRG system we have gathered qualitative evidence from focus groups organized in the course of March 2008 with doctors and nurses from the pilot DGR-implementing clinics. The analysis of this information outlines disparity in terms of the general understanding of the DRG system and the implications it will have among the two target groups.

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<sup>22</sup> Report on the financial operation of the University Clinical Centre Skopje, 06.09.2007

<sup>23</sup> Software application were developed and managed through internet by SEAVUS, a Macedonian branch of the international software company

Table 3: Lessons from the focus groups with doctors and nurses in DRG clinic

Question	Doctors	Nurses
<b>Understanding of the DRG system</b>	<p><b>Strengths:</b></p> <ul style="list-style-type: none"> <li>• Improved economic performance;</li> <li>• Controlled spending;</li> </ul> <p><b>Weaknesses:</b></p> <ul style="list-style-type: none"> <li>• Possibilities for increased burden on the side of the patients and their families to provide subsequent care.</li> </ul>	<ul style="list-style-type: none"> <li>• Strengths:</li> <li>• Improved efficiency of the administration of the hospitals</li> <li>• Existing protocol of precisely established procedures.</li> </ul> <p>Weaknesses:</p> <ul style="list-style-type: none"> <li>• Increased burden on data processing on the side of the nurses.</li> </ul>
<b>Practical obstacles and problems of the DRG system</b>	<ul style="list-style-type: none"> <li>• Scarcity of information regarding the DRG system</li> <li>• Application of the Australian DRG model, instead of adapting the system on the Macedonian context</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of information about the implementation of the DRG and the new obligations for the nurses</li> <li>• Lack of skills related to data processing</li> </ul>
<b>Comparative experience with the American and Australian groupers</b>	<ul style="list-style-type: none"> <li>• The employment of the American DRG system in Australia indicated significant discordance as it was not previously adjusted to the Australian context.</li> </ul>	<p>- Were not informed</p>
<b>Measures for improvement</b>	<ul style="list-style-type: none"> <li>• Informing the wider public about the implications of the DRG system</li> <li>• <i>Strengthening of the role of the Patronage</i></li> </ul>	<ul style="list-style-type: none"> <li>• IT training</li> </ul>

	<p><i>service and home visit as main pillars comprising the health care system</i></p> <ul style="list-style-type: none"> <li>• Redesign of the diagnosis programs</li> <li>• Investments in technical equipment.</li> </ul>	
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The interviewed doctors perceive the new system as a way to control the spending of the hospital facilities and to improve the economic performance. As the improved economic performance mainly implies to decreasing inpatient days, they presuppose that the system will affect mostly the patients themselves: they will leave the hospitals earlier in some cases without any recovery or physiotherapy (such as the cases at orthopedic and trauma). The doctors especially emphasized the need the patients will have for additional care inevitably provided by their close relatives at home and not by the hospital personnel. The doctors thus raised the issue of unpaid care work that is the focus of this paper.

On the other side, the nurses identify the improved efficiency in terms of administration and establishing of precise system of procedures as two main positive aspects of the DRG system. According to them, the newly established procedures would shorten the paper work which has been so far their duty. The system would enable them to process the information electronically which will improve administration efficiency.

Based on the answers provided both from the doctors and the nurses (summarized in table above), it can be concluded that there is a major disparity between the medical personnel working in DRG implementing clinics. From evidence gathered in the focus groups one can conclude that doctors are more informed of the DRG system its benefits and weaknesses and therefore have more clear opinion on whether they support its introduction or not. What is more the doctors have clear understanding of the weaknesses of the overall Macedonian health system that might be even strengthen with the introduction of the DRG payment system. On the other hand the nurses tend to be uninformed and therefore unaware of the DRG system and its impact on health system, society and patients.

It is noticeable that there is an age divide in the understanding and support for the introduction of the DRG system. It lies in to the matter of having IT skills and will to use computers. The nurses especially feel that they will not be competent to work with the DRG software as they have limited computer skills and the use of the advanced software programs are difficult for them. This concern of the nurses is mainly related to their understanding of the new duties under the DRG system. They believe that the data processing of the diagnosis and treatment will be their task. In comparison, in other systems this is a task of a highly trained DRG



specialized personnel that can utilize the systems advantages and therefore ensure better financing for the institution. Closely linked to this concern is the current shortage of basic technical equipment such as computers, printers and so on at all levels of health care and particularly at the Clinical Centre in Skopje. As Cashin argues DRG requires investment in information systems: information and billing systems.<sup>24</sup>

Both doctors and nurses agree that there is lack of information in respect to the type of DRG system; the process of its implementation and the ways of handling the implementation process on the side of the hospital personnel. As mentioned before the nurses are less knowledgeable of the reform process and almost ignorant of the fact that under the DRG system the recovery is transferred in outside centers and in Macedonian circumstances at home. This diminishes the role of the nurses in hospitals and will inevitably decrease their number on hospital's staff.

As a result of the promptness of the reform the practical obstacles for the doctors are mainly related to the fact that the proposed DRG system to be implemented is the exact model that is already established within the Australian health care system. Beside the weaknesses that are already identified regarding the DRG system in general, they feel that the efforts to adjust the Australian grouper to Macedonian circumstances should accelerate as to not create additional risks.

The interviewed doctors expressed their concerns in terms of the selection of the specific type of DRG system to be implemented in Macedonia. Their concern is based on the negative implications that were identified during the introduction of the American DRG system into the Australian healthcare system and the subsequent applications of the Australian DRG models in many European health systems.

### ***3.4. The Macedonian system of home care***

The doctors that were studied in the focus groups organized within this project noted a significant lack of homecare institutions. The importance of these institutions was stressed, and they were recognized as main pillars that could ameliorate any negative outcomes of the recovery being transferred in the patient's home as a result of achieving the goal for decreased length of stay in the process of implementation of the DRG system. Namely all studied doctors emphasized that the success of the DRG system depends on the capacity of the home care institutions to take the burden of care, monitor and treat the patient after their inpatient treatment in a DRG hospital ends.

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<sup>24</sup> Cashin, C. et al.: Case-based hospital payment systems. December 2004. Abt Assoc. Inc.USAID

There are two homecare institutions in Macedonia: the patronage and the home visit unit.

The patronage is part of the primary health system and its main purpose is to provide health care in the patient homes. The main focus of the activities of this unit is to locate people who need health and social protection, to help to individuals, families and other groups, to instruct and train those people how to conduct their everyday medical needs.

The main pillar of the patronage is the patronage nurse, whose main role is prevention and treatment of the diseases, rehabilitation and re-socialization of the patient with special needs.

The patronage visit usually is based on the contact of the medical person with the family members of the patient in their home in order to give them advises on the nutrition, care and the regime of life of the patient. The focus of this unit is very much placed on mothers and babies, young children and patients with special needs.

Depending on the number of health problems that are dealt by the patronage and the tasks performed, there are 3 types of patronage: mono-valence, bi-valence and poly-valence patronage.

Some of the shortcomings of the patronage service in Macedonia are that it is provided in only 36 municipalities (of the country's total of 85 municipalities) at national level. In 30 of 36 municipalities a so called poly-valence patronage<sup>25</sup> (covering urban and rural areas) is provided. In more than half of the municipalities, the nurses working in the patronage unit are engaged temporarily, or at the same time are working in other units of the primary health facility within which the patronage services operates. One of the main problems is that only in half of the total number of the patronage units the equipment fulfils the standards for providing homecare. What is more relevant for the capacity of this service to provide recovery treatment is the fact that in most of the municipalities (26 of them) the patronage service provides preventive rather than curative health services.<sup>26</sup>

The home visit system is also partly responding to the growing need of recovery to be performed at home rather than in hospitals under the DRG system. The system is organized at primary level and made of medical teams (doctor and nurse) that are mobile. The service suffers from shortage of staff as well as unclear functional divide with the general practitioners. The main shortcoming of this service is that is paid by the patient's family for every visit and therefore cannot fully substitute for free recovery.

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<sup>25</sup> Poly-valence patronage covers wide spectrum of diseases and provides different types of health care in the patient home

<sup>26</sup> Source: "Information on the situation of the patronage service in Macedonia for 2004" by the Republic Institution on health protection from 2005

### **3.4.1. Case study - How does the Skopje city patronage unit work?<sup>27</sup>**

In order to assess the capacity of the patronage service to undertake homecare under the DRG system we have reviewed the working principles, strengths and weaknesses of the Skopje city patronage service. There are several types of patronage depending on the number of problems and tasks that are preformed by the unit (mono-valence, bi-valence and poly-valence patronage). The Health Home Skopje has poly-valence patronage, which covers wide spectrum of diseases. Unfortunately, the patronage unit in the Health Home Skopje performs only preventive, but not curative activities.

This is pointed as being one of the main weaknesses why this unit is not used in greater extent by the population in Skopje<sup>28</sup>. On the other hand, other European countries have very positive experiences in this regard, since the patronage service is the most responsible for continuous monitoring and treatment of a patient. In those countries the patronage is in constant communication with the chosen general practitioner.

The other problem of the patronage service in Skopje is the lack of staff. The established standard for effective homecare delivery is that one nurse covers an area with a population of 5,000 to 6,000. Unfortunately, this criterion is not fulfilled in many Skopje municipalities (see Table 4). At the moment, the patronage unit has 73 nurses; lacking additional 27 to comply with the set international standards.

Table 4: Patronage service in Skopje – a case study

For 2006					
Municipality	Number of nurses	Working in one more municipality	Number of population in the municipality	Total number of nurses	1 nurse to population ratio
Gazi Baba	13		72617	13	5586
Petrovec	2		8255	2	4128
Ilinden	3		15894	3	5298
Aracinovo	1		11597	1	11597

<sup>27</sup> The data is taken from the annuals reports of the Health Home Skopje for 2006 and 2007

<sup>28</sup> Zoran Simonovski, analytical department of HH Skopje

Karpos	6	2 Gorce Petrov	59666	7	8524
Saraj	4	1 Karpos	35408	4	8852
Gorce Petrov	5		41634	7	5948
Aerodrom	7	1 Kisela Voda	72009	7	10287
Kisela Voda	6		57236	7	8177
Zelenikovo	1		4077	1	4077
Centar	5	1 Cair	45412	6	7569
Cair	9	1 Centar 1 Suto Orizari	64773	11	5888
Butel	5	3 Suto Orizari 1 Cair	36154	5	7231
Suto Orizari	3		22017	7	3145
Cucer Sandevo	1		8493	1	8493

\*Data for 2006. The situation in 2007 is insignificantly changed.

From the analysis of the work of the patronage unit, it can be noticed that there is continuity with regard to the worked hours and number of visits the nurses have made in the last two years. The data in Table 5 shows that the average time per patronage visit is 85 minutes.

Table 5: .Patronage service statistics- case study Skopje

Municipality	2006			2007		
	Worked hours	Number of visits	Time spend	Worked hours	Number of visits	Time spend

			per patient (minutes)			per patient (minutes)
Karpos	9691	7760	75	10224	8071	76
Gorce Petrov	10451	8232	76	10339	8131	76
Saraj	4048	3448	70	4148	3468	72
Aerodrom	11633	10257	68	10423	9075	69
Kisela Voda	9085	6150	89	9352	6831	82
Zelenikovo	1748	822	127	1796	1056	102
Gazi Baba	19187	14812	78	19789	15203	78
Ilinden	4248	2147	119	5761	3472	99
Petrovec	2415	1306	111	2527	2149	70
Aracinovo	931	669	83	1519	1261	72
Centar	9469	5431	105	9170	5392	102
Cair	15767	11043	86	16948	11354	89
Butel	7352	5644	78	8032	6287	77
Suto Orizari	4968	4054	73	4841	4161	70
Cucer Sandevo	1520	897	102	1752	1099	96

The Table 6 shows that the main focus, and therefore specialization of the patronage nurses, is put on the work with children up to 2 years, women after childbirth. The number of performed preventive services for other diagnosis are insignificant compared to the aforementioned categories.

