

# INCO-HEALTH



## Operational Manual

**Interregional Cooperation for a Trans-European  
Electronic Health Cards Strategy**



The INTERREG IIC programme is part of INTERREG III, a Community initiative designed to strengthen economic and social cohesion in the European Union.

INTERREG IIC supports co-operation and networking activities between regions and municipalities across the entire EU territory and neighbouring countries.

---

Please visit INTERREG IIC website  
at [www.interreg3c.net](http://www.interreg3c.net) for more information.

TABLE OF CONTENTS

- 1 EXECUTIVE SUMMARY ..... 4
- 2. HIC STRATEGY: A STEP-BY-STEP APPROACH ..... 5
- 3. EHC ADOPTION: STRATEGIES AND OPPORTUNITIES ..... 12
- 4. THE INCO-HEALTH SERVICES AND TOOLS ..... 18
- 5. CONCLUSION AND RECOMMENDATIONS ..... 24

# 1 EXECUTIVE SUMMARY

Which strategies should be adopted for introducing Health Insurance Cards (HIC)? Are there better paths to be addressed for embracing proper strategies deploying HIC? How the European Health Insurance Card could represent an opportunity for citizens and public administrations? Which issues – under the legal, technological and operational point of view – should be considered for launching HIC and EHIC plans?

The INCO-HEALTH Operation Manual is willing to answer to these questions providing a methodological framework aimed at fixing some critical aspects dealing with the implementation of the HIC / EHIC. On the basis of the experiences already initiated by the INCO-HEALTH partners, the Operational Manual has the objective to lead public administrations at regional and national level through preferential pathways for introducing tailored and effective implementation programmes referred to HIC and EHIC.

**The Operational Manual is a user-friendly and effective tool** firstly designed for public administrations acting in the e-Health sector and for healthcare providers, professionals and citizens. In addition to the aspects that should be taken into account when developing an HIC and EHIC strategies, **the Manual identifies main threats and constraints, opportunities and advantages** also providing references and orientations for delving these themes and improving knowledge on this sector.

As cornerstone, this Manual focuses on services and tools developed in the frame of the INCO-HEALTH operation representing the concrete added value of the project enabling to support public administrations and governmental bodies to properly address the health and insurance cards themes.

The Operational Manual is also available on the INCO-HEALTH project web-site at:

<http://www.inco-health.org>

## 2. HIC STRATEGY: A STEP-BY-STEP APPROACH

### Background

Healthcare systems are facing a common challenge due to increasingly costs of services, high number of medical errors, low productivity of hospitals. The professionals operating in the health sector recognize the importance of Information Technology and its role addressing these problems and are searching for ways to improve the quality of care they deliver while simultaneously attempting to reduce costs and improve levels of service. Such efforts require important changes in the way healthcare organizations function. The European healthcare organizations are looking to smart card technology as a component of advanced health information systems. The reasons include both regulatory compliance and benefits of smart cards as a tool to improve care. However, current health-care information systems are quite heterogeneous and the level of countrywide integration is weak. Different standards are used, implementations of electronic patient records are mutually incompatible, and systems are based on outdated technology that presents barriers to further integration or extension without substantial re-engineering. Furthermore, medical data, information, and documents are stored on media systems ranging from classic data collections to computer-assisted systems.

In order to develop a successful plan for introducing HIC in the health care system different aspects have to be analysed and taken into consideration; among them the key factor is that the *HIC must "match"* the health system in relation to a variety of **technical, social, organizational and legal** factors, including the perceptions of key stakeholders (i.e., the health personnel users of the system) and organizational leadership. Sometimes a misunderstanding arises when using the word "*match*". Since the goal of the HIC is to have changes inside the health system (reducing costs, times, improving the quality of care), the HIC by definition cannot and must not "match" the environment and changes management and organizational development activities must accompany its introduction.

### Technological Aspects

A survey of the international experiences (in Europe, Canada and United States), has allowed to underline what and how is possible to realize within the electronic cards field. The comparison within these different experiences makes it clear that "little is to make up", but what is crucial is the choice for the solution suitable to own needs and context.

The first choice to keep into consideration is related to card to be implemented into the system; this choice, strictly connected to functions developed by the same system and its technical specifications, can be carried out in two different ways:

- **Insurance Card to manage administrative procedures**
- **Health Card to improve the quality of care**

The first choice (Insurance Card) is actually useful to simplify and reduce administrative/bureaucratic operations time, and also it allows identifying citizens as part of a specific National Health system or of an insurance scheme. This card does not include any citizen's clinical data and so it is not offered a high value added service to citizens; we can register this experience only as a faster device for administrative procedures, for example for reimbursement procedures.

The second case (Health Card) offers citizens the opportunity to record different data as emergency and medical data, allergies, vaccinations, drug therapy, as well as a list of the main

medical events that have occurred in citizens' lives. The opportunity to accessing this information allows health professionals to know health history of an unknown citizen, avoiding needless suffering and mistakes, while considerably harnessing the costs of health care. After different choices made by Public Administrations, results have underlined that Health Card systems work better and actually guarantee a high value added service, so International experiences for card enabled systems, today, are more focused and centered on this method.

The implementation of both, however, needs to have a system able to be updated in a secure way, on or off line. Public Administrations and others Authorities have to consider more carefully this aspect, taking into account costs and investments related to informatics and technological infrastructures on the territory (hospitals, GPs, ect.) and their maintenance.

It could be useful (to justify these high costs) the integration of others services linked to card specifications (health card as credit card, or to access Public Administration services and not necessarily health services).

Considering the technological aspects and specifications of cards nowadays in use, we mainly register the use of two types: **telematic cards and ordinary cards** (the last one is not a telematic card: all data necessary to identify citizens are eye-readable on the card surface; sometimes the card is provided of a bars code which can be used, by using a bars code reader, to authorize transactions). Telematic cards can guarantee a direct exchange of citizens' data, through a telematic channel; **they can be magnetic or electronic**. The first one contains a **magnetic strip on the backside of the card**, the other a **microchip** which allows to memorize and structure all data. Another type of card, **laser card** or **optical memory card**, is based on the optical registration of the data.

