The thwarted lives of the shared medical record (DMP)

A look back at a long-term digital innovation

Nicolas Klein, Alexandre Mathieu-Fritz, Translated by John Crisp

In Réseaux 2025/1-2 No 249-250 , pages 85 to 122
Publisher La Découverte

ISSN 0751-7971
ISBN 9782348085987
DOI 10.3917/res.249.0085
Uploaded: 04/23/2025

THE THWARTED LIVES OF THE SHARED MEDICAL RECORD (DMP)

A look back at a long-term digital innovation

Nicolas KLEIN
Alexandre MATHIEU-FRITZ

Translated by John Crisp - LINC Languages Ltd/OÜ

DOI: 10.3917/res.249-250.085

RÉSUMÉ

L'article retrace l'histoire encore mal connue du dossier médical partagé (DMP) en analysant les représentations, les décisions et les pratiques qui ont présidé, à l'échelle nationale, à ses multiples projets de développement, depuis sa création au cours des années 2000 jusqu'à son récent projet d'intégration au sein du portail « Mon espace santé », qui s'est concrétisé en 2022. La perspective d'analyse invite à considérer le DMP comme une innovation dont il importe de retracer la trajectoire et, notamment, l'extraordinaire genèse. Le dossier médical partagé a en effet pour caractéristique d'avoir donné lieu à des phases cycliques de difficultés, d'arrêt et de relance, et, 20 ans après son démarrage, de ne pas être totalement stabilisé et de ne pas avoir encore atteint les objectifs fixés initialement. En prêtant attention aux temporalités multiples du processus d'innovation, l'analyse met au jour les deux grandes conceptions de l'informatique de santé qui ont sous-tendu les modalités de développement du DMP. Elle met également en évidence l'importance du contexte politique et institutionnel, ainsi que l'instabilité des modalités de gouvernance du projet et le rôle joué par plusieurs de ses acteurs, qui ont contribué à entraver les efforts de traduction mis en œuvre.

Mots-clés : Dossier informatisé ; dossier médical partagé (DMP) ; innovation ; instrument d'action publique ; numérique en santé.

THE THWARTED LIVES OF THE SHARED MEDICAL RECORD

Looking back at a long-term digital innovation

ABSTRACT

This article traces the still little-known history of the shared medical record (DMP) by analysing the representations, decisions and practices that have governed its many development projects at national level, from its creation in the 2000s to its recent integration into the "Mon espace santé" portal, which came to fruition in 2022. From an analytical perspective, the DMP should be seen as an innovation whose trajectory, and in particular its extraordinary genesis, warrants retracing. The shared medical record has been characterised by cyclical phases of problems, suspensions and relaunches, and, twenty years after its inception, it remains unstable and has yet to fully achieve its initial objectives. By paying attention to the multiple timeframes of the innovation process, the analysis brings to light the two main conceptions of health IT that have underpinned the development of the DMP. It also highlights the importance of the political and institutional context, the instability of the project's governance and the role played by several of its players, which contributed to hampering the implementation efforts undertaken.

Keywords: electronic health record, shared medical record, DMP (*dossier médical partagé)*, innovation, public policy instrument, digital health.

Since 2022, the shared medical record (in French, *dossier médical partagé* - DMP) has been part of "Mon espace santé"[1], a digital platform set up by the French government to enable insured persons to store their health data securely[2,3]. Its purpose is to make this data available to medical and paramedical professionals in order to improve the management and coordination of care – particularly between hospitals and outpatient clinics – and, in so doing, avoid redundant examinations and drug interactions, as well as keeping healthcare costs under control. While the record is updated by healthcare professionals, access to the data is under the control of patients and is governed by procedures guaranteeing respect for privacy and medical confidentiality (Mathieu-Fritz and Rouquet, 2014). Since its creation in 2004[4], the DMP has struggled to develop, giving rise to cycles of problems, stoppages and relaunches. Twenty years after its launch, and at the end of the various stages of its development, it seems to have led only to a limited number of uses corresponding to the initial objectives. To date, more than 65 million digital health spaces have been created automatically and tens of millions of documents have been uploaded[5], but this does not mean that they will be deemed useful and be widely used by healthcare professionals or will facilitate coordination between them (Klein and Mathieu-Fritz, 2023).