Table 6: Patronage service focus

Diagnosis	2007	2007
Cancer	108	104
Cardiovascular disease	2160	2325
Cerebrovascular disease	121	193
Diabetes	825	898
Mental illness	35	42
People with special needs (handicapped people)	47	53
TB	56	69

Other chronicle diseases	675	819
Other diseases	1284	1426
Other beneficiaries	1892	1923
New-born child	17211	N/A
0-2 years old baby	14105	N/A
2 years old child	4547	5354
4 years old child	2745	3442
Scholl child	1074	1647
Pregnant woman	5890	5597
Woman in childbed	17430	17402
Women in reproductive period	10585	12846
Elderly persons	1882	815

### **3.4.2. Case study – How does the Skopje city home visit works?**

The Home visit unit is important in this context since the patronage does not perform curative services. Therefore, we additionally researched the operations of the home visit service assessing its capacity to bridge the gap between the patients and the medical system working under DRG.

Institutionally, the Skopje City Home Visit is a unit that operates under the Emergency Medical Service. The total number of medical staff working in this unit is 28. The established standard is that for each 30,000 people, one medical team (doctor, nurse, driver and vehicle) operates<sup>29</sup>. The current situation in Skopje is that one medical team covers an area of 36,209 people and that additional 6 medical teams are needed to cover the Skopje area. The structure of the medical staff employed in the home visit unit is the following:

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<sup>29</sup>Art. 5 Statute on the criteria for determining the organizational unites in the public health institutions that could not be given under lease, Official Gazette RM, 16.03.2006, n. 32-pg. 9

Table 7: Composition of home visit unit of Skopje Health Home

Home visit	Position	Number
	Specialist doctor in general medicine	1
	Specialist doctor in occupational medicine	1
	Doctor	10
	Nurse	16

As the chosen general practitioner is the one determining the diagnosis of the patient the Home Visit Unit medical records do not have data on the diagnosis treated by this unit. Our team was therefore only provided with data on the total number of visits done by the Home Visit Unit (as presented in Table 8).

Table 8: Visits made by the home visit unit

Year	Number of visits made by a doctor	Number of visits made by other medical staff
2006	27181	49127
2007	23450	68750

### 3.4.3. Case study – The American system of home care

In order to provide point of comparison between Macedonia's home care system and that of the US, we present a case study which can give some insights about how the Macedonian system can be changed. We focused on the US and not on another country because the US has introduced DRGs almost 30 years ago and as a result had time to reform other levels of health care as to respond to the growing need of home care services that emerged under the new DRG payment system introduced in hospitals.

This case study aims to present some advantages of an alternative model of home care, but we acknowledge that there have been also various criticisms of it, which we will be discussing here.

In the US about 73% of all long term care is provided at home by networks of volunteers who receive no compensation for their labor.<sup>30</sup> The biggest number of this sort of care users are the elderly. The government on the other hand, has programs through which it pays for the long term care if there is a medical need. However, in specific cases the government programs may pay for the home care that is non-medical under certain conditions that the care recipient has low income and has virtually no assets.<sup>31</sup> Considering that women on average live longer than man and have lower pensions, women might be particularly represented in this low-income target group.

### ***3.4.3.1. Home care for the elderly***

To receive Medicaid home care in the US one has to qualify for it and to spend at least 90 days in a nursing home. The elderly on one side can utilize other ways of support by agencies that often pay for home repairs, transportation and snow removal for low income recipients. A network of volunteers, on the other side, provides range of services for low income elderly citizens. Furthermore, many low-income people can receive rent subsidies and help with utility bills from Federal and local governments.

### ***3.4.3.2. Home care for the sick***

An important place in the American medical system is occupied by the home health agencies (privately owned and profit-oriented) providing home health services. However, the Medicare (the US public health system) has the main role for paying for these services. Three conditions have to be fulfilled for one to be eligible for Medicare homecare: (i) the patient must have a need to care from skilled person; (ii) must be homebound; and (iii) there has to be a plan of care ordered by a physician. This arrangement<sup>32</sup> is based on a prospective payment system where, according to the plan of care, a certain amount of money will be allocated for the skilled care need for the patient. The patient however needs to recover in maximum 60 days. If the patient recovers sooner than the rest of the money will be reallocated to another patient. In case there is no improvement of the patient health the Medicare will stop to provide money. In such a case the patient will have to find other sources of finances for that service. Home health agencies provide

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<sup>30</sup> About Long Term Care at Home; by Thomas Day;  
[http://www.longtermcarelink.net/eldercare/long\\_term\\_care\\_at\\_home.htm](http://www.longtermcarelink.net/eldercare/long_term_care_at_home.htm)

<sup>31</sup> About Long Term Care at Home; by Thomas Day;  
[http://www.longtermcarelink.net/eldercare/long\\_term\\_care\\_at\\_home.htm](http://www.longtermcarelink.net/eldercare/long_term_care_at_home.htm)

<sup>32</sup> About Long Term Care at Home; by Thomas Day;  
[http://www.longtermcarelink.net/eldercare/long\\_term\\_care\\_at\\_home.htm](http://www.longtermcarelink.net/eldercare/long_term_care_at_home.htm)



variety of skilled services, but also custodial services (non medical services, dressing, bathing, transferring etc.)

The most interesting invention in this context is the telemedicine.<sup>33</sup> It is a revolutionary tool of health care widely used in America, but also in Europe (e.g. England). The novelty introduced by the telemedicine is that the health providers care, monitor and educate patients in their place of residence. This system offers two-way audio and video interaction between the doctor and the patient. One of the main reasons for the introduction of the telemedicine is the increase of the healthcare expenses. Telemedicine is chosen as mode for maximizing human and capital resources of the health systems. By many this is seen as the best approach to the patients with chronic diseases, because it provides consistent contact with the patient and reduced cost compared to in-home visits. It again provides cost saving for the public health system as it is reducing emergency room visits and re-hospitalizations. Therefore, alternative models of home care, such as this one, can be useful to be reviewed and to see what aspects of them can be adjusted and be relevant for Macedonia.

As the introduction of the DRG system will inevitably create more home recoveries and under the current circumstances when in Macedonia the home care system is not ready to respond to this growing need, we continue to discuss in this paper unpaid care work, which acts as "buffer" when care is not provided by public institutions.

## **4. UNPAID WORK**

### ***4.1. History of unpaid work***

For a long time most economists had equated work with paid employment, while sociologists specializing in labor questions regarded the issue of unpaid labor as more related to the sociology of the family. The problem has been notably addressed at the beginning of 1900s by the economist Arthur Cecil Pigou, who wrote that 'if a woman employed as a housekeeper by a bachelor were to marry him, the national income would fall, since her previously performed paid work would now be performed unpaid'<sup>34</sup>. The issue has been given greater attention from

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<sup>33</sup> About Home Telehealth, Audrey Kinsella:  
[http://www.longtermcarelink.net/eldercare/home\\_telehealth.htm](http://www.longtermcarelink.net/eldercare/home_telehealth.htm)

<sup>34</sup> UNDP *Human Development Report*, 1995, p.87

sociologists and economists in the 60s and 70s, and has gone much further from the simple exploration of the value of housekeeping.

Currently, unpaid care work is all work defined according to the 'third-person criterion', i.e. work is considered as unpaid care work if in principle it can be performed by another person, who can be paid for it. However, the tasks which are unpaid and the time spent performing them vary between cultures, regions, countries, socio-economic characteristics of the population and so on. Swiebel employs a slightly different definition of unpaid work, as comprising '*all productive activities outside the official labor market, done by individuals for their own households or for others*'<sup>35</sup>. These activities are productive in the sense that they use scarce resources to satisfy human wants.<sup>36</sup>

## **4.2. Unpaid work as a gender issue**

Research indicates that the bulk of unpaid work is traditionally women's activity in and around the household. Women's unpaid work consists of time spent on unpaid care for members of their families and communities, as well as time spent to make up for deficiencies in public infrastructure, including in the energy, health, and sanitation sectors (e.g. fetching water and firewood).<sup>37</sup>

Unpaid work as a women's or gender issue has been officially discussed by UN at the First Women's Conference (Mexico City, 1975), when it was perceived as an issue of unjust distribution and/or inefficient allocation between the sexes. However, it had received even greater attention in 1995, at the two United Nations World Conferences, the Social Summit (Copenhagen, March 1995) and the Fourth World Conference on Women (Beijing, September 1995). These conferences resulted in agreement on the measurement and value of unpaid work, as well as an implicit agreement on the new ways of looking at labor, comprising both paid and unpaid work.<sup>38</sup>

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<sup>35</sup> Swiebel, Unpaid Work and Policy-Making: Towards a broader perspective of work and employment, Discussion Paper of the United Nations Department of Economic and Social Affairs, 1999, p.11

<sup>36</sup> For definition of unpaid care work in more detail please consult "Progress of the World's Women 2005: Women, Work and Poverty": [http://www.unifem.org/attachments/products/PoWW2005\\_eng.pdf](http://www.unifem.org/attachments/products/PoWW2005_eng.pdf) (p. 23.24)

<sup>37</sup> <http://www.levy.org/undp-levy-conference/>

<sup>38</sup> Swiebel, Unpaid Work and Policy-Making: Towards a broader perspective of work and employment, Discussion Paper of the United Nations Department of Economic and Social Affairs, 1999, p.vii.

### **4.3. Methods for measuring the value of unpaid work**

Swiebel (1999) elaborates the two main methods used to measure and value unpaid work:

The '*input method*' counts hours worked in unpaid productive activities and assigns a price to it, using a comparable wage rate. *Time use surveys* are mostly used to tackle the quantitative side of the equation of arriving at the hours worked [value quantity x price]. They consist of identifying the activities household members do during their day/s and the time they spend performing each one of them. Each household member keeps a time-use diary [in developing countries individuals do not usually keep a diary, but are instead usually interviewed about activities on the previous day] (open, fixed or mixed format) of daily activities, which are afterwards divided into paid work, unpaid work and leisure. Unpaid or household work usually covers routine housework, active childcare, maintenance work, purchase of goods and services, plus travel connected to these tasks.<sup>39</sup> Afterwards, the unpaid activities are assigned a market value, which makes them comparable to the corresponding paid activities (e.g. cooking – wage of a cook, cleaning – wage of a cleaner, etc).

The '*output method*' consists of measuring the results of unpaid production by assigning a price to the quantities of goods and services produced. Although this method is theoretically superior, identifying physical units of output is difficult (OECD, 1995, p.12, according to Swiebel, 1999). Although it is feasible to think of square meters of floor mopped, and kilograms of food prepared, the quality of products and services can not be accounted for. In practice, the output method is seldom used in its pure form, because of lack of data. Mostly, input measures are used as a proxy for output measures.

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<sup>39</sup> Kitterød, R.H., *How to Measure Unpaid Work: Empirical Measures and Theoretical Approaches in Sociological studies*, in G. Hagemann and H. Roll-Hansen (Eds.) *Twentieth Century Housewives: Meanings and implications of unpaid work*, 2005, p.260.