Electronic cards can be also divided in two categories: **memory cards** and **intelligent cards**. The first type has memory devices to store all useful data and also it contains necessary devices to communicate with card reader and its control software; intelligent card contains a micro elaborator and inside it is also included the control software. It is possible to list a multitude of direct and indirect advantages related to smart card applications, just for this purpose it is necessary a defined comparison of cards functionalities. Smart cards offer a high security standard, a high memory and elaborating capacity, and also durable connected software products. Magnetic strip cards have the great advantage to be cheaper, but at the same time they do not guarantee security as the others, they have an inadequate memory capacity, besides they can not elaborate data.

Considering production costs it is possible to state that electronic cards are more expensive than magnetic cards, but at the same time they are stronger, safer and long-lasting: really, they can not be examined without the memory access key of the card (Secret code or P.I.N- Personal Identification Number), furthermore their duplication is more complicated and expensive than for magnetic cards. In accordance with the microchip used, we can register smartcards in three categories:

- **Smartcard memory free**: it can be read and written openly without restraints;
- **Smartcards with a protected memory**: the access is controlled by a password;
- **Micro-processor Smartcards**: it has inside an elaborator with an operating system.

With reference to the choice opportunities for Public Administrations and above all according to different experiences of INCO-HEALTH operating Antennas a good principle has to be underlined as central point to realize a useful card enabled system:

*Public Authorities and Administrations both National and Regional must plan its card-enabled system according to their needs and they can integrate specifications for precise services.*

A description of the different scenarios carried out after the organization of an enabled card system is reported in the following paragraph. In particular here are illustrated the specifications of each system with benefits and disadvantages deriving from their implementation (table 1) and a short description of the terms used .

**Citizen card:** Health card can be structured either as the access key to specific services or as a memory card which stores specific citizens' data inside. Both cases allow common operations:

- It allows to identify the owner of the card
- It allows to transfer anyplace some basic data stored in the card: emergency data, name, surname and date of birth, etc.
- It allows to use data-set or the structure connected to the enabled card system.

**Professional card** is issued and delivered for a legal and functional need linked to the enabled card system:

- It is useful to identify the professional managing the citizen data or all operations allowed by the system
- It is useful to check with citizens' data (reading and writing on the card)
- It allows the digital signature of documents

**Health data:**

- Can be stored directly inside the citizen's card, on a central server (central repository), or they can be allocated to the different health providers servers (distributed repositories).

Health International background offers three possible sceneries for the organization of an enabled card system:

- Health card without central data bank (Scenario 1);
- Health card with a central data bank (Scenario 2);
- Health card and an Electronic Health record with a central data bank (Scenario 3).

	<u>Patient instrument</u>	<u>Administrative data</u>	<u>Health data</u>	<u>Professional card</u>	<u>Benefits</u>	<u>Disadvantages</u>	<u>Enabled Card System</u>
<b>Scenario 1</b>	Memory card as exclusive instrument for data management	Inside the card	Inside the card	Not all professionals work with the cards which is delivered according to specific requirement. Professional cards hold different access and rights allowed by the system (Data Integrations, data corrections ..etc)	Easy access to different data, autonomy from a central data bank/server	Limited card memory capacity, manual updating, reduced security standard. Costs for a central system for the data back up. (Not necessary but strongly recommended )	<b>A central server is not structured to maintain all services but its impossible to have a backup of the data</b>
<b>Scenario 2</b>	Health Card as access key to services offered by the enabled card system	Inside the card related to the citizens,	Inside the card (safety data) but above all in the system	The access to the system is screened with the professionals card. All professionals hold this card to work into the system.	Automatic updating of the system, updated indicators and better management of health politics, high security standard, substitution of cards at reduced costs, capacity to proceed with epidemiological studies	Organizational costs and project financing plan for a structured central server, cultural resistance of professionals, training of professionals, problems deriving form internet connections or lacks of the system against hacker attacks.	<b>A central server has to be structured to maintain all services, as actors/professionals are all internet (ADSL) connected to the system.</b>
<b>Scenario 3</b>	Health card and Health diary/history. In the card are stored the links to others health events occurred to the citizen.	Inside the card but above all in the system	Inside the card but above all in the system	The access to the system is screened with the professionals card. All professionals hold this card to work into the system.	Information shared among professionals, clinical referrals, analysis results, etc..), the duplication of documents and analysis is avoided, better management of the health system.	Professionals' resistance for new instruments and technologies, generally problems connected to previous scenery 2.	<b>A central server has to be structured to maintain all services. All the health structures are connected to the system.</b>

Table 1: Health card and enabled card systems: a comparison among three possible scenarios.

### **Social-Organizational Aspects**

As a process of socio-technical change HIC implementation should not be run as a ‘mere’ technical project. **It should be managed as a process of organizational development**, in which IT is drawn upon as a strategic asset to transform organizational structures and routines, and further the organization’s goals. When considering as such, it becomes obvious that the implementation has to be managed by a project-group that includes the IT department, but that is not limited to it. Crucially, it should include both representatives from future users, and representatives from the institution’s top-level management. Adequate user-involvement, first of all, is of paramount importance to foster ownership of the system by the future users, and to allow the implementation of systems that will actually match work processes – current or future. ‘User-involvement’ is an easy slogan, yet its importance cannot be overstated.

In this contest **collaboration among actors in the health sector** is essential to promoting HIC solutions in the care systems. In fact the main goal is to develop a deep knowledge of the positive aspects and also of the barriers, which care providers find in adopting HIC strategy. It is necessary that:

- All users must clearly see the need for the change if they are to support it;
- There must be a clear understanding that significant change occurs in multiple stages, and that errors in any of the stages can have devastating consequences;
- Local personnel must actively and enthusiastically promote the system, build support, overcome resistance, and ensure that the system is actually used;
- The management must be able to understand and address the challenges ahead and capitalize on opportunities for quality improvement and cost reductions;
- Users are generally not familiar when speaking the language of ‘specifications’, and in imagining what specific configuration of the technology they ‘need’ or what would work ‘best’ in actual work situations.

