Reimbursement in eHealth: Results of International Survey

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One of the main obstacles for worldwide implementation of eHealth is the reimbursement policy at local, national and international level. That's why the attitude towards reimbursement of virtual healthcare services is rather important.

The paper presents in brief results of international survey revealing changes of attitude towards reimbursement within 3 years period. The effect of gender, years of expertise in eHealth, occupational status, etc. are discussed.

Introduction

The world is changing, and along with this change comes a new wave of technology. This new high-tech world has the power of minimizing distance as a barrier to health care. With the help of eHealth, optimum health care can be available to patients around the world and right in their own home.

One of the barriers to eHealth, becoming completely integrated into the medical systems, is the absence of consistent reimbursement policies. This lack of an overall eHealth reimbursement policy reflects the multiplicity of payment sources and policies within the contemporary world. In order to speed up eHealth implementation, the reimbursement gap, i.e. the gap between providing and paying for eHealth services has to be confronted at local, national and international level [1-4].

The first steps towards organization of adequate reimbursement for eHealth / telemedicine services have already been done.

In USA in 1997 with the Balanced Budget Act that authorized Medicare (insurance organization) to reimburse for eHealth services was the first legal step in North America. Today 35 states have rules relating to the reimbursement of eHealth activities.

Since 1997 there have been numerous improvements, but serious limitations remain impacting geographic location, originating sites and eligible services.

In Europe the picture is very fragmented with little or no reimbursement policies or joined up thinking across countries. Recognizing this in 2008 the European Commission published a report [5] aimed at identifying the underlying issues preventing the adoption of eHealth technologies, recommendations and actions and stimulating its adoption. It stated that "Despite the potential of eHealth, its benefits and the technical maturity of the applications, the use of telemedicine/eHealth services is still limited, and the market remains highly fragmented. Although Member States have expressed their commitment to wider deployment of telemedicine/eHealth, most initiatives are no more than one-off, small-scale projects that are not integrated into healthcare systems". It goes on to say …"Patients' compliance is high and some healthcare authorities have already acknowledged the need for these services. Yet, most telemonitoring services are still limited to the status of temporary projects without clear prospects for wider use and proper integration into healthcare systems. Commitment by healthcare providers and concerted action between all stakeholders are needed in order to ensure wider deployment of these types of services throughout the EU".

The report identified three key areas that action needs to happen to stimulate the eHealth. These are:

- Building confidence in and acceptance of eHealth services;
- Solving technical issues and facilitating market development and
- Bringing legal clarity. The lack of legal clarity – in particular with regard to licensing, accreditation and registration of eHealth services and professionals, liability, reimbursement, jurisdiction – is a major challenge for eHealth in EU.

Wide cross border provision of eHealth services also require legal clarification with regard to reimbursement. Only a few Member States have clear legal frameworks enabling eHealth. In some Member States, for a medical act to be legally recognized as such, the physical presence of the patient and the health professional in the same physical place is required. This is a clear obstacle to the use of eHealth. Moreover, there are often limitations in law or administrative practice on reimbursement of these services. The Commission has promised to support member states in the establishment of a Common European Platform to support legal issues and generate policy regarding data flow, ownership, reimbursement and accountability within the European Union.

In sum: legislation is important. But both patients/citizens' and professionals' confidence in the necessity of eHealth reimbursement is also significant.

One of the major groups, that shapes citizens point of view on eHealth matters, is the group of healthcare professionals and especially those that are directly engaged in eHealth. They are those that in a straight line communicated with politicians, decision makers, patients, etc.

What is their attitude toward reimbursement in eHealth? This is what we were trying to find out.

Material and Method

As part of more extensive international surveys, performed 3 times - in 2007, 2008 and in 2009, the attitude of healthcare professionals towards reimbursement of eHealth activities was studied.

A specially designed questionnaire was applied. Subjects participate anonymously, voluntarily and have the right to withdraw.

Only professionals engaged in eHealth development, implementation or performing eHealth patient cares took part

in the interview. As some of the questionnaires were not correctly filled in, data from only 144 participants from all continents are included in the analyses. Participants were chosen among attendees of annual eHealth event Med-e-Tel (The International eHealth, Telemedicine and ICT Forum for Education, Networking and Business, www.medetel.eu). The survey aimed to follow whether the years spent in eHealth services and gender influence the attitude towards reimbursement.

Results

The data revealed that when reimbursement is concerned subjects are distributed in three groups:

1. Defenders of reimbursement via insurance funds;
2. Defenders of reimbursement and ready to pay for eHealth services from their pockets and
3. Rejecting any form of reimbursement.

A gradual increase of the first group is observed within the three years period (from 64% in 2007 up to 77,41% in 2009). Just the opposite is the tendency in the second group where a decline from 30% in 2007 to 12,9% in 2009 is revealed (Fig. 1). The differences between groups 1 and 2, 2 and 3 and 1 and 3 reached statistical significance at $p<0.05$ for each of the three years studied with one exception – the difference between groups 2 and 3 tested in year 2009 does not reach statistical significance.