#### ***4.4. Unpaid work of women in Macedonia and comparisons with other countries***

Macedonia is signatory country to CEDAW but progresses slowly towards achievement of its objectives. The CEDAW Committee noted "concerns about the persistence of patriarchal attitudes and deep-rooted stereotypes regarding the roles and responsibilities of women and men in the family and society. These stereotypes present a significant impediment to the implementation of the Convention and are a root cause of the disadvantaged position of women in a number of areas, including in the labor market and in political and public life."<sup>40</sup> Unpaid care work reflects the understanding of male and female roles in Macedonian society. Knowing and understanding this issue is critical for creation of adequate respond to the same. This puts an emphasis on the need for studies of time use in the family, the gender roles and divides as well as the factors that are impeding greater participation of men and women in society, politics and economy.

##### **4.4.1. Time use survey in other countries-comparisons**

The results from a time-use survey<sup>41</sup> in 31 countries studied for the purposes of the Human Development Report 1995 (UNDP, 1995, Ch. 4) indicate that about two-thirds of women's total work time was spent in unpaid work, while only one third in paid work. This situation was the same both in developing and industrial countries. In contrast, men from industrial countries were found to spend one third of their work time in unpaid labor, and the ones from developing countries devoted only one fourth of their total work time to unpaid care work.<sup>42</sup>

In the Central and Eastern European countries that were undergoing economic restructuring in the time of the survey, both men and women were found to spend long working hours, but women on average worked 5.5 hours a week more than men if unpaid and paid work were combined. As in developing countries, woman in poorer and mostly rural areas worked longer than men and women from more developed areas/countries. For example, women in Moldova worked 73.5 hours a week (including both paid and unpaid work), in contrast to the Moldovan men that

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<sup>40</sup> CEDAW Committee Concluding Comments (Article 19) to the report submitted by Macedonia at the CEDAW 34 session in the beginning of 2006 (<http://www.un.org/womenwatch/daw/cedaw/34sess.htm>),

<sup>41</sup> The main principles of time-use surveys are explained under the following heading

<sup>42</sup> Behind this average figure there are great disparities, even among industrial countries.

worked 51 hours a week (11 of which were unpaid) and the women in Bulgaria whose total working time was 59%..

The comparative survey data from 18 industrialized countries from the early 1960s to the early 1990s showed that the highest burden of unpaid women's work has been noticed in the countries of South and East Europe, where women spend on average 25 minutes more on unpaid work a day compared to men. However, men in Eastern Europe were found to spend more hours of household work, compared to the world's average. In relation to these findings, Swiebel (1999) concludes that the initial phases of the development and modernization process do not carry only improved household technology, more availability of ready-made products, but also have the negative effect of forcing women out of paid employment to replace the reduced public services by their unpaid labor.

#### **4.4.2. Time use survey in Macedonia**

The State Statistical Office of the Republic of Macedonia conducted a pilot time use survey (TUS) in 1996 on a sample of 200 households. This survey was planned to be regular with five year periodicity as from 1997 and nationally representative, but due to lack of financial resources, the survey was postponed several times and was carried out for the first time in 2004. Since then Macedonia did not have another times use survey.

The 2004 TUS, however, provides evidence on how the time is used in Macedonian urban and rural families. The data are sex disaggregated and therefore allow gender related analysis. It should be noted that the Macedonian TUS survey uses the term "*domestic work*" for the household work including unpaid care work. As it can be seen from the Table XXX below, women engage four times more in domestic work, which is unpaid, than men. The unemployed and women living in rural areas perform longer unpaid domestic work. On average women spend at least 4.5 hours [per day?] doing "domestic work" compared to the 1.3 hours that men spend on household related activities. From them the unemployed women spend the most time (5.9 hours per day) on household work and so does the unemployed men (1.6 hours per day).

**Average time used per day by activities for persons aged over 10, by sex, 2004**

Активности	часови и минути												Activities
	Вкупно население Total population		Вработени Employed		Невработени Unemployed		Неактивни Inactive		Урбана средина Urban area		Рурална средина Rural area		
	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	
Спиене	8.33	8.34	7.58	7.48	8.52	8.27	9.12	9.02	8.30	8.29	8.36	8.42	Sleeping
Слободни активности	5.36	4.28	4.32	3.24	6.58	5.00	6.22	4.50	5.55	4.39	5.11	4.06	Free time activities
Домашни активности	1.44	4.51	1.37	4.40	2.11	6.15	1.37	4.33	1.45	4.30	1.41	5.21	Domestic activities
Вработеност	3.30	1.41	6.19	4.48	1.23	0.21	0.39	0.19	3.10	1.44	3.56	1.37	Employment
Јадење и пиење	1.30	1.38	1.22	1.21	1.44	1.45	1.32	1.45	1.28	1.33	1.32	1.44	Eating and drinking
Друга лична грижа	1.04	1.00	1.03	1.01	1.08	1.00	1.03	0.59	1.05	1.03	1.01	0.55	Other personal care
Патување	1.09	0.50	0.57	0.46	1.27	0.54	1.15	0.51	1.09	0.55	1.08	0.42	Travelling
Школување	0.45	0.52	0.02	0.03	0.04	0.05	2.13	1.33	0.46	0.57	0.45	0.45	Study
Волонтерска работа и помош	0.09	0.08	0.09	0.07	0.15	0.13	0.06	0.08	0.11	0.10	0.07	0.08	Volunteer work and informal help
Друго	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	Other

Source: SSO, 2004 TUS

**Average time per day spent on domestic activities for persons aged over 10, by sex, 2004**

Домашни активности	минути												Domestic activities
	Вкупно население Total population		Вработени Employed		Невработени Unemployed		Неактивни Inactive		Урбана средина Urban area		Рурална средина Rural area		
	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	мажи Men	жени Women	
Подготвување храна	20	107	18	110	22	136	21	97	25	102	13	114	Food preparation
Миене садови	2	35	2	33	3	48	3	32	3	32	2	39	Dish washing
Чистење на станот	5	42	4	41	6	54	6	40	6	40	4	46	Cleaning of the dwelling
Перење на облека	0	13	0	14	0	17	0	11	0	12	0	13	Laundry
Пеглање	0	9	0	12	0	11	0	6	0	10	0	7	Ironing
Рачни изработки и производство на текстил	0	9	0	2	0	8	0	14	0	6	0	14	Handicrafts and prod. of textiles
Градинарство	11	9	8	5	15	10	14	11	9	5	15	15	Gardening
Одгледување животни	8	5	7	3	7	3	12	7	2	1	16	12	Tending domestic animals
Грижа за домашни миленици	1	1	1	1	2	0	1	1	1	1	1	0	Taking care of pets
Шетање на куче	1	0	0	0	1	0	1	0	1	1	0	0	Walking the dog
Градње и поправки	9	1	11	1	12	1	6	1	11	1	8	1	Construction and repairs
Купување и услуги	13	11	12	12	16	17	12	9	15	14	10	8	Shopping and services
Физичка грижа и надгледување на децата	2	21	3	19	4	34	1	18	3	20	2	22	Physical care and supervision of children
Учење, играње и др. со децата	7	11	10	12	8	18	2	8	8	11	6	10	Teaching, playing etc. with children

Source: SSO, 2004 TUS

As a result of the non-availability of regular time use data in Macedonia and lack of interest in using the existing 2004 TUS, relevant policies are not based on time-use evidence. For example, the working time policy (changed in 2006) is not adjusted according to evidence from TUS; the social policy also is not approximated with the traditional division of domestic work among the two sexes; the problems that

emerge from the need to be simultaneously employed and provide unpaid care services to family members (such as child care, care for the weak and feeble or ill family members) are not analyzed;. Therefore, incentives for greater participation of women in the labor force are not introduced, traditional gender roles about division of labour in and out of the household are not questioned, and generally the burden of unpaid care work is not recognized as an issue that requires attention by policy-makers.

The TUS does not provide evidence on how much time is used for care work for ill family member specifically. Therefore, the results of this survey cannot be used for analysis of the impact on the introduction of the DRG health policy measure on the unpaid care work in Macedonian families. Moreover, the Macedonian TUS does not provide enough information to estimate the scope and value of unpaid work and therefore the Macedonian national accounts do not account for the household activities that are not marketed.

#### ***4.5. Value of unpaid work***

When talking about undervalued work, economists primarily think of undervaluation in economic terms, because the value of work in economy is synonymous with market value. However, since many goods and services with economic value are not marketed, the earlier accepted process of calculating the national income statistics (derived by adding the market value of the goods produced and sold and the services provided for hire) has been put in question

Hence, the 1993 revision of the System of National Accounts (SNA) resulted in inputting a market value to goods produced and consumed within the household. Still, much of the household and community work remains unvalued because it consists of services rather than goods. This results in underestimating the total product of the society and the economic contribution of many people, especially women. To illustrate this on the example of several industrialized countries, the men share in non-SNA activities ranges from 40% in Austria and Germany to 48% in Netherlands, while the women's share ranges from 64% in Canada, Finland and Germany to 81% in Italy. Therefore, there are continuous efforts to make the 'SNA become more comprehensive, more encompassing in how it defines economic activity, so that the people performing the so called 'invisible' or 'shadowed' work would get their economic reward or recognition'. This issue is more complicated than it initially seems, because in principle, there is a trade off between the SNA and non-SNA activities. The higher the time spent on the SNA activities, the lower will be the time available for non-SNA activities, and vice versa. Additionally, the

both types of activities also influence each other in terms of opportunities and upward mobility in life. For example, the burden of unpaid work at home on women results in their inferior status and having lower opportunities in the labor market.<sup>43</sup>

Thus, improvement of the SNA is highly needed as under the System of National Accounts only the marketed work of cleaners, childcare workers and alike is accounted for, even though the same tasks are being done by (unpaid) individuals in their home - the residence is being cleaned and the children are being cared for. It is clear that the goods and services resulting from such activities are a source of utility to the members of the household and other households and contribute to their well-being, the only difference being they are not marketed.<sup>44</sup>

#### ***4.6. The share of unpaid work in GDP***

An important aspect of unpaid economic work is that its inclusion would provide more correct estimates of macroeconomic aggregates like the work force of the economy or the total national income. Conceptually speaking, the total workforce in any economy includes all those who contribute to the gross domestic product (GDP) of the economy. That is, there is always a correspondence between the GDP generated in the economy and the total workforce that contributes to its generation. However, as the current SNA and ILO rules say that only that work that is counted in GDP must be counted as 'employment', so people in the informal sector or in subsistence work or working unpaid in the family business should be counted as part of the labour force, but those doing unpaid care work should NOT.

In order to determine the output of household goods and services and compare it with the aggregates of conventional national accounts (i.e. GDP), their value needs to be expressed in monetary units. This is done by inputting a market wage (e.g. the gross wage of a substitute household worker) to the labor time needed to produce household goods and services. According to this principle, estimates of the share of the unpaid labor in the GDP have shown its immense participation in the national economy. For illustration, the value of unpaid labor, as a percentage of GDP was found to range from 39% in New Zealand, 46% in Finland, 55% in Germany to 86% in Australia.<sup>45</sup> If on a global level, 'these unpaid activities were treated as market transactions at the prevailing wages, they would yield huge monetary valuations - a staggering \$16 trillion, or about 70% more than the

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<sup>43</sup> Hirway, I. 'Integrating Unpaid Work into Development Policy', Paper presented at the Conference on "Unpaid Work and Economy: Gender, Poverty and Millennium Development Goals", Levy Economics Institute, New York, October 1-3 2005.