One of the emerging points related to socio-organisational aspects is related to the tools to be used in order to involve the healthcare providers in adopting IT. **Financial incentives** can cover the initial cost of innovation brought in the health care system of each health professional. Of course the total amount of incentives depend on the actual situation of the IT solutions already used in the system and generally they are calculated according to the needs and on the characteristics of the services offered: full-time physician per year work, per patient visit, per member month. Another point to take into consideration is the necessity of a **training plan** designed to accelerate the adoption and the use of services IT applications in order to make health personnel able to handle with good knowledge these new instruments.

Considerable importance has to be attributed to the **HIC dissemination** among the citizens. Information framework should assure the quality of information, support decision-making, improve care management, while accommodating new information and communications technologies. Nowadays it would appear that citizens increasingly want to be in charge of their own health care and treatment decisions: well-informed patients are less concerned, healthcare costs drop in the case of better informed patients as they are capable of self-management and a more efficient use of resources. Once this framework is created, implementation should be ensured at all levels, standards should be set to ensure the quality of information and continued development should be supported.

## Legal Aspects

Directive 95/46/EC<sup>1</sup> is the reference text, at European level, on the protection of personal data. It sets up a regulatory framework, which seeks to strike a balance between a high level of protection for the privacy of individuals and the free movement of personal data within the European Union (EU). With this aim the Directive sets strict limits on the collection and use of personal data and demands that each Member State set up an independent national body responsible for the protection of these data. This Directive applies to data processed by automated means (e.g. a computer database of customers) and data contained in or intended to be part of non automated filing systems (traditional paper files). The Directive aims to protect the rights and freedoms of persons with respect to the processing of personal data by laying down guidelines determining when this processing is lawful. With specific reference to the relationship between *privacy and electronic communications*, Directive 2002/58/EC<sup>2</sup> of the European Parliament and of the Council of 12 July 2002 deals with the processing of personal data and the protection of privacy in the electronic communications sector. This directive was adopted in 2002 at the same time as a new legislative framework designed to regulate the electronic communications sector. It contains provisions on a number of more or less sensitive topics, such as the Member States keeping connection data for the purposes of police surveillance (the retention of data), the sending of unsolicited e-mail, the use of cookies and the inclusion of personal data in public directories.

Health Authorities, particularly in the implementation of policies related to HIC (Health Insurance cards), have always granted attention to privacy rules, common and at the same time different according to the specific law disposals in the EU countries. Data protection and security aspects play a central role. Health insurance cards, although their features<sup>3</sup> and data conserved, have to respect law disposals according to specific principles (Confidentiality, Integrity, Authenticity, No repudiation) as following:

- **Privacy:** Individual's desire to limit disclosure of personal information;
- **Confidentiality:** Information managed in a proper and controlled manner;
- **Security:** Protecting information against accident, theft, sabotage, alteration, and denial of service.

Privacy stands for the right of data in HIC to remain unknown for non-authorized professionals. Patients can decide whether and which of their health data are to be made available: only the owner can authorize the professional to using the HIC at the right place and at the right time. This as consequence of the second principle detected above, confidentiality. The information enclosed in the HIC can be used and shared, under citizen's grant, by multiple users at many institutions. Health Authorities have to develop according to law disposals coherent and strict policies enforced by appropriate technologies, ensuring that providers and others involved professionals have legitimate access to information for purposes of care or anyway related to the system needs.

It is certain that technical mechanism have been accompanied by organizational mechanism for developing access and release HIC policy but in general according to two types of privacy control approaches:

---

<sup>1</sup> Official Journal L 281 , 23/11/1995 P. 0031 – 0050.

<sup>2</sup> Concerning the processing of personal data and the protection of privacy in the electronic communications sector, Official Journal L 201 , 31/07/2002 P. 0037 – 0047.

<sup>3</sup> Chip cards and Eye-readable cards. See paragraph related to technical differences for HIC.

- Pre-emptive: lock and key<sup>4</sup>
- Retroactive control: community of trust<sup>5</sup>

In general, data protection and security aspects play a fundamental role as citizens must be able to rely on the best possible security and confidentiality system. At the same time, systems have to ensure organizational skills for smooth operation in practice. To this end, we can highlight the following general principles established with specific reference to National Legislation:

- The citizens' data sovereignty and the principle that any storage of health data be voluntary are ensured
- Citizens can decide whether and, if so, which of their health data are to be stored or deleted and which service providers are entitled to access these data
- HIC makes it easier for the patients to enjoy their established rights to look at the data stored and obtain certificates
- Security concept guarantees protection of the sensitive data. Apart some National and Regional exceptions, the HIC can only be used in combination with an HIC professional enabled with a qualified electronic signature

Health Authorities have consequently to develop policies to implement secure systems for HIC among them:

- Only administrative data are allowed to be visible reported on the card. (insurance number, name and surname and date of birth)
- Data stored in the card chip are only accessible for reading or modifying in the presence of a health professional card by means of a special card reader
- Card data security maintained at several levels
- Introduction of a health professional card. The combination of both these cards provides an adequate level of data security, since no data can not be accessed without the presence of the professional card, which is issued to doctors, medical nurses, reception office administrative staff, pharmacists, physiotherapists and other health professionals, and to the authorised health insurance officers
- Different data access authorizations in accordance to the health professional profile.

