



## > FIRST DAY / THIRD SESSION

PRESENTER- Hello again. Ms. Marie-Laure from French National Chamber of Pharmacists is here to share their experiences in electronic health records.

MARIE-LAURE MICOUD (French National Chamber of Pharmacists)

I am very happy to be here. First of all, I should apologize. I am tired as I could not sleep last night. Please be kind to me. I am sorry for my English as well. I speak English with the French accent. I will try to speak slowly and please ask me to repeat if you do not understand.

Maybe I should introduce myself, because not everybody knows me. I will try to tell the experiences in France in terms of e-health now. I work as a consultant for French National Chamber of Pharmacists. I was the vice director of French National Project that was responsible for the electronic health records of the patients. I will also talk about the national project and the pharmacy records. I hope I can convince you that this pharmaceutical project was successful. I will try to put the difficulties and deficiencies that should be handled.

I will tell the context in France. In the beginning, we had a grand national project DMP<sup>4</sup> within the framework of personal health program. It was carried out by the ministry. It had three goals and directed by three well known physicians. One of the goals was to reduce costs and increase social security. Another goal was to improve health care and treatment facilities, and to establish a structure that includes physicians, nurses, pharmacist and family physicians.

I would like to give several figures in France and introduce some structures. Everybody is included in the social security system in France. We do not know the exact number but it should be 64,5 million people under the social security.

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<sup>4</sup> DMP (Le Dossier Médical Personnel - DMP) : "Personal Medical Record Project"; The project aims to provide all public health insurance beneficiaries with a secure electronic medical record, under their own control.

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Although France is not as densely populated as Turkey we can make several comparisons. Everyone has to have a social security. But everybody is free to make her own choices. She can either be involved in private sector or in public system. On the other hand, you can choose the health professional and the way of the treatment. You have a great freedom about treatment. But, basically everybody has the same level of social security.

What was the main aim of the national project? It aimed to improve the quality of health services because there were many complaints about it. French people want to improve the quality but how? Firstly, by increasing and facilitating the coordination. Secondly, by information sharing. This is a very difficult point because there is confusion in data sharing and message exchange. These two things are not same. In fact, sharing the documents is more difficult than e-mail communication. However, we should improve the efficiency. We should simplify the information sharing by improving coordination and web facilities. Of course, we need to prevent the unwanted cases and errors in this process.

We talked about France. Everyone has insurance in France. However, we have many information systems like in Sweden, which is the weak side of our system. We face very serious problems concerning interoperability. We have several special networks for interoperability, such as cancer network, diabetics network and infant network. But we do not have a common system based on one infrastructure. This is really a great deficiency for us. You can see some figures here.

This process has so many actors. We have 800 thousand health professionals including experts such as nurses, dentists, practitioners, pharmacists, physicians. We have around 23 thousand pharmacies and 60 thousand pharmacists.

I would like to give some figures about financing. We have not talked so much on this point. This is very important for the national projects. We have to invest much more money on it. If you work with many IT systems you have to invest more money. For example, we have to invest 125 million Euros within next five years. This is a big number. Do you know who gives the money? There are

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several funds of social security system in France. The state transfers money to this system. In other words, there is a national institution responsible from the project. In fact, there is no direct relationship but the social security system pays indirectly for data processing systems for healthcare.

We devote 11.1 percent of the national income to health in France. That means 10+0,1. 0,1 percent is not so important but we have to be aware of it.

It is estimated that the health care expenditures will be around 185 billion Euros in 2009 in France. Compared to other countries France pays more money for medicine. You can see the figures here. We pay 555 Euros per person for medicine in one year. This is the reimbursed money which is 413 Euros in the European Union.

We can mention the other things as well. We have to consider the returns of the investments but it is not possible to determine it precisely. However, you can never see returns before 10 years in such investments. But I should say that it is really a profitable field.

Personal health records will be included in the system too. But I am talking about the future. It does not exist at the moment. There will be a structure including information sent by health professionals and each information system. However, the information may only be disclosed upon the consent of the patient. We have three actors here: persons who provide documents, institutions who give information and patients.

We should be sure that all patients consented for the disclosure of their data in this process. In other words, this process should be official. This will be realized by smart cards and we should ensure a structure that obeys patient's consent. We have to know about the data that the patient consents to be disclosed. These are all structured and non-structured data. We should be able to put and see whatever we want in the structured data. Let's call SNOWMED<sup>5</sup> to this structured data. Of course, laboratory tests, discharge papers and other

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<sup>5</sup> Medical Coding Standart used in Europe, similar to the ICD-10 used in Turkey.