<sup>44</sup> Hamdad, M. 'Valuing Households' Unpaid Work in Canada, 1992 and 1998: Trends and Sources of Change', Statistics Canada Economic Conference, May, 2003

<sup>45</sup> UNDP *Human Development Report*, 1995



officially estimated \$23 trillion of global output. Of this \$16 trillion, \$11 trillion is the non-monetized, "invisible" contribution of women'.<sup>46</sup>

## **5. The impact of DRG on unpaid work**

### ***5.1. DRG and care work - the relationship***

The biggest success of the DRG hospital payment system identified in all international comparisons, but also in the partial implementation of the system in Macedonia, is the reduction of the average length of hospital stay (ALOS). The doctors and nurses in our focus groups indicated that this decrease will in practice mean that the patient will have to leave the hospital earlier and spend his/her recovery at home. In the absence of adequate system of home care, the role of care givers in this respect is assumed by the family members.

To learn about the scope of the care work performed in the homes of the patients discharged from DRG implementing hospital and who in the family is providing this care, the CRPM team together with the Ministry of Health and selected number of clinics from the Clinical Centre in Skopje identified 11 patients that were discharged from hospital in the period January-February 2008. All of them had different diagnosis and were patients in one of the case-study clinics. Their families, assisted by the local partner organizations: *Aureola*, *OZO Sveti Nikole* and *Esma* participated in a time use survey. For this purposes the team developed another research tool: time use diary that was filled by 23 individuals (12 females and 11 males). Every family was asked to record activities undertaken by individual family members [aged 10 years and above] in one working and one weekend day. In addition, focus groups with all studied families were conducted. Here we present the findings of the focused groups, followed by analysis of the time use diaries.

The families were located in every of the participating municipalities: Struga, Sveti Nikole, Shuto Orizari and Skopje. The real names of the families are known to CRPM, but for the purposes of this study we will use pseudonyms on the request of the case study families.

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<sup>46</sup> *ibid.*

Family Ebipi belongs to the Albanian ethnic group and lives in Struga. It has seven family members of which three are children ranging from 1 to 7 years of age. The ill family member is one of the children. The two women: the mother and the daughter in law are economically inactive, and the two adult male family members: the father and son are employed. All adult family members have higher education (the women have graduated from college and the men from University). The care in Ebipi family for the four year old Miranda is provided by her mother and grandmother. After Miranda was discharged from hospital her mother spends at least four hours performing activities related to the recovery of the child. When the mother has to take care of the other two children, the grandmother replaces her. The men in the family are traditional breadwinners. They usually provide the food and the medicine, but rarely perform care work for the ill child.

In the Mehmeti family, also Albanian from Struga, the situation is very similar. The men are employed and the females are economically inactive. As the daughter in law is sick, her mother in law takes care of her. The husband and father in law provide the transport to the hospital and purchase food and medicine when needed.

The third case study from Struga is another Albanian family - Ahmeti. There the son is sick. In this family, it is again the women (his wife and his mother) that provide the care related to his recovery. The women are economically inactive, the patient is not employed and they all live out of the modest pension of the father that does not exceed 100 euros. Most of the care work is performed by the daughter in law, as the parents are rather old. The ill family member has a chronic disease and needs to be hospitalized often.

In Sveti Nikole we had four case studies: family Nikolovski, family Trpenovski, family Aleksovski and family Bogdanovski. All are from Macedonian ethnic descent. These families are somewhat different from the Struga families as they live separately from their parents i.e. they are one-generational rather than two and three-generational families studied in Struga. However, alike the previous cases, the family members are the ones providing the care work during the recovery period even though they do not live together in one household.

The Nikolovski family has one daughter in early thirties. Her father is ill and though the mother takes care of the custodial services (cooking, cleaning, laundering) for the whole family and for the ill; the son in law is the person most engaged in the care work for the ill. Every day he comes to their house and applies medicine,

supplies medicine and feeds the father in law. Partly this is because the care giver is unemployed while his wife (the daughter of the ill family member) works and is the breadwinner in the family.

The Trpenovski family consists of three people in which the parents are both ill. Their son, who is in his forties, takes care of them. He literally does not have free time as is constantly occupied with care work activities for the father who has a chronic disease and the mother's recovery from an operation. He is also unemployed.

The Aleksovski family has two sons, both in their thirties,, one of which has a disease that caused hospitalization several times. The other one is married. They live separate from the mother, father and ill brother but contribute to the care work. Here again, the female members (the mother and the daughter in law) provide all the medical and custodial services though are also actively providing income as they are both in formal employment. The males (the father and the healthy son) one the pensioner the other one unemployed are responsible for socializing, transport and purchasing supplies.

In the Bogdanovski family the care over their daughter, aged 32, is equally divided among the parents. They help each other in everything and there is no division of work based on gender as in some of the families of this sample. They are both employed and live alone.

The Ramadani and Redzepovi families are Roma from Shuto Orizari. In the Ramadani family the son is sick and his wife does all the care work. The parents of the ill are old and feeble. They cannot help much their daughter in law. She is destined to take care of her husband and his old and feeble parents. As a result she cannot work for pay, and remains economically inactive, spending her time taking care of her children, the husband and in-laws. On the other hand, in the Redzepovi household the daughter is ill. While both of her parents work for pay still the care work is provided by the mother. The father helps out with supplies and transport to the hospital.

In Skopje city we studied two more families the Paskalov and Spasovski, they are belonging to the Macedonian ethnic group. In both families a male family member had surgery. In the recovery period the women were instrumental in providing care. As in both cases the women care givers are employed they had to take sick leave from work to take care of their husbands during recovery.

As it can be noticed in most of the cases the women were the care providers. Where the women were employed while men were not [i.e. two cases] the care was provided by the men. Across the different ethnic groups studied a division of care work activities is made as being of either a male or of female kind of work. The women cooked, cleaned, did the laundry, fed, dressed and applied medicine to the ill; while the men provided food and transport to the hospital and very often bought medicine for the ill family member.

The analysis of the data from the times use diary confirms the above conclusions and provide additional insightful observations of the impact the DRG policy measure has on domestic work, and particularly reveals the variations on the extent of work performed between men and women. We recognize that due to the small sample, this data is not representative, but we can nevertheless use it to make some inferences, that we have then additionally verified by a nationally representative survey on patterns of unpaid care work, as detailed in the next section. Tables 9 and 10 outline the activities performed by both genders as recorded in the TUS diary. As it can be seen from the data presented in the tables, the activities that consume most of the time in the case study families [besides sleeping] are the activities/the time spent on nursing of the ill (bathing, dressing, feeding), custodial activities (cleaning, cooking, laundering for the ill) and the time spent in formal employment. This links the care work (that is unpaid) with the DRG policy measure. If the patients were kept in the hospital the care would not have to be provided at home over the same length of time and to the same extent. As a result of the transfer of care work from the hospitals to the homes of the discharged patients about one third of the day of family members is spent in taking care of the ill. From the evidence presented below you will find that the women are more affected by this shift of care from the health institutions to the citizen's households, as they are the ones that provide the bulk of care.

Table 9: Time use diary (male average, in % of the day and in hours)

Activity	Working day	Weekend	Working day hours	Weekend hours
Sleep and related activities	33,4%	33,7%	8,01	8,10
Formal employment	14,6%	2,0%	3,50	0,49
Watching television and video	8,3%	9,3%	2,00	2,22
Eating and drinking	6,1%	8,6%	1,47	2,07
<b>Nursing</b>	<b>6,1%</b>	<b>8,4%</b>	1,47	2,03
Socializing with family	5,1%	5,7%	1,22	1,36
Personal hygiene and health	4,6%	3,8%	1,11	0,90
Custodial activities	3,2%	3,6%	0,78	0,88
Socializing with non-family	3,1%	8,3%	0,74	1,99
Shopping for personal and household goods	3,0%	3,1%	0,71	0,74
Domestic work (for the whole family)				
Cleaning and upkeep of dwelling and surroundings				
Other				

Table 10: Time use diary (female average, in % of the day and in hours)

Activity	Working day	Weekend	Working day hours	Weekend hours
Sleep and related activities	32,8%	35,5%	7,86	8,53
Formal employment	13,1%	0,0%	3,15	0,00
Watching television and video	6,4%	7,0%	1,53	1,68
Eating and drinking	9,0%	11,4%	2,15	2,74
<b>Nursing</b>	<b>8,1%</b>	<b>11,2%</b>	1,94	2,68
Socializing with family	2,1%	4,9%	0,52	1,18
Personal hygiene and health	3,6%	2,4%	0,86	0,58
Custodial activities	8,3%	9,0%	2,00	2,17
Domestic work (for the whole family)	3,6%	1,8%	0,86	0,44
Cleaning and upkeep of dwelling and surroundings	2,7%	3,8%	0,64	0,91
Other	10,4%	12,9%	2,48	3,09

The data from the tables above show that representatives of both genders are almost equally engaged in ensuring the household income as the difference in the

time spent in formal employment is insignificant showing that male spend 1% more of their time on this type of activity.

The share of the care- for- the- ill type of activities is not gender balanced. If we look closer into the time spent on specific care activities, such as nursing, females spend around 30% more time than men. Hence, females spend 3% more of their time during the weekend on nursing for the sick family members.

Briefly, the disproportion of care related activities is only a logical result of the unbalanced division of labour in the family, while at the same time the balance between both genders in regard to the wage employment is preserved. Hence, the "emancipation" of women in Macedonia today means that if they are willing to engage in a salaried employment they should do that by not decreasing the unpaid home care work that they are "obliged" to provide due to traditionally accepted gender roles by society. Thus, the burden on their shoulders is double. Macedonian females contribute to the household income while, at the same time they are the main providers of domestic and care work at home. Hence, they are engaged both in the paid and unpaid sector. To illustrate the traditionally divided roles we indicate that a gap of 51%<sup>47</sup> (more than double the time spent by male – 6 hours as opposed to 3 hours spent by male) is identified in the area of custodial activities for the ill. The previous information regards the time spent during work days, while during the weekends Macedonian women tend to work even more instead of using the weekend for relaxation. On the other hand, men prefer to spend their free time during the weekends mostly on socialisation with family non- members, family members and shopping for personal and household goods (see Table 9).

Even more, females provide an additional care work (3,6% of their time during the working days, while additional 1,8% are provided during weekends) in general, which includes care for the whole family and not just the ill family member. This means that aside from the physical care that females provide to the sick family member/s with the assistance of the male, women additionally provide care for the rest of the family. This type of activity is not mentioned at all in the time use diary table for males.

If we try to sum up all care related activities provided by both genders during the week, one can conclude that the burden of care work for the ill is mostly taken by the female members of the family. The evidence from the TUS diaries show that during the working week women spend 20% of their day or 4,80 hours on care work for the ill; while men spend 9,3% of their time or 2,25 hours carrying for the sick family members. On weekends the gender imbalance is confirmed, as women spend 22% of their time on care activities for the ill or 5,39 hours; while men spend 12% of their time or almost 3 hours (2,91). Therefore, we can conclude that the decreased ALOS under the DRG system and the transfer of recovery of patients from the hospital to the household creates unpaid care work of both men and

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<sup>47</sup> Calculated by adding the time spent on nursing, custodial activities and cleaning the dwellings and surrounding

women, but because of the traditional division of labour in the family, this affects women more than men.

## **5.2. Care work in Macedonia**

To confirm the evidence gathered with the TUS and analyzed above, and to explore further the unpaid care work in Macedonia the Centre for Research and Policy Making with its local partner organizations conducted a country wide survey. The sample size was 1100 respondents, which is considered as standard and substantial for Macedonia, a country that at the time of the survey had slightly more of 2 million inhabitants. The surveyors interviewed one respondent per household.

A standard set of disaggregations was used to explore patterns in care work among different groups, namely population group, age group, marital status, relationship to children, employment status, and habitat type. All of these are cross-tabulated by sex, given the importance of gender in shaping household work.

### **5.2.1. The survey population**

Table 11 shows the distribution by ethnic group and sex of the sample.