#### **Legal references:**

**Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data**

**Directive 2002/58/EC of the European Parliament and of the Council of 12 July 2002 concerning the processing of personal data and the protection of privacy in the electronic communications sector (Directive on privacy and electronic communications)**

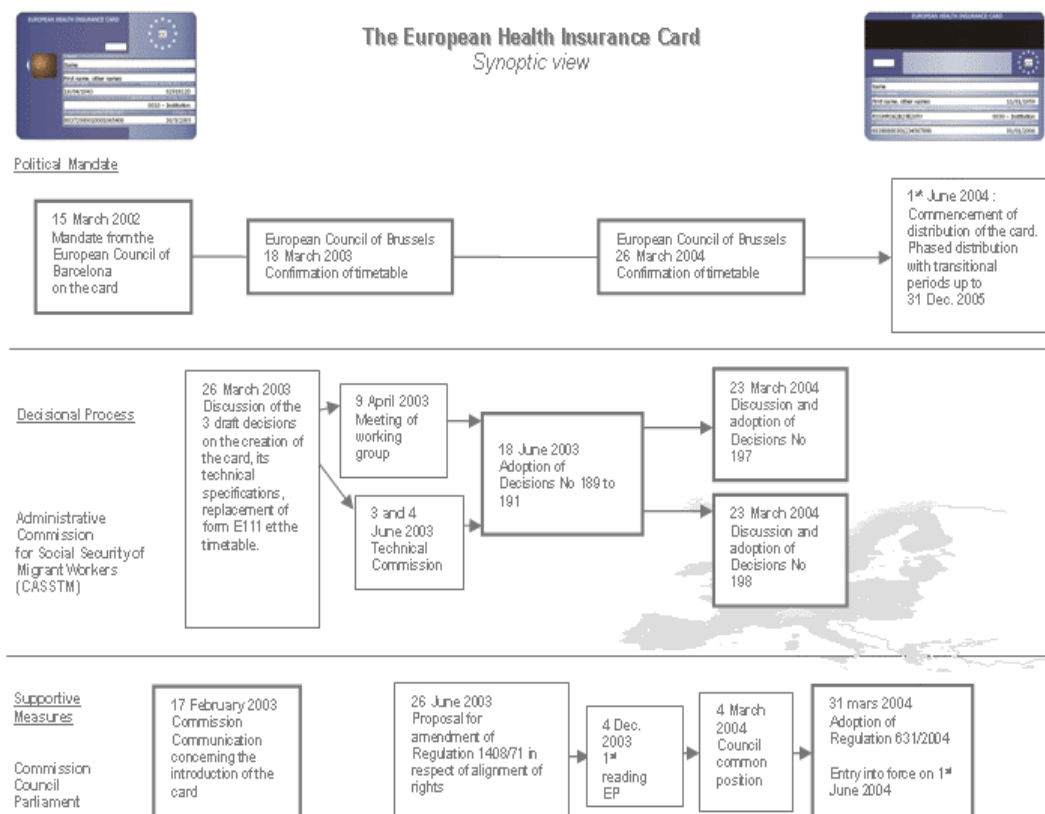
<sup>4</sup> Need to know often need pre-specified understanding of who needs, what under, which circumstances (commonly known as military model).

<sup>5</sup> Checking up and not prevention with a system with appropriate sanctions.

### 3. EHIC ADOPTION: STRATEGIES AND OPPORTUNITIES

#### Background

The Barcelona European Council, held in March 2002, endorsed the Skills and Mobility Action Plan<sup>6</sup>, designed to remove the main obstacles to occupational and geographical mobility within the EU by 2005. The summit decided to create a European health insurance card which will "replace all the current paper forms needed for health treatment in another Member State" when on a temporary stay (i.e. posting, study, business and leisure travellers, lorry drivers, job seekers). With the Decisions Nr. 189, 190 and 191 of the 18 June 2003<sup>7</sup>, the European Union has arranged the progressive introduction, to leave from 1 June 2004, of the European Health Insurance Card (EHIC). The new card is aimed to favour the direct access to the health services in the various States Members of the UE not only in emergency situation, but also in any necessary case in relation to the citizen' state of health. The plan for introducing the European card has three stages, starting from the initial replacement of only form "E111" (and subsequently all the other forms used for temporary stays) to the final introduction of electronic "smart cards". In some EU regions, however, such electronic systems already exist for planned health care inside the States and outside in another Member States. Decisions adopted by the Administrative Commission on Social Security for Migrant Workers of the European Union, in order to implement the EHIC are summarized at the end of the chapter.



© European Commission - 30 September 2004

This scheme describes all documents of European Institutions for EHIC. It is a legislation tab published by the European Commission, DG Employment, Social affairs & Equal Opportunities:

<sup>6</sup> Presidency conclusions Barcelona European Council: <http://ue.eu.int/en/Info/eurocouncil/index.htm>

<sup>7</sup> Published in the Official Journal L276 of 27 October 2003

### **Timetable for an European Health Insurance Card**

When it decided to replace the various forms with the European card, the Barcelona European Council asked the Commission to submit a proposal in 2003. It would seem best to phase in the card in three stages – preparation/distribution/electronification.

**Phase 1: Preparation.** Following the Barcelona Council's decision to create the card, intensive consultation with those involved in the statutory social security schemes enabled the priorities for the effective launch of the card to be identified.

- The Commission proposes that CASSTM concentrate on replacing only form E111 with European Card. The Relevant decisions should be taken by summer 2003 and specify the administrative and technical requirements for creating the European card. The Commission would recommend taking 1 June 2004 as the deadline for the effective replacement of form E111.

**Phase 2: Distribution.** Distribution of the card could be in two successive stages.:

- The first stage, starting on 1 June 2004, would see the introduction of the card to replace form E111. The paper forms would cease to be recognised in the other Member States, subject to any transitional periods. In the event of a transitional period, the other Member States would have to continue to accept the Paper E111 forms until the expiry of that period;
- The second stage to be completed by 31 December 2005 at the latest, would mark the end of the transitional periods and replacement of all the forms used for a temporary stay. This would end the parallel circulation of cards and forms. In principle, only the European health insurance card would give access to Health care in another Member State during a temporary stay.