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information are parts of the data. This was a part of the public health strategy but it is not an accomplished system at the moment.

There is another thing; we have had a pragmatic approach. As Helene explained, you have to be pragmatic. For example, you had a strategy, applied the pilot project and wanted to test the information infrastructure. This is a difficult way; you have to be realistic and pragmatic. So, you should start the project with the existing tools and data processing systems. There are thousands of data processing systems in France and it is not so easy to combine these systems to each other. This is a big problem. On the one hand you are trying to get local experiences and on the other hand trying to reach a conclusion based on those experiences. This is an expensive process. We have had to spend 26 million Euros for the local experiences. It is difficult to say that we have taken very good lessons. It is because we have not spent enough time on it. In other words, we have not had enough experiences. Six month is not enough to take lessons.

At the same time, we have to reduce the resistance of practitioners. Many people do not resist against the technical issues. In fact, they are resisting changing their applications. Most of these people are physicians. Pharmacists are much less resistant in France. We would have advanced more if have not faced resistances in the last 10 years. In order to reduce the resistance we should put all the health professionals in the centre of the project. The working groups have worked for months in the European level. We should be part of this process and people needs to have right to decide on their ways of working. Otherwise, your projects can be interrupted.

Besides a pragmatic approach, there should be a political support. In France, the government is the sponsor of this system. You need to have a strong support of the government. But the social security system finances it. However, this is the weak part of the structure, because it is a health project but not a social security project. You are together with everyone in the health sector and the aim is not only to decrease the costs. The legal environment has importance in this case, particularly at the project level. We have two different laws and they provide a very good legal framework.

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What have been the subjects of the discussion in the last two years? In 2006, the government asked us to combine all the data processing systems by July 2007. The time was not enough. They did not provide help in terms of verification and definition processes. You either have to explain everything to politicians or have to have a very realistic planning. Otherwise, you cannot be successful. This is a long-term task and we have to work interoperability. We could not accomplish the interoperability for months in France. It was a very difficult process. So you have to put clearly how many years you need.

Another contested issue was on the patient's decision on the safety of her own data. We tried to do our best and now the patients are more loyal to the project, because they believe that we are doing the best for them.

The last debated issue was masking and unmasking the process. What do the physicians allow patients to do or what do patients allow physicians to do? The physicians have a considerable power in the parliament of France. They have always had power. This discussion should be open to everybody. A political discussion on this subject should be carried out as well. And, the government should undertake the deontological and ethical dimensions of the issue. In sum, we have to discuss several points, otherwise we cannot advance.

The last problem that is still being discussed in France is the discordance between the regional organizations and the national organizations. We have regional organizations in France but we have a national framework that provides standards. We need interoperability standards, semantic standards and classifications. These are existed in the national structure but there is disharmony between regional organizations and national ones. When patients apply to the regional organizations there occur problems. Patients do not move to other regions frequently. You have to carry out and share this process with many regional organizations in a national framework. We have a new law that will be handled in February and the discussion is going on now.

We have talked about personal health records and the system that includes these records in the morning and afternoon. This system is for the patient. You

have to improve the quality of healthcare; the system should be safe and accessible over internet from everywhere. For example, personal health records should be accessible from home for each patient. The offices should be accessible as well with software.

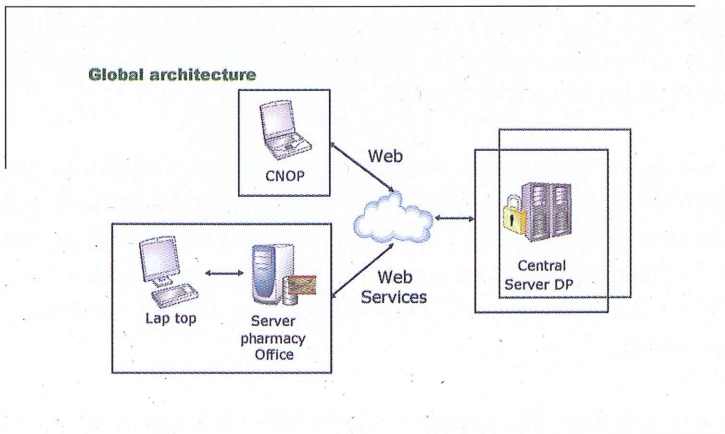
What benefits do the personal health records bring for the health professionals? Of course, it enables patients to get a better treatment and care. It enables the health professionals to access the information entered by other health professionals. It gives the opportunity of document and data sharing, and provides the health summary of patients. The summary is the data that you want to be disclosed. We try not to enter data two times, which means that we need unique software for the health professionals. They should always be signed, sealed and kept in a certain place. These are very important points.