**Table 11 Distribution of sample by ethnic group and sex**

	Macedonian	Albanian	Turkish	Roma	Other	Total
Male	42.5%	46.8%	25.6%	23.8%	42.1%	41.0%
Female	57.5%	53.2%	74.4%	76.2%	57.9%	59.0%
Total	63.5%	19.8%	7.5%	5.7%	3.4%	100%

In Table 12 six age groups are used, representing youngsters (15-25 years); the primary reproductive and productive years (25-40 years); and the ones in which having young children is most likely; and those who are older (41-50 years); those that are likely to have grandchildren (51-60 years); and those that are at retiring age (61-65)<sup>48</sup>; the retirees are also screened (65 and above). All groups in the sample are large enough and therefore produce relatively reliable results. The

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<sup>48</sup> In Macedonia under current laws female retire at 62 and male at 64 years of age.

distribution across male and female, are similar, but with more women in the older age groups reflecting greater longevity.

**Table:12 Distribution of sample by age group and sex**

			Age groups						Total
			15-25 age	26-40 age	41-50 age	51-60 age	61-65 age	65+ age	
Sex	Male	Count	93	110	87	66	55	40	451
		% Male	20.6%	24.4%	19.3%	14.6%	12.2%	8.8%	<b>100%</b>
	Female	Count	112	200	104	132	44	57	649
		% Female	17.2%	30.8%	16.0%	20.3%	6.8%	8.8%	<b>100%</b>
Total		Count	205	310	191	198	99	97	1100
		% of Total	18.6%	28.2%	17.4%	18.0%	9.0%	8.8%	100.0%

In Table 13 the marital status of the sampled population is presented. For the purposes of simplicity, we used the terms "single", "married", "widowed" and "divorced", though in reality, the categories are more complex.

**Table 13 distribution of sample by marital status and sex**

	Single	Married	Divorced	Widower	Total
Total	133	282	14	22	451
% Male	49.4%	38.7%	38.8%	32.8%	41.0%
Total	136	446	22	45	649
% Female	50.5%	61.2%	61.1%	67.1%	59.0%
	269	728	36	67	1100
	24.4%	66.2%	3.3%	6.1%	100.0%

The above table reveals that over 60% of the sample population has been married. The single group, at around a fourth of the sample population, should also produce reliable results, but this is not the case for the much smaller widowed and divorced groupings. The distributions for male and female are similar only at the level of the singles group. Among the other groups, especially the widower group, we can notice significantly higher number of women than men, as females are more likely to outlive their spouse.



Considering children Table 14 shows that almost half of the ethnic Macedonians from the sample have two children, which is comparatively similar to the status of children among the Turks. However, more Albanians tend to have three or more children in comparison to Macedonians and Turks. Most of the Roma, on the other side, have four or more children (47.6%).

**Table 14 Distribution of children by ethnicity**

Number of children		Macedonian	Albanian	Turkish	Roma	Other	Total
One child	Count	122	17	20	10	3	172
	% of Total	17.4%	7.8%	24.3%	15.8%	7.9%	15.6%
Two children	Count	344	74	38	4	13	473
	% of Total	49.2%	33.9%	46.3%	6.3%	34.2%	43.1%
Three children	Count	66	48	7	3	4	128
	% of Total	9.4%	22.0%	8.5%	4.7%	10.5%	11.6%
4+ Children	Count	22	39	7	30	10	108
	% of Total	3.1%	17.8%	8.5%	<b>47.6%</b>	26.3%	9.8%
Don't have	Count	145	40	10	16	8	219
	% of Total	20.7%	18.3%	12.1%	25.3%	21.0%	19.9%
Total	Count	699	218	82	63	38	1100
	% of Total	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100.0%</b>

Table 15 utilizes the standard labor force categories of employed, unemployed (i.e. not having done SNA-type work, but having actively sought work), not economically active (NEA i.e. not having done SNA-type work and not having actively sought it), retired, as well as working under contract for services or self-employed. The survey revealed that around 7.5% of the survey population (women and men) who do not work do not seek jobs but consider themselves as working for their household. Just one third of the sample is employed, with 26% of all women and 29% of all men are employed. This gender pattern could be observed in the economically not active and housewife group of the survey population.

**Table 15 Distribution of sample by work status and sex**

Sex		Economic status by sex									Total
		Student	Employed	Unemployed	Not looking for a job	Retired	Housewife	Contract for services	Self-employed	Other	
Male	Count	54	130	71	50	77	26	18	16	9	451
	%	43.2	43.7%	41.2	40.9%	33.0	31.3%	64.2%	80.0	45.0	100

	Male	%		%		%			%	%	%
Female	Count	71	167	101	72	156	57	10	4	11	649
	% Female	56.8%	56.2%	58.7%	59.0%	66.9%	69.5%	35.7%	20.0%	55.0%	100%
Total	Count	125	297	172	122	233	83	28	20	20	1100
	% of Total	11.4%	27.0%	15.6%	11.1%	21.2%	7.5%	2.5%	1.8%	1.8%	100.0%

The Table 16 shows that male respondents in the sample were more educated than female respondents. Almost half (44%) of the women in the sample had no primary or only primary education. Men on the other side (again 44%) had finished secondary and even higher education.

**Table 16 Distribution of sample by sex and education**

			Education						Total
			Primary Unfinished	Primary finished	Secondary un-finished)	Secondary Finished )	Higher Unfinished	Higher Education	
Sex	Male	Count	54	116	61	137	54	29	451
		% of Total	11.9%	25.8%	13.5%	30.3%	12.1%	6.4%	100.0%
	Female	Count	115	172	63	179	72	48	649
		% of Total	17.8%	26.5%	9.8%	27.5%	11.1%	7.3%	100.0%
Total		Count	169	288	124	316	126	77	1100
		% of Total	15.4%	26.2%	11.3%	28.7%	11.5%	7.0%	100.0%

## 5.2.2. Types of care work

Care work in the household is by definition unpaid. We have analyzed three types of care work: care for the children; care for the ill family member and care for the elderly. All of these are considered to be part of the housework. There is small number from the surveyed population that does not spend any time on housework, whereas 76.1% of the sample spends from 1 to over 8 hours on housework. Table 17 shows that most of the men (39%) spend less than an hour on housework, compared to only 10% of women. In contrast, most of the women spend from 1-4 hours (33%) or over 8 hours (31%) on housework.

It can be concluded that activities regarded as housework are mostly performed by women and that out of the people that spend more than 5 hours on housework, about 70% are female, while only about 30% are male.

**Table 17. Distribution of housework by sex**

Table 7: Time allocated to housework							
Sex		< 1 hour	1-4 hour	5-8 Hour	8+ hour	Do not spend time	Total
Male	Count	175	120	67	79	10	451
	% of Male	39%	26%	15%	17%	2.2%	100%
Female	Count	68	216	155	200	10	649
	% of Female	10%	33%	24%	31%	2.2%	100%
<b>Total</b>	<b>Count</b>	<b>243</b>	<b>336</b>	<b>222</b>	<b>279</b>	<b>20</b>	<b>1100</b>
	<b>% of Total</b>	<b>22.1%</b>	<b>30.5%</b>	<b>20.2%</b>	<b>25.4%</b>	<b>1.8%</b>	<b>100.0%</b>

Within the time spent on housework Macedonian women mostly do care work for children, but also spend considerable time on care for elderly and ill family members (discussed below).

### ***5.2.2.1 Care for the children***

Married females tend to spend more time than other groups on unpaid care work which by large related to taking care of the children. Table 18 shows the distribution of child care work according to the number of children.

It can be seen that within women with one child there is no noticeable trend of the time spend on child care, i.e. the number of women within the four time-frames is rather equally distributed. Although the most equal distribution of child care between the sexes can be noticed in families with 1 or 2 children, in these families women also more frequently perform child care activities, especially when it comes to spending more than 5 hours a day on child care.

Surprisingly, families with more children tend to spend less time on child care, a trend especially obvious among men. The majority of men in families with three or more children spend less than an hour a day taking care of the children, which implies that large amount of the child care related activities are left to be performed by women. However, there is a possibility that the older children are taking over part of the care for the younger ones, thus reducing the woman's responsibilities. There is also a possibility that since these families tend to be poorer (as is the case with Roma families), parents may be less involved in the child care.

An analysis of the relationship between the social status and the time spent on child care shows that parents who are still studying tend to spend the least time with their children (Table 18a). In fact, large percentage (38.2%) of parents-students and active unemployed (19.8%) reported not to spend any time on child care. In contrast, over 40% of housewives spend over 5 hours on taking care of their children. The parents that reported to be in a permanent employment relationship typically spend from 1 to 4 hours.

Data indicates that the time spent on child care reduces with the increased time spent at paid work. Still, one unexpected trend can also be noticed – about 30% of unemployed reported not to spend any time or to spend less then one hour on child-care activities.

**Table 18. Distribution of child care by sex and number of children**

	Sex		1 child	2 children	3 children	4 + children	total
<b>&lt;1 hour</b>	Male	Count	20	60	29	26	135
	% of Male spending 1 hour		37.0%	27.0%	53.0%	66.6%	52.7%
	Female	Count	26	67	15	13	121
	% of Female spending 1 hour		25.0%	22.0%	22.0%	32.0%	47.2%
	<b>Total</b>	<b>Count</b>	<b>46</b>	<b>127</b>	<b>44</b>	<b>39</b>	<b>256</b>
<b>1-4 hours</b>	Male	Count	14	52	12	4	82
	% of Male spending 1-4 hours		26.0%	23.0%	22.0%	10.0%	36.7%
	Female	Count	21	93	18	9	141
	% of Female spending 1-4 hours		20.0%	31.0%	26.0%	22.0%	63.2%
	<b>Total</b>	<b>Count</b>	<b>35</b>	<b>145</b>	<b>30</b>	<b>13</b>	<b>223</b>
<b>5-8 hours</b>	Male	Count	8	24	3	3	38
	% of Male spending 5-8 hours		15.0%	10.8%	5.5%	7.6%	27.9%
	Female	Count	24	56	14	4	98
	% of Female spending 5-8 hours		23.0%	18.4%	20.1%	10.0%	72.1%
	<b>Total</b>	<b>Count</b>	<b>32</b>	<b>80</b>	<b>17</b>	<b>7</b>	<b>136</b>
<b>D) 8+ hours</b>	Male	Count	5	16	6	2	29
	% of Male spending 8+ hours		9.2%	7.2%	11.1%	5.1%	26.6%
	Female	Count	25	56	17	7	105
	% of Female spending 8+ hours		24.0%	18.4%	25.0%	18.0%	78.3%
	<b>Total</b>	<b>Count</b>	<b>30</b>	<b>72</b>	<b>23</b>	<b>9</b>	<b>134</b>
<b>E) Do not spend time with children</b>	Male	Count	7	9	5	4	25
	% of Male that do not spend time with children		28.0%	36.0%	20.0%	16.0%	33.3%
	Female	Count	7	32	4	7	50
	% of Female that do not spend time with children		14.0%	64.0%	8.0%	14.0%	66.6%
	<b>Total</b>	<b>Count</b>	<b>14</b>	<b>41</b>	<b>9</b>	<b>11</b>	<b>75</b>
<b>Total (according to the number of children)</b>			<b>157</b>	<b>465</b>	<b>123</b>	<b>79</b>	<b>824</b>

There is a clear trend that can be noticed – as the hours of daily child care increase, men become less and women more represented. To illustrate, while among the respondents that said to spend less than one hour on child care 53 % are men and 47 % female, the situation with the ones that spend more then 5 hours is

completely different – less than 30% are men and more than 70% women. The differences are statistically significant (Chi-square=50.66; df=5; p<0.01) However, there is a surprising trend within people that do not spend any time on child care, more of which (66.6%) are women.