Electronic health records have been the subject of a great deal of research (Häyrinen *et al.*, 2008), which has revealed the wide variety of their users, their forms and content, their contexts and the ways in which they are adopted and used (Ghandour *et al.*, 2016 and 2017; Greenhalgh *et al.*,

1. "My Health Space" brings together the DMP and administrative data, a secure health messaging system (MSS), a diary that can be completed by the insured person him/herself, but also by various health professionals, and finally, a catalogue of referenced digital health tools and services (Morlet-Haïdara, 2019, 2021; Simon and Moulin, 2022; Merlière, 2022).

2. We would like to thank Fabien Granjon and the anonymous referees from *Réseaux*, as well as Marielle Poussou-Plesse, Renaud Gay and Gilles Jeannot for their kind and constructive comments on earlier versions of this text.

3. These include drug treatments, any pathologies and allergies, reimbursement history, hospitalisation and consultations reports, examination results and advance directives (see http://www.ameli.fr [consulted on 17/01/2025]).

4. By the Health Insurance Act no. 2004-810 of 13 August 2004.

5. Cour des comptes (2024), « Chapitre X – "Mon espace santé" : des conditions de réussite encore à réunir », *in La Sécurité sociale*.

2010; Mathieu-Fritz and Esterle, 2013), as well as their effects on medical work, management and the organisation of care (Berg, 1997 and 1999; Berg and Bowker, 1997; Creswell and Sheikh, 2013; Lehoux *et al*., 1998). However, relatively little research has focused on the DMP. Most of the studies devoted to it have sought to interpret its development from specific angles, notably ethical (Pougnet and Pougnet, 2019), technological (Poussou-Plesse, 2024), institutional and regulatory (Merlière, 2022), without succeeding in giving an account of the history of its development (Odeh, 2016) as a whole, which is very dense, complex (Bourret, 2007; Merlière, 2021), edifying in more ways than one (Schweitzer, 2010; Cacot, 2016) and, consequently, difficult to grasp (see Appendix 1). We propose to shed new light on this by looking at the representations, actions and decisions of the main institutional and political players who, at national level, have played a leading role in the process of developing the DMP, because it is at the level of the project's governance that many of the difficulties encountered in its implementation originate.

Our research draws mainly on sociological studies of innovationsthat emphasised the temporality of their trajectories, inviting us to pay attention to their sequentiality, non-linearity, unpredictability and the difficulties they face (Gaglio, 2011; Akrich *et al*., 2006). In his study of the various phases of the process of innovation in ICT, Patrice Flichy points to "the juxtaposition of several temporalities, each with a certain degree of autonomy" (1987, p. 102) and, above all, the tendency for the temporality of the different phases of innovation to be underestimated, notably by players failing to gauge the time needed for the sequences in which they are not directly involved. In addition, various studies have highlighted the discrepancies between the initial intentions driving technological innovations and the ways in which they are used, and even the reasons for their failure (Gaglio, 2018), with no single cause or specific person or entityheld responsible (Latour, 1992; Alauzen, 2021). Research into IT-related innovations in the context of projects to modernise the state and public action has, in this respect, highlighted the uncertainties and difficulties inherent in "aligning the various categories of protagonists around a common project" (Flichy and Dagiral, 2004, p. 245), an alignment which – to be successful – needs to be based on an effort to translate their points of view and expectations into the new systems (Alauzen, 2021). Studies of public transport projects have also focused on technological innovations

with significant political implications, and a desire to transform relations between users and professionals (Latour, 1992; Joseph, 2004).

Our perspective in some respect echoes the "instrumentation of public action" approach developed by Pierre Lascoumes and Patrick Le Galès (2004), who define it as "the set of problems posed by the choice and use of tools (technologies, ways of doing things, mechanisms) that make it possible to realise and execute government action […]. The aim is not only to understand the reasons for choosing one instrument over another, but also to consider the effects produced by these choices." Public policy instruments can be "informative or communicational", but also "economic" (*ibid*., p. 12); they are not neutral and produce their own effects, well beyond or independently of the initial objectives assigned to them. While the development of the shared medical record can be understood from the perspective of instrumentalising public action, applied to the framing of care pathways and relations between patients and healthcare professionals, the DMP is a "strange instrument", which seems to have been in a state of constant emergence since its implementation was announced in 2004, and which has never really had any effect with regard to the main objectives assigned to it. It therefore invites us to look back at the earlier phases of its development.