Now, I would like to tell about pharmaceutical records. I said that the national project was stopped at the moment but we have achieved a considerable success in pharmaceutical records. These records were shaped with a law that was brought into force at the beginning of 2007. National Chamber of Pharmacists was appointed as the responsible organization of the pharmaceutical records. The Chamber became responsible of such a project for the first time. In addition, we have a special commission in France such as the one in Great Britain. Moreover, you have a similar one in Turkey. This commission is a kind of supervisory authority on protection of personal data. Its goal is to experiment and generate the pharmaceutical records to the national level. The Chamber decided to generate the pharmaceutical records to the national level. This is a great success achieved in two years.

What are goals of pharmaceutical goals? These are of course professional records. These need to promote healthcare coordination in between pharmacies to the benefit of the patient. This is a structure that binds the hospital pharmacies to community pharmacies. The information of the patients who get their medicine either from hospital pharmacies or community pharmacies is recorded. The records of medicine procurement for four months in order to prevent procurement, prevent adverse events, and prevent redundant order aims are very fundamental and important.

The network of the pharmaceutical records aims to improve the prevention and informing people at risk by installing a system of mass dissemination of alerts. The necessary controls of the patients such as for allergies are done according to the records. There are many benefits with the dissemination of information in this network. For example, some stocks can be withdrawn according to the records. The announcement of such cases should be made over this network. By this way, the drugs can be prevented to reach pharmacies and patients. This process should be tracked before the patient goes to the hospital. Dissemination of information over this network will be beneficial in preventing the counterfeiting in medicine.

There is no need to worry; I am not going to describe complex data processing architecture. It is quite simple. There are around 4-5 computers in pharmacies. Every pharmacy has its own server and there is a small network between the pharmacies. Each pharmacy is connected to the main service supplier through web services. There are two central servers for back-up. These servers can be reached 7 days 24 hours. French National Chamber of Pharmacists (CNOP) is also connected to this network.



When a patient goes to a hospital pharmacist or a commercial hospital with a printed prescription, the pharmacists use her smart card to verify her identity.

### **Pharmacist Smartcard**

It enables the pharmacists to give medicine. An ordinary pharmacy employee cannot give medicine. Afterwards, the patient gives her social security card to the pharmacist. The pharmacist uses the patient's card in a two slot device and can see all the prescribed and non-prescribed drugs bought by patients. However, this authentication system does not start repayment automatically. It just enables to access the records of the last four months.

### **Personal Social Security Card (Smartcard)**

It is the last four months, because, the physicians cannot write a prescription for more than three months in France. This is the measurement for the chronicle diseases. The patients suffering from chronicle diseases have to visit physicians once in three months for a new prescription. That is why we determined the time as three months.

What have been the successes of this system? We have had 80 thousand pharmaceutical records in November 2007 while they reached to 200 thousand in April 2008. It was 1 million 6 thousand pharmaceutical records in November 2008. It is 1,7 million now. We add 80 thousand to 100 thousand new pharmaceutical records in every week. It is very fast.

The number of the pharmacies included in the system was 672 in April 2008 whereas it reached to 5 thousand. The pharmaceutical records have grown very fast. In addition, we classify them. For example, we saw that most of the records belonged to the persons at the age of 60-75, when we classified the records according to the age. People aged 50-59 and more than 75 come second and third respectively.

We receive more than 80 thousand applications concerning pharmaceutical records in a day and it is getting more day by day.





What have pharmaceutical records provided us for our work on the adverse effects of drugs? We had knowledge deficiency in this subject. According to a research conducted on adverse effects, we found out that the adverse effects can be provided from 125.000 to 165.000 among the 300 thousand to 365 thousand hospital patients. And, around 700 million euros was required for the elimination of that case resulted from drug interactions. Thus, it was understood that it was possible to avoid adverse effects that would reduce social security costs. We had another research in which we could analyze very few cases.

In the network for pharmaceutical records, the system gives alarms in several levels about the drug interactions before the patients get their medications. These levels are from 1 to 4. 3rd and 4th level alarms are very serious ones. When we analysed the findings of the researches on warnings and providing pharmaceuticals to patients we reached the following conclusions: 72 percent of the pharmacists gave the drugs with an explanation. 6 percent gave with an additional explanation. 1 percent of the pharmacists denied giving drugs. 19 percent of them phoned the physicians while 3 percent gave the drugs after making necessary corrections on the prescriptions. After this research, the percentage of the pharmacists who give the drugs with an explanation decreased to 41 while the percentage of the ones who give drugs with an additional explanation increased to 38. The percentage of the ones who deny giving the medicine increased to 12 while who call the physicians decreased to 6 percent. The percentage of the pharmacists who make changes in prescriptions stayed in the same rate. These rates show us that we can prevent unnecessary drug expenditures. In addition, we aim to prevent counterfeiting and violations in pharmaceuticals during this process.