**Phase 3. Electronification.** Replacing the forms with the European Card, simplifying procedures, aligning the entitlement of different categories of insured persons and running pilot projects on the card interoperability form a coherent whole, which will take on its full significance when an **electronic** system and automated administration of the forms and procedures are in general use. This changeover would represent a third phase, the timing of which depends both on the evaluation of Phase 2, which could be completed by 2008. This Phase would also benefit of the results of the first stage of the Netc@rds project, actually under execution<sup>8</sup>. This final stage could also include evaluating the possibility of integrating into the card functions linked to personal health data, such as access to important medical information in emergencies or records of treatment received.

### **Planning**

There is great diversity in Europe in this area, stemming from the fact that individual countries have responsibility for the organisation of their own health and social security systems and, consequently, in the use of cards. While all countries have a system for identifying persons covered by social insurance, not all have a card system at the moment for the relationships between the health systems, the social security system and the insured (UK, SWE, IRL, EL, FIN and most of the applicant countries). In some of them, projects are under way (FIN, EL, SWE and CZ). In others, there is no national card, but there are plans for the regions (EL) or the sickness insurance bodies (NL) to distribute them. Some countries (B, F,

---

<sup>8</sup> The Netc@rds project is funded under the eTEN Programme of the European Commission. [www.netcards-project.com](http://www.netcards-project.com).

D, ES, SLO) have already issued smart cards on a large scale, even if the functions and the contents vary widely. For example they may:

- serve solely to identify the insured,
- enable acquired rights to be verified and facilitate payment or reimbursement procedures
- include identification data which provide access to online services
- include medical emergency data etc.

The nature and scope of the data stored on the various cards depends on the purpose for which they are intended. Some of them only include the information necessary to identify the insured, and possibly to allow online access to resources and services. So far there is no European standard for the information to be included on such cards.

The European Commission takes into account that by proposing realistic phasing in, with the card being issued in a "eye-readable format" as a first step (with a chip for countries which want to go ahead with interoperability of their systems). However, given the differences in national circumstances and in the technology used, this phase cannot be embarked upon immediately.

### **Different approaches**

Each Member State is responsible for producing and distributing the European Health Insurance Card in its territory. Two variations of the model of the card have been defined, however, the **model for the card is identical and has the same technical specifications** in all the Member States, which enables health care providers in every Member State to identify the card immediately. More specifically, article 3 of Decision No 191 establishes that Member States shall lay down the practical and technical arrangements for introducing the European card from 1 June 2004.

The European card must have common features enabling it to be recognised and used in all Member States. This essentially concerns the nature and presentation of the information carried, as the cards must be readable irrespective of the language of the user, and conformity with a European model. A common model for the card is needed to ensure immediate recognition of the card by all those involved in the health system, irrespective of where the cardholder is staying.

The European model is subject to three constraints:

- Member States are free to choose between adding a European side to a national card or creating a separate European card, which latter would obviously leave more scope for flexibility for a European model
- In the case of a combined card, the model must be adaptable to the different technologies used (magnetic strip or chip card)
- Where the Member State opts for a specific European card, the model must be designed to allow transfer ultimately to an **electronic** carrier in the form of a chip.

Nowadays EHIC is officially in use in Europe (by 1st January 2006) but different approaches still stay. Initially, however, the European card will have to carry visible information, which will obviously make its integration into a national card more difficult.

**If the national choose is to *combine the European card with the national card(s)***, there are specific points to be addressed:

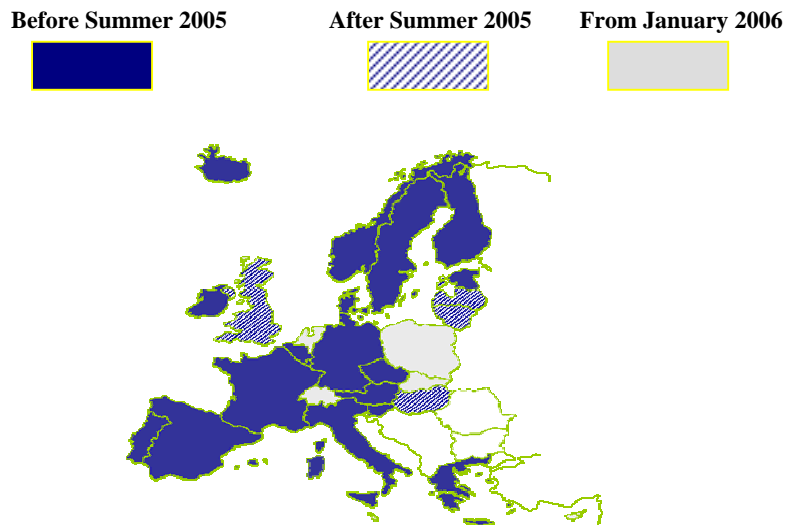
- With electronic cards, the European data will have to be loaded onto the card while incorporating the same information visibly onto a “European” side of the card. This will allow the information to be read by a card reader in the country or region of stay, without preventing it from being read visually in the other cases.
- Many national cards have relatively long periods of validity, and replacing the national card to add the European information on one side would require time to adapt the existing stock, unless all the cards were replaced, which would incur excessive costs. In any event, this question is closely linked to that of the validity period of the European card, as the national and European sides could hardly carry different expiry dates.
- Finally, the cardholders will need full information on how to use the two sides of the card, which serve different purposes. The cover afforded by the national card, which forms the basis of the holder's social security entitlement, and that of the European card are not at all the same. The European card gives access only to health care in another Member State under the conditions defined by the coordinating Regulation 1408/71 during a temporary stay in another country.

**The second option is the *creation of a specific European card*.**

This option has many advantages. A special European health insurance card would appear to respond more obviously and clearly to the European Council's mandate. Its distribution could also be restricted to people actually moving within the Community. Issuing a separate European card would alleviate considerably certain constraints, such as the temporary disparity between the validity periods of the two sides of a combined card. It would also avoid unsatisfactory makeshift solutions such as affixing stickers. Creating a specific European card would not prevent the data on it from also being loaded onto a chip in countries or regions with cards, to make its use easier for stays in countries or regions with compatible equipment.