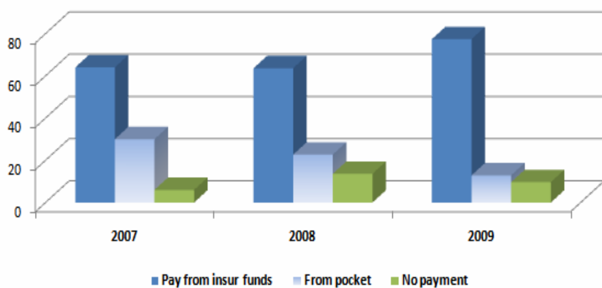

Fig. 1 Three groups based on their attitude towards reimbursement

Time is a critical characteristic in changing attitude towards reimbursement. Comparing the results of the three consecutive years 2007, 2008 and 2009, a trend of gradual

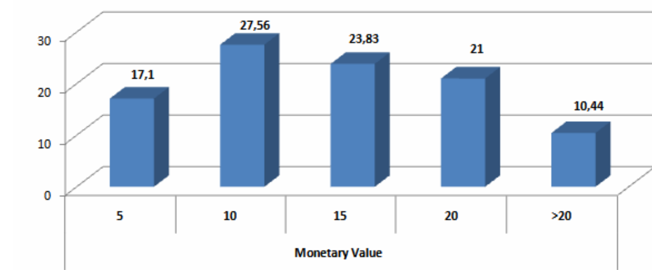

Fig. 2 Monetary value of reimbursement (%)

decreasing of the percentage of subjects that reject any reimbursement decline from 13,63% to 9,67%. Although the difference is not dramatic it confirms that time is something that no one can sell or buy. The discussions, good examples, advertising the successful stories and individual and/or organizational experience have gradually changed the minds of healthcare professional. The main motive of reimbursement opponents is that eHealth is not a new healthcare discipline but is rather an enabler of providing healthcare services.

Another important question was about the monetary value of the reimbursement. Figure 2 shows the distribution of results for all participants. Almost 68% of participants estimate the value of eHealth services (consultations, second opinion, etc) between 5 and 15 € in local currency.

No gender differences were revealed for the entire group when monetary value is concerned. When European participants were compared, the following tendency was revealed: women are keener to reimburse eHealth services and also estimate it higher compared to men (fig. 3 a). Even more representative data are received if comparing men and women occupied in eHealth industry from the entire sample (Fig. 3 b). The results are not surprising. Similar outcomes

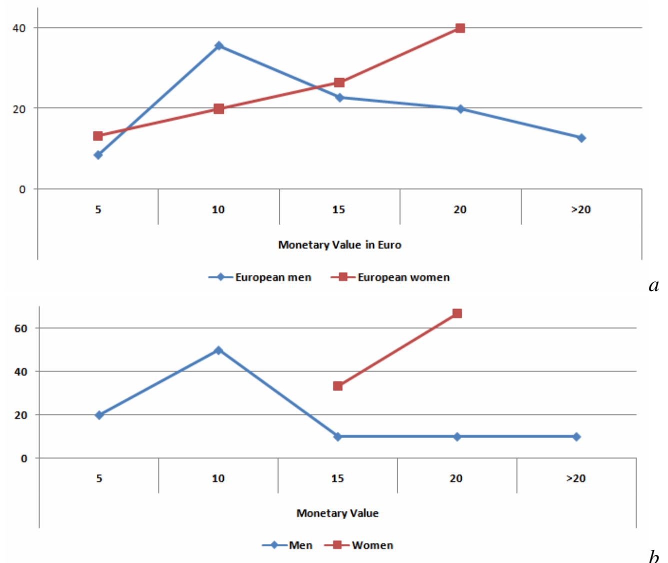

Fig. 3 Gender differences in reimbursement (%): a) Comparing Europeans, b) Comparing subjects occupied in eHealth industry

were established when consumers' attitude towards reimbursement of virtual telepsychology support was studied [6-7].

Whether the difference in culture and existing healthcare systems may influence the attitude towards reimbursement policy? This was yet another question. Participants in the survey were representatives of 4 continents – Africa, Asia and

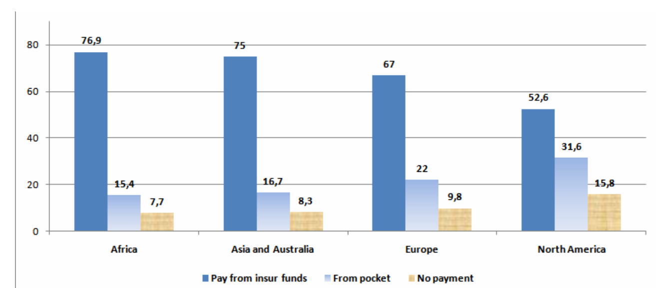

Fig. 4 Attitude towards reimbursement of representative of various continents (%)

Australia (countries Australia, Japan and Singapore), Europe and North America (Canada and USA). Surprisingly participant from North America were more ready to pay for eHealth services from their pocket (31,6 % vs. 22% from Europe, 16,7% from Asia and Australia and 15,4% from

Africa) compared to all other groups ((Fig. 4). In addition only 52,6% of North Americans rely on insurance funds to reimburse their eHealth services as compared to 67% in Europe and 75% and 76,9% Asia and Australia and Africa. This is an interesting observation as in USA the first legal reimbursement of eHealth was organized via two major insurance funds – Medicare and Medicaid. What is more, when the monetary value of the reimbursement is concerned, only Europeans and North Americans agreed the sums to exceed the equivalent of 15 €. This is also surprising as especially in Asia and Australia the eHealth is well developed, its benefits are more obvious to both healthcare professionals and citizens as compared to all other continents and the representatives of this continent are from countries with very high standard.