**Table 18a. Work status and time spent on child care**

Social / employment status		<1 hour	1-4 hours	5-8 hours	8+ hours	Do not spend time	Total
<b>Student</b>	<b>Count</b>	<b>22</b>	<b>13</b>	<b>10</b>	<b>10</b>	<b>34</b>	<b>89</b>
% of Total student		24.7%	14.6%	11.2%	11.2%	38.2%	100%
% of total according to hour		8.0%	5.2%	7.2%	6.6%	23.4%	
<b>Permanently employed</b>	<b>Count</b>	<b>67</b>	<b>94</b>	<b>47</b>	<b>35</b>	<b>33</b>	<b>276</b>
% of Total permanently employed		24.2%	34.1%	17.0%	12.7%	11.9%	100%
% of total according to hour		24.4%	37.9%	33.8%	23.3%	22.7%	
<b>Unemployed-active</b>	<b>Count</b>	<b>26</b>	<b>38</b>	<b>20</b>	<b>29</b>	<b>28</b>	<b>141</b>
% of Total unemployed – active		18.4%	26.9%	14.2%	20.5%	19.8%	100%
% of total according to hour		9.4%	15.3%	14.4%	19.3%	19.3%	
<b>Unemployed-inactive</b>	<b>Count</b>	<b>35</b>	<b>20</b>	<b>10</b>	<b>25</b>	<b>16</b>	<b>106</b>
% of Total unemployed inactive		33.0%	18.8%	9.4%	23.6%	15.1%	100%
% of total according to hour		12.7%	8.0%	7.2%	16.6%	11.1%	
<b>Retired</b>	<b>Count</b>	<b>86</b>	<b>50</b>	<b>30</b>	<b>29</b>	<b>20</b>	<b>213</b>
% of Total retired		40.3%	23.5%	14.1%	13.6%	9.3%	100%
% of total according to hour		31.3%	20.2%	21.6%	19.3%	13.8%	
<b>Housewife</b>	<b>Count</b>	<b>22</b>	<b>17</b>	<b>14</b>	<b>17</b>	<b>7</b>	<b>75</b>
% of Total housewife		29.3%	22.6%	18.6%	22.6%	9.3%	100%
% of total according to hour		8.0%	6.8%	10.1%	11.3%	4.8%	
<b>Other (part-time employed, self-employed etc.)</b>	<b>Count</b>	<b>17</b>	<b>16</b>	<b>8</b>	<b>5</b>	<b>7</b>	<b>64</b>
% of Total other		26.5%	25.0%	12.5%	7.8%	10.9%	100%
Total	Count	275	248	139	150	145	1100
% of Total according to hour		100%	100%	100%	100%	100%	100.0%

### 5.2.2.1.1 Care for children according to type of settlement

There are differences between the amount of child care spent by urban and rural dwellers. More than half of the urban citizens spend less than 1 hour (30.7%) and from 1 to 4 hours (26.9%) on child care; while within rural people this percentage is somewhat lower – 27.9% and 24.3 respectively. In addition, while 33.5% of rural dwellers spend more than 5 hours on child care, this is characteristic for 26.4 of the urban dwellers. The latter also more frequently report not to spend any time with their children.

As it can be seen from table 19, comparatively in both rural and urban areas women spend more time taking care of the children than men; with the difference that more rural women (43.8%) spend over 5 hours on childcare, in contrast to 32% of the urban women. This may be because urban women typically have fewer children and more of them are formally employed, which provides them with less time to spend on child care as well as the possibility to either employ someone else to care for the child, or put them in paid child care facility. Regarding men from rural and urban areas, more of the former (42.7%) reported to spend less than an hour daily on child care activities; whereas more of the latter (20.2) stated not to spend any time on these activities.

**Table 19: Care for children according to type of settlement and sex**

Settlement	Sex	> 1 hour	1-4 hours	5-8 hours	8+ hours	Do not spend time	Total
<b>Urban</b>	<b>Male</b>	75	59	20	16	43	213
% of urban male		35.2%	27.7%	9.4%	7.5%	20.2%	100%
% male-female		45.4%	38.8%	29.4%	19.7%	44.3%	
	<b>Female</b>	90	93	48	65	54	350
% of urban female		25.7%	26.5%	13.7%	18.6%	15.4%	100%
% male-female		64.5%	62.2%	70.6%	80.3%	65.7%	
	<b>Total</b>	<b>165</b>	<b>152</b>	<b>68</b>	<b>81</b>	<b>97</b>	<b>563</b>
		<b>25.9%</b>	<b>23.8%</b>	<b>10.7%</b>	<b>12.7%</b>	<b>15.2%</b>	<b>100.0%</b>
<b>Rural</b>	<b>Male</b>	70	36	18	21	19	164
% male-female		63.6%	37.5%	25.3%	30.4%	39.6%	
% of rural male		42.7%	21.9%	11.0%	12.8%	11.6%	100%
	<b>Female</b>	40	60	53	48	29	230
% male-female		36.4%	62.5%	74.7%	69.6%	61.4%	

% of rural female		17.4%	26.1%	23.0%	20.8%	12.6%	100%
	<b>Total</b>	<b>110</b>	<b>96</b>	<b>71</b>	<b>69</b>	<b>48</b>	<b>394</b>
		<b>23.8%</b>	<b>20.8%</b>	<b>15.4%</b>	<b>14.9%</b>	<b>10.4%</b>	<b>100.0%</b>

\* People that do not have children are not included

It is worth noting that significant numbers of women spend more than 8 hours taking care of their children. Specifically, every 5<sup>th</sup> woman in the urban and in the rural areas of Macedonia has reported to spend more than 8 hours on activities related to childcare.

### 5.2.2.1.2. Care for the children by ethnicity

Table 20 shows the amount of time people from different ethnicities spend on child care. It can be seen that almost half of the Macedonians and Albanians that have children spend less than one hour or from 1-4 hours taking care of them. More Albanians (20%) than Macedonians (12.3%) reported to spend 8 or more hours. About 15% of the both ethnic groups responded that they do not spend time with their children.

The majority of Turks reported to spend from 1-4 hours (25.7%) and more than 8 hours (29.7%) on child care. Additionally, the least percentage of respondents from this ethnic group reported not to spend any time taking care of their children. Interestingly, a significant number of the surveyed Roma (22.6%) reported they do not spend time on taking care of their children. On the other hand, the majority of the Roma that do take care of their children perform these activities from 1-4 hours (24.5%) or over 8 hours a day (22.6%).

**Table 20: Taking Care for children by time and ethnic groups**

Table 12: Taking Care for children by ethnic groups								
Care taking		<b>Macedonian</b>	<b>Albanian</b>	<b>Turks</b>	<b>Roma</b>	<b>Serbs</b>	<b>Others</b>	Total
<b>&lt;1 hour</b>	Count	173	58	20	9	8	7	275
% of the ethnic group		28.2%	31.2%	27.0%	16.9%	50.0%	46.7%	28.7%
<b>1-4hours</b>	Count	172	39	19	13	1	4	248
% of the ethnic group		28.1%	21.0%	25.7%	24.5%	6.2%	26.6%	25.9%
<b>5-8hours</b>	Count	98	24	6	7	2	2	139
% of the ethnic group		16.0%	12.9%	8.1%	13.2%	12.5%	13.3%	14.5%



<b>8+hours</b>	Count	76	37	22	12	1	2	150
% of the ethnic group		12.3%	20.0%	29.7%	22.6%	6.2%	13.3%	15.6%
<b>Do not spend</b>	Count	94	28	7	12	4	0	145
% of the ethnic group		15.3%	15.0%	9.5%	22.6%	25.0%	0	15.2%
Total	Count	613	186	74	53	16	15	957
	%	100%	100%	100%	100%	100%	100%	100.0%

- People that do not have children are not included

### Taking Care for children by time and sex( male –female)

			Sex		Total
			Male	Female	
Care for children	<1 hour	Count	145	130	275
			52.8%	47.2%	100%
	1-4 hours	Count	95	153	248
			38.2%	61.8%	100%
	5-8 hours	Count	38	101	139
		28.4%	71.6%	12.6%	
	8+ hours	Count	37	113	150
			25%	75%	13.6%
	Do not spend	Count	62	83	145
			5.6%	7.5%	13.2%
Total		Count	451	649	1100
		% of Total	41.0%	59.0%	100.0%

- People that do not have children are not included

### 5.2.2.2. Care for the elderly

In Macedonia traditionally families take care of their elderly family members. Nursing homes exist but are not very popular. The CRPM research undertaken with relevant stakeholders from the Ministry of Labor and Social Policy indicate several reasons for this situation: (i) the nursing homes are rather expensive; (ii) in all

ethnic communities it is known generally that to turn the care of the parents/grandparents to an institution is embarrassing.

Almost 60% of the individuals in the survey sample reported to have elderly members of the family that needed care. In general, 38% of total number of respondents (men and women equally) said they spend from one to four hours caring for the elderly family members in the household (Table 21). Although women appear to be more engaged in the care of the elderly family members, the sex differences are not statistically significant (Chi-square=0.53, df=4; p>0.05)

**Table 21: Time spent on care for the elderly family members**

			<1hour	1-4 hours	5-8 hours	8+ hours	Total people with elderly family members
Sex	<b>Male</b>	Count	79	100	35	58	272
		% of total male	29.0%	36.7%	12.8%	21.0%	100%
		% men-women	43.0%	40.0%	41.0%	42.0%	
<b>Female</b>	Count	104	149	51	81	385	
	% of total female	27.0%	38.7%	13.2%	21.0%	100%	
	% men-women	56.0%	60. %	59.0%	58.0%		
<b>Total</b>	<b>Count</b>	<b>183</b>	<b>249</b>	<b>86</b>	<b>139</b>	<b>657</b>	
	<b>% of Total</b>	<b>27.8</b>	<b>37.9</b>	<b>13.1</b>	<b>21.1</b>	<b>100.0%</b>	

\*People without elderly family members are not included

### **5.2.2.3. Care for ill family members**

As presented in Table 22, most of the respondents (78.7%) have reported to have taken care of an ill family member over the last two years. Out of them, the majority (62%) were women, while the rest 38% men.

**Table 22: Taking care for ill family members by sex**

			Care for ill family member			Total
			Yes	No	Refused	
<b>Sex</b>	<b>Male</b>	Count	330	109	12	451
		% of Total	38.0%	52.4%	46.1%	41.0%
	<b>Female</b>	Count	536	99	14	649
		% of Total	62.0%	47.5%	53.9%	59.0%

<b>Total</b>	<b>Count</b>	<b>866</b>	<b>208</b>	<b>26</b>	<b>1100</b>
	<b>% of Total</b>	<b>78.7%</b>	<b>18.9%</b>	<b>2.4%</b>	<b>100.0%</b>

The taking care of an ill family member is a relatively commonly performed task in the households, as 23.6% of respondents have provided care for an ill family member in the last 6 months; 11.5% have experienced that 7 -12 months ago; 7.5% - 1-2 years ago; and the rest more than 2 years ago. 13.9% of the respondents reported they permanently take care for someone ill in the family. Out of them, 6.5% take care for people with special needs; 32.5 % for elderly and feeble person; 28.3% for elderly people; 18.6% for ill kids.

In regards to the type of illness of the people being taken care of, 22% were chronically ill patients; 16.8% acute ill; 11.2% seasonal ill; up to 29.4% were patients recovering from a surgical operation; and 5.2% were victims of an accident. Almost 6.5% of respondents reported to give care for everyday needs of family members and 8.9% provided other type of care.