**EHIC in Member States: this map has been created on the basis of the data available by 1st September 2005<sup>9</sup>**

**Distribution started:**



**Legal references for the introduction of the EHIC:**

**EUROPEAN COMMISSION, ADMINISTRATIVE COMMISSION OF THE EUROPEAN COMMUNITIES ON SOCIAL SECURITY FOR MIGRANT WORKERS**

**DECISION No 189 of 18 June 2003 aimed at introducing a European health insurance card to replace the forms necessary for the application of Council Regulations (EEC) No 1408/71 and (EEC) No 574/72 as regards access to health care during a temporary stay in a Member State other than the competent State or the State of residence.**

**DECISION No 190 of 18 June 2003 concerning the technical specifications of the European health insurance card.**

**DECISION No 191 of 18 June 2003 concerning the replacement of forms E 111 and E 111 B by the European health insurance card**

**Decision No 197 of 23 March 2004 on the transitional periods for the introduction of the European Health Insurance Card in accordance with Article 5 of Decision No 191**

**Decision No 198 of 23 March 2004 on replacement and substitution of forms necessary for the application of regulations (EEC) No 1408/71 and 574/72 of the Council (E 110, E111, E 111B, E 113, E 114, E 119, E 128 ed E 128).**

<sup>9</sup> Completed by DG Employment, Social Affairs & Equal Opportunities.

**Source of information on the web:**

***[http://www.europa.eu.int/index\\_it.htm](http://www.europa.eu.int/index_it.htm)***

***[http://europa.eu.int/comm/employment\\_social/healthcard/index\\_en.htm](http://europa.eu.int/comm/employment_social/healthcard/index_en.htm)***

***[http://www.europa.eu.int/comm/health/index\\_en.html](http://www.europa.eu.int/comm/health/index_en.html)***

***[http://www.europa.eu.int/scadplus/scad\\_en.htm](http://www.europa.eu.int/scadplus/scad_en.htm)***

***[http://www.europa.eu.int/information\\_society/index\\_en.htm](http://www.europa.eu.int/information_society/index_en.htm)***

***[http://www.europa.eu.int/comm/research/index\\_en.cfm](http://www.europa.eu.int/comm/research/index_en.cfm)***

***[http://www.europa.eu.int/comm/consumers/index\\_en.htm](http://www.europa.eu.int/comm/consumers/index_en.htm)***

***[http://www.europa.eu.int/comm/regional\\_policy/index\\_en.htm](http://www.europa.eu.int/comm/regional_policy/index_en.htm)***

***<http://www.ministerosalute.it/>***

***<http://www.zzs.si/>***

***<http://www.regione.veneto.it/>***

***<http://www.sanita.regione.lombardia.it/>***

***<http://www.oep.hu/>***

***<http://www.netcards-project.com/index.php>***

***<http://www.mit.edu/>***

## 4. THE INCO-HEALTH SERVICES AND TOOLS

This Operational Manual is the main output of a methodological approach aimed at providing regional and national public administrations with effective tools and services supporting them in introducing and managing HIC and EHIC plans. These themes are at the core of the e-Health strategies which EU Member States and Regions are facing in recent years. By one hand some experiences in Europe have shown difficulties and constraints in deploying successful schemes in this sector. By the other some public organisations and governmental bodies has started since the last decade in designing and implementing coherent frameworks dealing with this domain.

When facing these e-Health aspects, regional and national governing entities are confronted with problems dealing with the legal and regulatory framework guiding the HIC and EHIC introduction, the ICT structures supporting the technological solutions and the organisational systems devoted to properly implement the whole strategy. These issues entail a re-organisation of the local health systems and a re-engineering of the knowledge process inside the governing bodies, including know-how uptake, expertise improvement and skills upgrading.

The INCO-HEALTH project is leveraging the sharing of knowledge and exchange of experiences in the HIC and EHIC field domain amongst European public administrations starting from the practices already carried out by the regional authorities involved in the operation. This result is pursued by outlining major factors to be considered for the introduction of health and insurance cards and providing guidelines and practices. This approach, now disclosed in the Operational Manual, is based on a set of tools and services delivered by the project partners as centres of competence in this sector. Through this services and tools set other governing entities will be in the position to learn from the past experiences of the INCO-HEALTH partners thus improving their capacity to move towards a HIC and EHICF strategy.

The INCO-HEALTH services and tools set is composed by:

## **The state of the art and assessment Questionnaire**

The questionnaire is aimed to identify the actual state of affairs of the adoption of Health Insurance Card and to introduce the European Health Insurance Card in national/regional context with respect to the political, legal, operational and technical issues so that to surveying the level of development and awareness of a coherent strategy for their implementation and to position this strategy in the frame of the practices which actually public administrations and governmental bodies are deploying for launching HIC and EHIC services.

Public administrations and governmental bodies willing to share their knowledge and experience in this domain are invited to fill in this questionnaire and return it to the INCO-HEALTH consortium. They will receive a profiling report addressing main features relating to the current strategy on Health Cards and propositions to improve it according to the best practices presently adopted at European level.

This questionnaire consists of four chapters. Each of these chapters is focused particularly on the one of the following domains:

- Political, legal, operational
- Technical and organisational
- European Health Insurance Card including further “electronification”

The INCO-HEALTH questionnaire enables to detect the actual regional positioning in development of an HIC and EHIC strategies including legal and regulatory aspects and procedures, technology adopted and technological state of the art within the region, available organisational structure, level of understanding of EHIC context at EU level, requirements in terms of training of administrative personnel.

**For more information about the Questionnaire, please contact the INCO-HEALTH partners at: [info@inco-health.org](mailto:info@inco-health.org).**

## **The Best Practice Manual**

The BPM is a repository of best practices including regional and national programmes, projects, strategies and initiatives carried out or planned at EU level dealing with the introduction of HIC and EHIC.