We have learned during this process that the pharmaceutical records project has been successful although the personal health record system was stopped. The project has been successful for several reasons. First of all, pharmaceutical record system is only the one that includes the pharmacists. Existing identity authentication tools (SmartCard) are used. The pharmacist uses Cart Vitale while the patient uses Smartcard with the Social Security Number on it. I think, you will have a health identification number and IT identity number in 2010.

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The network of the pharmaceutical records does not involve all the health professionals and does not bring an extra burden on them. There are not so much data processing systems and identity numbers in the portal of pharmaceutical records. It is quite an ample one. There are only 23 thousand pharmacists and their ID information. If there were also the personal health records, then 800 thousand health professionals would be involved in the system. In addition, there are more than 200 companies providing IT software to the freelance physicians. This situation is an obstacle against interoperability.

All the pharmacies in France are 100 percent computerized today. They all have data information systems. On the other hand, the physicians do not have to share their medical practices, which is an important matter for the success. It is because the pharmacists share the data but not the medical practices. It is their decision to give medicine or not and the information system does not force them to do certain things. A pharmacist does not know whether the other pharmacist give the drug or not. Only the information is shared but not the medical practices. This is an important criterion for the success.

On the other hand, high number of stakeholders/users constitutes a problem in the personal health record system that also needs a huge investment. In addition, we did not have a strong political support for the personal health record system and the physicians showed a great resistance against it. I hope the new team responsible of the national project would move more slowly and convince the government to continue the project. If the government and the Ministry of Health support the project, the team will have more power to cope with the resistances and there will be fewer problems in the application.

I believe the national project with the pharmacists and physicians will result in better outcomes in the next period. National Chamber of Physicians has already started to work on provision and evaluation of data for the national health record system. We will be able to reach a more comprehensive national system for the physicians and maybe in terms of e-prescribing, e-medicine and so on.

I am afraid I have talked too much. If you have questions please do not hesitate to ask.

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**Ivana SILVA-** Thank you very much. I would like to explain several points that might be helpful for the participants. It is up to patient now to give or disclose her pharmaceutical records or not. It is not something compulsory. Will it change in the future and become compulsory or will it stay voluntary?

**MARIE-LAURE MICOUD-** It was kind of an election for the national election when the new legal framework was brought in 2007. So, it will not be compulsory in the future.

**QUESTION-** Thank you for sharing the experiences in your country. I have two questions. The data and experiences are coming from the pharmacists but not from the patients. Do you know if the patients are comfortable with these e-health processes? Maybe you saw this journal. A pilot project is carried out in Bolu. People were asked whether they are content with that project. It is not a scientific data but shows that people are content with the project. We have a card on which there is a chip but we do not know whether it is useful. How did the French people react against it? It is important because we put our goal as to improve the welfare and satisfaction of the citizens.

**MARIE-LAURE MICOUD-** Both of the projects have become very popular in France. We conducted several inquiries which revealed that 80-85 percent of the people are content. They do not have a detailed knowledge but they like it. It is also valid for pharmacy reports and pharmaceutical records. Very few people denied disclosing their records. Such matters are related with the discussions carried out at that moment. We had a problem about national identity cards. But now people sometimes refuse to disclose their personal data but the rate of the people who refuse is always less than 10 percent. Besides, they can close their records whenever they want, they can conceal some of their data. Very few people close or hide information after they open a record. They think it is beneficial because, I guess, people trust the pharmacists and physicians in France. It should be similar in Turkey.

**QUESTION-** Can I add a second question? That is highly a related subject. You said that social marketing is highly important for such a project. To make people,

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physicians, nurses to trust the project and to include them in the project are very important. So, I agree with you. If you have any other idea, please share it with me. Thank you.

**MARIE-LAURE MICOUD-** Yes, you are right. You have to convince everybody and need a large scale communication. You should include the experts in the project. It is not an easy process. We allocated half of the budget to communication and marketing. Thank you.

**PRESENTER-** We thank to our dear guest. I think it has been a long, tiresome but an efficient day for everybody. We close our programme today and hope to meet at 9.30 in the morning tomorrow. Good evening.