Participants were furthermore distributed in groups based on the years they have spent in eHealth. Figure 5 presents the

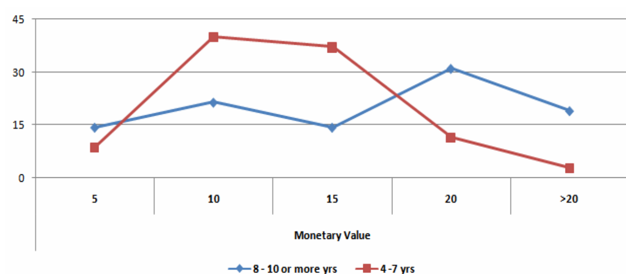

Fig. 5 Attitude towards reimbursement value based on years engagement in eHealth

results of comparison between two groups – one consists of subjects working in eHealth between 4 and 7 years, the other – of people engaged in eHealth for 8 or more years. No difference in their attitude how the reimbursement has to be organized is revealed. When monetary value of the reimbursement is concerned, there is a significant difference between both groups for the payments of 15, 20 and >20 Euro. The results reached statistical significance for $p<0.05$. Those working longer in eHealth evaluate it higher. Almost 50% of them thought that 20 € or >20 € are normal price for eHealth activities, while only 14,2% of those working less than 7 years agree on such sums.

Conclusions

Politicians and medical specialists believe that eHealth increases productivity by streamlining workflow and maximizing billing while at the same time improving quality of care. In spite its potential eHealth is not as widely applied as needed. A number of barriers, at various levels, have to be overcome for health systems to take full advantage of these opportunities. One of the most important barriers to eHealth is the systematic-financial reimbursement.

At a first glance it is obvious that:

- The situation in various countries is ambivalent. National and international efforts still need more and better coordination;
- The requirement of specific legislations dealing with all aspects of eHealth is essential;
- Development of adequate governmental policies is crucial;
- The lack of an adequate reimbursement policy continuous to be pointed out as one of major problems in eHealth deployment [8-9].

Having in mind all these it is necessary to study in details and carefully follow the attitudes of experts engaged in eHealth towards reimbursement policy. Further analyses may provide valuable clues when preparing the reimbursement legislation.

References

[1] L. Kleinebreil, N. Nader, R. Zuffada NETC@RDS for E-EHIC: Deploying E-EHIC Services for Borderless Care in Europe, In M. Jordanova, F. Lievens (Eds.) Global telemedicine and eHealth Updates, Vol. 2, 2009, pp. 464 -467.

[2] W. B. Korte, H.-W. Schemken, J. Stevens , M. Ruzicka, P. Carnotensis, Ten4health – Trans-European Healthcare Support Network for Europe's Mobile Citizens, In M. Jordanova, F. Lievens (Eds.) Global telemedicine and eHealth Updates, Vol. 2, 2009, pp. 468-473.

[3] Telemedicine Reimbursement Report, Center for Telemedicine Law 2003 http://www.hrsa.gov/telehealth/pubs/reimbursement.htm

[4] S. Callens, K. Cierkens, Legal aspects of E-HEALTH. Stud Health Technol Inform. 141, 2008; pp. 47-56.

[5] Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. "On telemedicine for the benefit of patients, healthcare systems and society". Brussels, 4.11.2008 COM (2008) 689.

[6] M. Jordanova, L. Vasileva, M. Rasheva, R. Bojinova, Telepsychology as a Part of eHealth, 2009, Publ. Prof. M. Drinov, Sofia, Bulgaria, 2009

[7] M. Jordanova, L. Vasileva, M. Rasheva, R. Bojinova, Tele-Psychology: Clients' Attitudes towards Remote Consultations In Jordanova M., Lievens F. (Eds.) Electronic Proceedings Med-e- Tel 2008: The International Educational and Networking Forum for eHealth, Telemedicine and Health ICT, Publ. Luxexpo, Luxembourg, 2008, ISSN 1818-9334, pp. 115-119.

[8] M. Jordanova, eHealth: From space medicine to civil healthcare. Proceedings of 2nd International Conference on Recent Advances in Space Technologies, IEEE Inc., Turkey, 2005, pp. 739-743.

[9] P. Whitten, L. Buis, Private payer reimbursement for telemedicine services in the United States. Telemedicine Journal and E-Health, 13, 2007, pp. 15-23.