When taking care of ill family members, the care-givers need to perform various tasks that usually differ according to the type of illness. In general, as presented in Table 16, the most frequent activity is purchasing basic necessities for the ill family member, performed by 17.7% of the respondents; dressing the ill family member (14.6%), taking him/her to the doctor (12.8%) and assisting with the personal hygiene (11.8%).

The analysis found that women spend more time on almost all of these activities, except on the hygienic care, which is mostly the men’s responsibility (60%-men, 40%-women). Men and women relatively equally attend to purchasing basic necessities for the ill family member, but twice more women than men still do most of the other responsibilities, such as feeding, laundering, taking to the doctor etc.

**Table 23: Activities performed by people taking care for an ill family member**

Sex		Economic status by sex									Total
		Student	Employed	Unemployed	Not looking for a job	Retired	Housewife	Contract for services	Self employed	Other	
Male	Count	54	130	71	50	77	26	18	16	9	451
	% Male	43.2%	43.7%	41.2%	40.9%	33.0%	31.3%	64.2%	80.0%	45.0%	100%
Female	Count	71	167	101	72	156	57	10	4	11	649
	% Female	56.8%	56.2%	58.7%	59.0%	66.9%	69.5%	35.7%	20.0%	55.0%	100%
Total	Count	125	297	172	122	233	83	28	20	20	1100
	% of Total	11.4%	27.0%	15.6%	11.1%	21.2%	7.5%	2.5%	1.8%	1.8%	100.0%

It can be concluded that taking care for the children, elderly or an ill family member is most often an unpaid work, since only 11.7% of respondents have utilized the

right to assistance from the social services for the care they are providing to a family member (Table 24). An additional 7.5 % are paid by their relatives to provide the care and 5.2% are paid by humanitarian organizations. However, most of the respondents (68.2%) do not have any help and do not receive any finances/allowance for the care work they provide.

**Table 24. Utilization of the possibilities for paid care work**

Source of assistance/allowance	Frequency	%Male	%Female
Care allowance	129 (11.7%)	23.3%	76.6%
Paid from a family member	82 (7.5%)	36.3%	63.4%
Humanitarian organization	57 (5.2%)	26.3%	73.7%
Do not receive any help	751 (68.3%)	44.5%	55.5%
Other	81 (7.4%)	51.9%	48.1%
Total	1100 (100%)		

The table below shows that the number of users of the care allowance, provided through the Centers for Social Assistance within the Ministry of Labor and Social Policy, is small and that there is a decreasing trend in the care allowance recipients. Taking into consideration the newly emerging need for care (under the DRG system) for medical recovery in particular, the policy makers will have to look at the possibilities of expanding this social scheme as one policy solution to overcome patient dissatisfaction and to address the increased burden of care for women in the household.

**Table 25: Number of recipients of care allowance**

	2004	2005	2006	2007
Number of underage recipients of assistance and care allowance	22	18	132	N/A
Number of adult recipients of assistance and care allowance	20996	22124	21733	N/A
TOTAL	21018	22142	21865	19274

\* the data for 2004, 2005 and 2006 is taken from the Statistical yearbooks from 2005,2006 and 2007

\*\*the figure for 2007 is taken from the Ministry for Labor and Social Policy. It refers to the number of recipients of assistance and care allowance for June 2007.

## **6. DRG and its budgetary impact**

### ***6.1. The DRG impact on the health budget spending***

In all countries that moved from input-based payment to case-based payments the reforms led to a reduction in the ALOS. In the US Medicare system, the ALOS fell by 15% in the first three years after the DRG payment was implemented; and fell as much as 24% for some diagnoses.<sup>49</sup>

According to the latest financial report by the University Clinical Center – Skopje (UCCS), the average length of stay (ALOS) has been reduced from 8.2 to 7.8 days for the first 9 months in 2007.<sup>50</sup> This represents a reduction of 4.9% compared with the first 9 months from 2006. However, having in mind that from March 2007 the DRG system was not yet functional, that the American grouper was used just to document cases/diagnosis, the reduction of 0.4 days (or 4.9%) needs to be adjusted.

The adjustment of the reduction of ALOS will be done in order to project what the implications of the DRG (case-based) payments will be on the Macedonian budget. Will it influence savings to the health sector that can be used for treating more patients, increase quality of services and invest in more sophisticated equipment?

Analysing evidence from other countries that have gone through this reform process and had similar health system, financing, and outputs as the Macedonian health system (i.e. Bosnia Herzegovina and Croatia), it can be estimated that the Diagnostic Related Groups policy measure implemented from February 2008 will produce a reduction of ALOS by 20% during 2008.

This approximation is higher than the international average of 15% reduction in countries adopting the DRG payment system for hospital services. The assumption is that the Macedonian health system before the introduction of DRG had longer length of stays than needed. This hypothesis is mainly based on the characteristic of the point-based system (used in Macedonia) where the hospital management does not create productivity gains and therefore hospitals are motivated to keep beds full, extend lengths of stay, since high occupancy results in steady funding.

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<sup>49</sup> Cashin, C. et al.: Case-based hospital payment systems. December 2004. Abt Assoc. Inc. USAID

<sup>50</sup> It should be pointed out that this number represents an average across all 33 Clinics. However, in order to simplify the estimation we took 0.4 days reduction in ALOS to be the same across our sample of Clinics. Although it is not entirely correct, it will serve as good approximation.

To see the implications of the DRG payment system for hospital services we have chosen a sample of hospitals to which we have applied the approximated value of ALOS reduction under the assumption that the reduction will be proportional across all Clinics in the sample of hospitals we have studied. We have chosen this sample of hospitals due to two reasons: (i) the hospital relevant data were accessible to our research team; (ii) the hospitals in our sample are the biggest health users of the national budget.

From the Table 26 below one can notice the trend of decreasing ALOS in the case study hospitals.

Table 26: Estimated average length of stay

Clinic	2006	2007	2008 <sup>e</sup>
Clinic for children diseases	8	7,4	5,9
Endocrinology Clinic	6	5,6	4,4
Hematology clinic	14	13,0	10,4
Cardiology Clinic	5,5	5,1	4,1
Gynecology	6,8	6,3	5,0
Obstetrics	4,3	4,0	3,2
Nephrology Clinic	14	13,0	10,4
Oncology	17	15,8	12,6
Orthopedic Clinic	12,2	11,3	9,0
Urology Clinic	5,3	4,9	3,9
Neurology clinic	7,6	7,0	5,6
Toracal	6,1	5,7	4,5
Average	9	8,2	6,6

‡ For 2006 actual ALOS; 2007 and 2008 estimated

*Source:* UCCS and CRPM estimations

To calculate the savings we also need the number of admissions in hospitals in 2008 (the period when the DRG system is planned to be launched). As UCCS recorded overall increase of 11% in the number of provided health services, for the first 9 months in 2007 and this also happened in all countries that moved to a DRG system, we took several assumptions in the process of estimation of the total number of admissions during 2008. Firstly, we believe that this 11% increase will continue in 2008, while the second assumption is that the increase in the number of

provided health services will be proportional for all Clinics in our sample. The following table gives the actual and expected number of admission for 2007 and 2008 respectively.

Table 27: Number of admissions

<b>Clinic</b>	<b>2007</b>	<b>2008<sup>e</sup></b>
Clinic for children diseases	6.423	7.365
Endocrinology Clinic	465	533
Hematology clinic	975	1.118
Cardiology Clinic	5.674	6.506
Gynecology	6.383	7.319
Obstetrics	4.059	4.654
Nephrology Clinic	1.104	1.266
Oncology	2.140	2.454
Orthopedic Clinic	2.064	2.367
Urology Clinic	1.538	1.764
Neurology clinic	2.005	2.299
Toracal	1.581	1.813

*Source:* UCCS and CRPM estimations

Table 28 Estimates of costs per sample clinic for 2006

<b>Inpatient</b>	<b>Cost per bed day</b>
Clinic for children diseases	4.813
Endocrinology Clinic	5.256
Hematology clinic	9.964
Cardiology Clinic	15.220
Gynecology	2.186
Obstetrics	2.400
Nephrology Clinic	5.538
Oncology	16.598
Orthopedic Clinic	3.069
Urology Clinic	3.260
Neurology clinic	3.765

Toracal	2.603
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*Source:* Republican Health Institute of Macedonia

Secondly, we estimated what would be the costs for each sample Clinic if the DRG measure is not implemented in 2007 and 2008. Therefore, we have used values for the ALOS from 2006. Once these costs are compared, an overview of the actual savings of the Health Insurance Fund under the DRG system is provided.

From the table below one can notice that although the implementation of this policy measure was partial (used for recording cases/diagnosis), in 2007 it created savings in the amount of 138 million Denars (or 2.3 million Euros). However, the full-fledged implementation of the DRG policy measure is expected to produce bigger savings in 2008. Namely, if the initial expectations regarding the reduction in ALOS and the number of admissions are realized, than this will produce approximately 560 million Denars (or 9.1 million Euros) of additional savings across these particular hospitals.

Table 29: Health Insurance Funds savings from DRG

Clinic	2007	2008	2007 in EUR	2008 In EUR
Clinic for children diseases	18,1	73,3	0,30	1,20
Endocrinology Clinic	1,1	4,3	0,02	0,07
Hematology clinic	10,0	40,3	0,16	0,66
Cardiology Clinic	34,8	140,8	0,57	2,30
Gynecology	6,9	28,1	0,11	0,46
Obstetrics	3,1	12,4	0,05	0,20
Nephrology Clinic	6,3	25,4	0,10	0,41
Oncology	44,2	179,0	0,72	2,93
Orthopedic Clinic	5,7	22,9	0,09	0,37
Urology Clinic	1,9	7,9	0,03	0,13
Neurology clinic	4,2	17,0	0,07	0,28
Toracal	1,8	7,4	0,03	0,12
<b>TOTAL</b>	<b>138,0</b>	<b>559,0</b>	<b>2,3</b>	<b>9,1</b>

*Source:* UCCS, RZZ and CRPM estimations

Finally, it should be pointed out that our estimation was limited to only 12 Clinics and approximately 34.000 patients. Knowing that the DRG payment system will be



applied at secondary level hospitals too, then the savings on national level will be far grater.

The estimated savings of the sample hospitals are not insignificant however. For 2007 they present 12% of the total health budget and for 2008 they constitute 34% of the health budget. How this money will be allocated further is a question for the policy makers? Is there an analysis or action plan on the aftermaths of the implementation of the DRG system?

Table 30: Savings as % of health budget

Clinic	2007	2008
Savings	2,3	9,1
Health budget	19,5	26,4
Savings as % of health budget	12%	34%

*Source:* Macedonian National Budget 2007 and 2008 and CRPM estimations

Moreover, policy makers should be also aware of the other implication of the DRG system – the embedded incentive to increase the number of hospitalized cases. Where there is an excess supply and soft budget constraint, this may result in growing hospital expenditures. Also hospitals may hospitalize a patient who could be treated more efficiently in an outpatient or day-surgery setting. As a result the DRG system may not generate savings but rather more expenditures. During the past 20 years, the number of total hospital discharges increased markedly in countries with output-based payment, while it remained on a similar low level in Spain, Canada and the Netherlands, where physicians are paid a monthly salary independent of their workload.<sup>51</sup> As in Macedonia the physicians are also paid monthly salary and the system of performance management is not yet established, the number of hospital discharges should not increase rapidly and therefore we should count on saving rather than increased expenditures. On the other hand the Book of rules for contracting specialist-consultative health care facilities (Official Gazette no14/08) that sets the basis for the DRG payment system allows the hospitals working under this system to keep the savings and invest it in improvement of service deliver at this level, without any mentioning of the possibility for such savings to be transferred in the primary sector and specifically home care.