The practices gathered in the manual represent some of the most advanced experiences in the European Union with regard strategies and programmes for launching HIC and EHIC. These refer to following Member States and Regions:

- **Regione Lombardia:** the **CRS-SISS project** is an e-government initiative in the healthcare sector aimed at linking public administrations, professionals, social services, healthcare providers and citizens, tracking all the events dealing with the patient treatment (from prescription to administration). The project, **based on smart card technologies**, ensures the access to a network for citizens and professionals through their personal smart cards. The objectives of the project consists of simplifying the access to the healthcare systems, sharing and exchanging information

amongst healthcare actors and providers, improving diagnosis and medical environment and rationalising costs and budget control. The project implements two cards: the citizen card and the professional card. The citizen card also integrates the EHIC on the reverse side.

Further information at: [www.crs.lombardia.it](http://www.crs.lombardia.it)

- **Slovenia (ZZZS)**: the national health insurance card system, introduced by the **Health Insurance Institute of Slovenia (ZZZS)** in 2000, furnished the Slovenian health care system with an electronic insured person's document and established data interconnections between all insurance providers and health care service providers. The HIC system, which effectively combines the smart card technology and network services, consists of the technological components: insured person's cards, health professional cards, health care service providers' data processing environment, and an on-line network of self-service terminals. The **health insurance card** is the only document applicable in the implementation of the compulsory and voluntary health insurance rights in Slovenia. This electronic document was issued to all persons covered by the compulsory health insurance in Slovenia. Slovenia is issuing the European Health Insurance Card as a separate one.

Further information at: [www.zzzs.si](http://www.zzzs.si)

- **Hungary (OEP)**: nowadays all the Hungarian citizens have a **paper based Insurance Card** issued by **National Health Insurance Fund of Hungary (OEP)**. Behind these cards, there is a secure database in OEP with the personal data of insured peoples. The health professionals have the right to ask after validity an Insurance Card of a patient. Hungary is separately issuing an eye-readable European Health Insurance Card.

Further information at: [www.oep.hu](http://www.oep.hu)

- **France (SESAM-VITALE)**: in France SESAM-VITALE is the organisation in charge for deploying health insurance cards and managing all the implementation phases. The **VITALE-HIC is a micro-processor card** in which only administrative data (i.e. addressing health insurance rights and entitlement) are stored; visible data on the HIC are name, last name, national identification number, serial number and date of issuance. The French HIC is a multi-beneficiary family card. The SESAM-VITALE system has been introduced to simplify and speed up claim reimbursement using new technology. It enables health professionals to create Electronic Claims Forms and to forward them directly to the patient's Health Insurance centre. SESAM-VITALE is issuing the EHIC on a separate card.

Further information at: [www.sesam-vitale.fr](http://www.sesam-vitale.fr)

- **Austria (eCard)**: the so called "e-card" is the **Austrian national health insurance card**. The **e-card is a component of the Austrian health insurance scheme** and thus a nation wide accepted and usable HIC. The Austrian e-card is a security evaluated and certified smart card using an operating system with EU compliant electronic signature application. The data on the card is divided into several sections, e.g. general public data, EHIC public data, social security related data and signature related data. These sections are secured by technical and organisational means, among them several

electronic counter measures and dedicated access rights. At the moment there is no medical data stored in the chip, signature related data is finally included.

Further information at: [www.chipkarte.at](http://www.chipkarte.at)

- **Baden-Württemberg:** the **AOK Baden-Württemberg** started a project for substituting paper-based form with an HIC in 1998. This experience can be considered as a leading practice in Germany driving AOK Baden-Württemberg to be the most advanced administration in further development towards electrification. The short-term strategy of development is to give out the new German electronic health insurance card in a test-region in order to implement and test it in a well-prepared surrounding. In relation to the EU directives and the implementation of an HIC integrated with an EHIC, the **AOK Baden-Württemberg** is now engaged in testing ways of electrification of the EHIC (in combination with the HIC).

Further information at: [www.aok.de](http://www.aok.de)

## **The INCO-HEALTH ANTENNAS**

The **INCO-HEALTH Antennas are centres of competence** installed in each region covered by the operation. Their role deal with the aim of creating a common working environment in the sector of the national and regional health insurance cards enabling to support public administrations and political decisions makers to design and manage effective strategies introducing HIC and EHIC at national and regional level and to promote health cards systems though the whole community of healthcare providers, professionals and citizens.

Antennas have the objective to enhance the expertise of organisations which are entailed, at different level, to develop programmes and initiatives in the mentioned field domain ensuring a proper level of complementarities with the e-Health plans introduced for governing the transformation in the healthcare systems. Moreover they provide services and tools devoted to increase knowledge, share experiences and networking competences thus favouring the creation of a cooperative milieu addressing major items referred to HIC and EHIC.

Antennas created in the frame of the INCO-HEALTH project have been established in the following sites:

### **Regione del Veneto – Local Healthcare Management Unit of Bassano del Grappa Unità Locale Socio-Sanitaria no 3**

Via dei Lotti, 40

I - 36061 Bassano del Grappa (VI)

[www.aslbassano.it](http://www.aslbassano.it)

#### **Short profile**

The Local Healthcare Management Unit of Bassano del Grappa (ULSS n.3) is the territorial competent authority to provide essential healthcare services to citizens living on the district area. According to the Regional regulation, the ULSS n. 3 is in charge to ensure medical and social assistance also managing hospitals, emergency care and first aid. On the basis of its competence, the ULSS of Bassano del Grappa has been identified as pilot area for testing the

regional HIC (Carta dei Servizi). This smart card is the effective instrument connecting citizens to regional healthcare services also ensuring their control in terms of provision and quality.