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<sup>51</sup> Pia Schneider: Provider Payment Reforms-Lessons from Europe & America for South Eastern Europe, World Bank, HNP Policy note, 2007

## ***6.2. The DRG financial and societal impact on Macedonian citizens***

With the decrease of ALOS the patients are discharged from hospitals earlier than usual. The need for care in their homes is growing and the family will become the main provider of nursing (application of medicine, changing bandages, performing physical exercises and etc.); and custodial services (cleaning, cooking, laundering, walking, transport and etc.).

In the previous section we estimated the possible savings for the Health Insurance Fund in 2007 and 2008 for 12 clinics. The scope of care work that is being transferred to households from hospitals is identified through the case study time use surveys. It is now clear that women take the burden of this care work, but the evidence shows that men also share part of the care for the ill family members. Therefore, in this section we attempt to estimate the financial value of the care work performed in the families. We will also portray other societal implications this increased unpaid care work has on the family members.

The following table notes the average time spent of both genders on care activities for the ill and other domestic activities. If we take a closer look on care related activities only and use the market value of the nursing we could estimate the value of the work that is being transferred from hospitals to households. This will help us compare the savings that emerge in the health budget (with the implementation of the DRG measure) with the value of the growing unpaid care work performed in the Macedonian households. We should emphasize that this is only approximation since the time use survey we conducted is based on a small sample and cannot be used for any reliable representative estimates.

Table 31: Time use diary (all)

Activity	Working day [% of total time]	Weekend	Working day [in hours]	Weekend
Sleep and related activities	33,1%	34,6%	7,94	8,30
Formal employment	13,9%	0,0%	3,33	0,00
Eating and drinking	7,5%	10,0%	1,80	2,39
Watching television and video	7,4%	8,2%	1,78	1,96
<b>Nursing</b>	<b>7,1%</b>	<b>9,8%</b>	1,70	2,34
Custodial activities for the ill	5,7%	6,2%	1,36	1,49
Personal hygiene and health	4,1%	3,1%	0,99	0,75
Socializing with family	3,7%	5,3%	0,88	1,28
Domestic work for the whole family	2,3%	1,2%	0,56	0,28
Socializing with non-family	2,3%	5,9%	0,56	1,42
Cleaning and upkeep of dwelling and surroundings	2,1%	3,1%	0,51	0,74
Other	10,8%	12,7%	2,59	3,04

According to the last report from the statistical office regarding the average salaries in the year 2008 the average salary in the health care sector is 14 872 denars<sup>52</sup>. When divided with the total working hours in a month the value of one hour is 92,95 denars. Based on the information from the time use survey conducted by CRPM, each working day Macedonian families [which are caring for ill people] spend 1,70 hours on nursing for the sick family members which otherwise should be provided within the health care institutions. Having in mind this, the estimation is that the unpaid care work provided at home has a value of 160 denars each working day for the Macedonian families [which are caring for ill people]. Yet, the cost during weekends is even higher adding up to 210 denars.

To sum up, by providing care for their sick family members the Macedonian families add value of approximately 6560 denars each month [if the care is provided over a full month]. This amount constitutes one half of the average monthly net salary that the health care system allocates for nurses which is around 13 000 denars.

<sup>52</sup> [http://www.stat.gov.mk/pdf/2008/4.1.8.22.pdf\\_pg.7](http://www.stat.gov.mk/pdf/2008/4.1.8.22.pdf_pg.7), last time checked on April, 5<sup>th</sup> 2008. (The presented data refers to the average monthly net-wage paid per employee, January 2008.) The exchange rate for euros is 61.5 Macedonian denar per one euro..

The burden on providing care for ill in the family is not proportionately shared among the male and the female members. More often it is the women in the family that take care of their ill relatives. Macedonia being a conservative society, men rarely stay at home to care for the sick. Our research shows (See Table 32) that the career of an average woman might be jeopardized if a family member gets ill- it is three to four times more likely that she rather than her husband will have to take care of this person, and either quit work, decrease working hours or take a sick leave that she later would not be able to use it if something actually happens to her,

On the other hand, the social life of women that take care of ill family members also suffers more than the one of the men (See Table 33). Women are between two to three times more likely to have less time for friends, for a hobby or for private issues, than their male counterparts. They have less time to be with children than men too. Overall, the fact being that Macedonian women tend to care more than men for sick members of their family does not help promote equality of the sexes. Neither does it help improve the levels of happiness among Macedonian women and the time they have for leisure activities. They work harder than men, if both paid and unpaid work is counted, and it negatively affects their lives.

**Table 32 Impact on *Professional life***

Impact	Total	Male	Female
Quit work	9.4%	From them 31.9%	68.1%
Take sick leave	7.8%	33.3%	66.7
Decrease working hours	9.2	23.9%	76.1%
Quality of work	9.8%	40.8%	59.2%
Change the job	3.1%	48.3%	51.7%
No impact	39.4%	50.2%	49.8%
Other influence	21.3%	Pay cuts and emergence of other family problems	
TOTAL			

**Table 33 Impact on *Personal life***

Impact	Total	Male	Female
Less time for friends	21.1%	39.9%	60.1%
Less time for hobby	21.4%	25.7%	74.3%
No time for yourself	17.8%	39.8%	60.2%
Less time with children	5.9%	22.3%	77.7%
Less time with spouse	2.3%	34.7%	65.3%
Other influence	31.5%	55.5%	44.5%
TOTAL	100		

## 7. Conclusions and Policy Recommendations

The DRG policy measure is a budgetary tool used to create savings in the public health sector, and increase efficiency of hospitals. The Macedonian health system had rather poor financial performance in the past and accumulated a significant debt to the Health Insurance Fund. At the same time patients remained dissatisfied with the quality of services provided by the health institutions while medical staff were continuously discontented with the level of their salaries that could not match the increasing life expenditures. The Macedonian government believes that introducing the DRG payment system will solve all the problems: decrease health care expenditures, increase the numbers of services delivered, and pay the medical staff per number of cases they have treated. In fact our estimations (based on data from 12 clinics out of 33 at the Clinical Centre; another 6 specialized hospitals and 14 general hospitals where the DRG system is applied) show that the health system will save up to 34% of the Ministry of Health's budget per year using the DRG.

In this apparent win - win scenario however, no one has asked the fundamental question of what will happen to the patients treated under the DRG system? Our research shows that under this payment system (i.e. DRG) the patients are discharged from hospital earlier and that they spend the recovery period at home. The reason for this is that in Macedonia the primary level of health institutions cannot treat patients, but rather operates as a preventive and diagnostic arm of the health system. The international comparisons indicate that under the DRG system patients discharged from hospitals are transferred to daily hospitals, primary level facilities or home care facilities. We have discussed how the home care in Macedonia, the patronage service and the home visit service, cannot respond to the emerging need of home care under the DRG system. At the moment the patronage service is specialized and organized only to provide support for mothers and babies in the neonatal period. The home visit on the other hand is part of the emergency medical service, and is therefore costly and time limited.

As our research shows, on average four hours is spent on care work for the ill family members, while doctors say that the full recovery period can be from one week to one month. Therefore, the home care should be organized to provide variety of services: nursing, physio-therapeutic, and custodial services for the whole period of recovery. Currently these are provided by the family of the patients discharged from hospital operating under the DRG system.

The time use survey conducted in 11 case study families depict two significant trends:

- (i) an increase of the care work as part of the general domestic work;
- (ii) the burden of the care work is disproportionately shared among the female and male family members, women spend more time taking care of the ill in the family than men.

During weekends the female family members spend up to 26% of their day on domestic work of which 20% is care work for the ill. On the other hand, male family

members spend a lot less – 12%. The women do the nursing, the cooking, laundering and cleaning; while the men do the shopping and take the ill family members to the doctor when needed.

This is backed up by the results from the nation- wide survey, where most of the respondents (78.7%) reported to have taken care of an ill family member. Out of them, the majority (62%) was women. Women perform twice more than men all care work activities, such as feeding, laundering, taking the ill member to the doctor and so on.

The care work for the ill family members, like other activities that women traditionally do such as taking care of the children, of elderly family members and of the whole family is unpaid work. In Macedonia this work has not been valued and – as in other countries - is not accounted for in the system of national accounts. This work does not contribute to the country's GDP.

For the purpose of this study we have estimated that the average value of the care work for the ill family members is around 6600 denars (or 110 euro) for 4 hours of work per day. This value is equivalent to the part time salary of a nurse. Macedonian women in this regard provide services that the health system used to offer and remunerate.

As a result of the analysis presented in this study we can conclude that the DRG policy measure is a budgetary tool that is not gender neutral. It affects more women than men by increasing the unpaid care work females perform at home to support the recovery of the ill family members. The shift of care from the hospital to the families has budgetary, but also other societal implications. Women tend to decrease their working hours and therefore earn less in their formal employment, or even quit jobs; they have less time for themselves and for their children in particular. Men largely do not record much effect of the transferred care work on their professional nor personal life.

To allow gender equality and provide environment for growing economic emancipation of women, the Government of Macedonia needs to review the DRG policy measure and couple it with additional policies that will ease the implementation and achieve the genuine objectives of hospital efficiency and effectiveness; but will also neutralize the gender implications the DRG system will have with the shift of care work from the hospitals to the homes of the patients. The measures should range from information campaigns among the patients that changes in the payment system affect longevity of hospitalization; to improving primary health care services that will help the families that need to take care of the ill members after they are discharged from hospitals. At the moment services such as patronage can not be counted as being sufficient in transferring the burden of the care of the sick at home rather than in the hospitals.

The DRG payment system will inevitably have its impact on several issues: from costing, to length of stay and use of equipment and personnel. This might cause

further patient dissatisfaction with how the health system operates. Therefore a consistent, clear way of informing the Macedonian citizens of the new modus operandi of the health system at tertiary and secondary level and its effects on service delivery to them- 'the end users'- citizens will be highly needed. The focus group of doctors organized within this research project also indicated a need for training of the medical practitioners in better understanding of the policy measure; the activities undertaken for its implementation; as well as setting clear expectations of how the system operates and what its outputs will be.

International comparisons show that the DRG system stimulates changes in hospital care that eventually affect other parts of the health care system. So if the DRG system creates incentives for shorter hospital stays, outpatient or community care must be ready to provide a greater degree of follow-up. That is how unintended impacts within the hospital sector and other parts of the health care system will be neutralized.

In particular the policy recommendations for the Ministry of Health (as primary policy maker in the area) and Health Insurance Fund (as managing body of the new payment system) are the following:

- Inform the citizens of the new payment system its benefits but also expected impact on average length of stay and transfer of recovery from hospital to homes
- Invest in the improvement of the existing home care system and develop new services that will ease the burden of unpaid care work in Macedonian families
- Change the Health Care Law and allow for treatment to be provided at primary level
- Open more day hospitals not just in Skopje but in the rest of the country
- Develop trusting monitoring system for hospital's performance, so that it could be continuously measured if they discharge patients too soon
- Put obligations on hospitals to ensure that there is follow-up care (referrals back to primary level facilities for further recovery)
- Taking into consideration the newly emerging need for care (under the DRG system) for medical recovery in particular, the policy makers will have to look at the possibilities of expanding this social scheme as one policy solution to overcome patient dissatisfaction and to address the increased burden of care for women in the household.
- Consider putting part of the savings that will emerge with the introduction of the DRG payment system to be put into improving the system of home care. In this a holistic approach to healthcare can be provided, and overall efficiency and effectiveness improved, rather than having transfer of care from the public sector to the private. This will also address the issue of unpaid care work burden falling on women, and taking it as granted that they will bear it.



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