### **Regione Lombardia – Directorate General for Health**

Via Pola 9/11

I – 20124 Milano

[www.sanita.regione.lombardia.it](http://www.sanita.regione.lombardia.it)

#### **Short profile**

Directorate General for Health of Regione Lombardia is the regional governing and policy body acting in the domain of healthcare. Its mission is dealing with the design and implementation of the socio-sanitarian policies and management of the welfare resources in terms of budgetary and finance subsidies, human capital and professionals (GPs and healthcare personnel), technological and logistic infrastructure, territorial governance systems. In the light of its governing and organisational role, Regione Lombardia – DG Health has established relevant linkages with primary regional and national healthcare providers, local governing bodies, research centres and academia specialised in life-science and healthcare domains, industries and entrepreneurial representative entities, technology centres and medical associations. Due to its central position in the health and socio-sanitarian regional system the Regione Lombardia – DG Health is enabling to create and coordinate a relevant critical mass of stakeholders dealing with the mentioned field also playing a pivotal role in increasing the potentiality of different actors through cooperation schemes. In addition the DG Health, being a policy maker, is in the position to identify major priorities to be addressed through the definition of governance guidelines, policy recommendations, and thematic programmes. DG Health is in charge of all aspects and phases of the CRS-SISS project – introducing the regional HIC and the EHIC - from initial planning to the final deployment.

### **Regione Friuli Venezia Giulia – Regional Agency for Health**

P. S.Maria della Misericordia, 15

I - 33100 Udine

[www.sanita.fvg.it/ars/welcome.htm](http://www.sanita.fvg.it/ars/welcome.htm)

#### **Short profile**

The Regional Agency for Health is the competent authority empowered by the regional government of Friuli Venezia Giulia to manage and coordinate, under the technical and administrative point of view, the healthcare services delivered in the regional territory. The Agency is in charge to implement the regional HIC also providing related services.

### **ZZZS - Health Insurance Institute of Slovenia**

Zavod za Zdravstveno Zavarovanje Slovenije

Miklošičeva 24

SI – 1507 – Ljubljana

[www.zzzs.si](http://www.zzzs.si)

#### **Short profile**

The Health Insurance Institute of Slovenia is a public institute, statutory exclusive provider of the compulsory health insurance in Slovenia. Under the strategy of continual modernisation of information and Organization systems in the Slovene health care system, the Institute introduced a national health insurance card system. Since October 2000, this system serves

the entire population and all health care service providers. In the first phase, the system covers administrative functions, yet enhancement of functionality is in progress. The card system was designed and implemented observing the relevant international standards and recommendations and is thus open to the extension of its application across the national borders, in the perspective of the envisaged EU health insurance card.

### **OEP - National Health Insurance Fund of Hungary**

Országos Egészségbiztosítási Pénztár (OEP)

Váci ut 73/a

HU - 1055 Budapest

[www.oep.hu](http://www.oep.hu)

#### **Short profile**

Hungary's health care system is under-funded, largely financed by Hungary's central government and administered by Hungary's National Health Insurance Fund (OEP). OEP is the only "health insurance company" in Hungary coordinating basically all financial aspects of healthcare and related services. The OEP fund is intended to be self-sustaining based on compulsory payroll contributions from both employers and employees.

These Antennas cooperate for providing the set of tools developed within the INCO-HEALTH project: questionnaire, best practices collection, operational framework. In addition Antennas, as "laboratories of ideas" are in the position to deliver the following services, mainly to regional and national administrations and healthcare-insurance bodies and dealing with the launch and management of HIC and EHIC strategies:

- Consulting support services
- On sites visits
- Training session for dedicated personnel
- Networking activities through working groups
- Links with international and European organisations
- Organisation of seminars and conferences
- Starting of new projects and initiatives at regional, national and European level
- Participation to EU co-funded projects

Further Antennas are expected to be implemented in other regions and EU countries. Regional and national administrations willing to play this role could contact the INCO-HEALTH operation at [\*\*info@inco-health.org\*\*](mailto:info@inco-health.org).

## 5. CONCLUSION AND RECOMMENDATIONS

When facing the challenge to introduce system based on an HIC and EHIC, the competent public administrations and decision makers should confront with some questions:

- Do exist experiences from which it is possible to learn? Which are lessons should be taken into consideration from the past?
- Which aspects should be considered? How to consider them in the due weight?
- Which advantages and opportunities to bring? Which threats and difficulties to avoid?

This Manual has been issued with the aim of circulating practices, methods, tools and services which could facilitate the introduction of HIC and EHIC plans, also helping them to identify the best solution to be adopted taking into account the legal, technical and organisational aspects where this approach should be deployed.

The interregional cooperation on these themes is of crucial importance due to the relevance of the e-Health topics in the development of modern and effective healthcare policies. The HIC systems and the integration of the EHIC in the regional and national health insurance cards, represent an useful instrument for ensuring the mobility of citizens through the Europe and allow to better control the healthcare in terms of increasing capacity to improve services to citizens and to manage expenditure against budget constraints.

Centres of expertise and knowledge, such as the INCO-HEALTH Antennas can play a proactive role to promote the adoption of these instruments, also bridging the lack of competences whose public administrations and governmental bodies often suffer. As **laboratories of ideas**, Antennas want to share with other entities the huge amount of competences and practices they have gained in the past thus contributing to amplify the interest of the healthcare community towards these items.

### Operation Lead Partner

Regione del Veneto  
Department of Health and Social Finances  
Palazzo Molin San Polo, 2514  
30125 – Venezia  
Italy



### Operation Partners

Regione Lombardia  
Health General Directorate  
Via Pola, 9/11  
20124 – Milano  
Italy



**Regione Lombardia**  
Sanità

Regione Friuli Venezia Giulia  
Regional Health Agency  
Via N. Sauro, 8  
34124 – Trieste  
Italy



Regione Autonoma  
Friuli Venezia Giulia

Health Insurance Institute of Slovenia – ZZZS  
Miklošičeva, 24  
1507 – Ljubljana  
Slovenia



National Health Insurance  
Fund Administration of Hungary – OEP  
Váci út, 73  
1139 – Budapest  
Hungary



Please contact the project partners at:  
[info@inco-health.org](mailto:info@inco-health.org)

For more information visit the project web-site:  
[www.inco-health.org](http://www.inco-health.org)