We propose to view the DMP as a process of translation (Callon, 1986; Akrich et *al*., 1988 and 2006) thwarted by the governance which supported it. The shared medical record has emerged as an eminently political project, whose institutional stakes have largely bypassed efforts to problematise its uses and to interest (*intéressement*) and enrol healthcare professionals[6] (*enrôlement*). Throughout the innovation process, there has been considerable controversy about the usefulness of the DMP, how it works and how it fits into the medical world. Its detractors accuse it of being "empty" and of never really having existed, while analyses of the DMP note that, despite its formal existence, it remains an object that professionals rarely manage to grasp. Nevertheless, successive DMP managers have attempted to explore the practical considerations associated with the project and to

6. For Michel Callon (1986), 'problematisation' is a crucial stage in the translation process, whereby an actor (or a group of actors) defines a specific problem to be solved – linked to the implementation of a technology or practice – and proposes solutions that involve the participation of other actors (human or non-human).

mobilise networks of players from the world of healthcare and research around it. However, their efforts have regularly come up against objectives and, above all, a timetable imposed "from above". This led to a series of unresolved problems, regular phases of stoppage and relaunch, and a mismatch between the exploratory work on technical possibilities and the political priorities assigned to the project.

All these observations raise a series of questions: what are the different representations of health IT that have governed attempts to define the operation and aims of the DMP? What efforts have been made to problematise and interest? To what extent have the rationale of the institutional players and the project's governance arrangements hampered these efforts?

In the first part of the article, we present the successive efforts that accompanied the innovation process, the representations that supported them and the obstacles they encountered. This exploration reveals two competing definitions of the DMP, corresponding to the two phases of its development within the personal medical records public interest grouping (GIP-DMP), and then within the national agency for shared health information systems (ASIP Santé). In the second part, we look at the institutional context in which the project was set up, and on which its successive managers regularly rely to explain what they perceive as its failure. We will return to the controversies linked to the original technological choices associated with the DMP, to the impact of political – and notably electoral – considerations, and to the rivalries and tensions between the institutions that are called to cooperate in the governance of the project.

TWO REPRESENTATIONS OF HEALTHCARE IT, ITS DEVELOPMENT AND THE DMP

Since the 2004 announcement that the DMP would be rolled out across the board in 2007, the impression is that the shared medical record entered a development phase that lasted almost fifteen years. This long roll-out has been marked by high turnover in the players entrusted with managing the project and by vagueness surrounding the system. From a general point of view, the eventful history of the DMP shows that the successive managements of the project have devoted little time to setting, consolidating and

Research methodology

Conducted between 2019 and 2021 on behalf of the *Association pour l'histoire des télécommunications et de l'informatique* (AHTI – telecommunications and it history association), our research initially consisted of a comparative socio-historical analysis of the DMP and the SESAM-Vitale system – which preceded the shared medical record project and led to the roll-out of the Vitale card. Two sets of materials were collected within the context of this research. The first consists of the testimonies of the main institutional players involved in the various attempts to develop and deploy the DMP. We gathered these accounts either directly by means of semi-directive interviews (n= 11) or through the intermediary of the Comité d'histoire de la Sécurité sociale (CHSS – Social Security history committee), which allowed us to listen to audio recordings of interviews conducted with individuals (n= 4) to whom we did not have direct access. There are two points to be made about reproducing these accounts for the purposes of this article.

On the one hand, the DMP is a project whose development has involved a number of figures – politicians and senior civil servants – who have been widely quoted in the press and in public reports. We have therefore chosen not to disguise the identity of these individuals when describing their biographical backgrounds and actions, while maintaining their anonymity when quoting them.

On the other hand, the DMP's development has been fraught with difficulties and delays, the consequences of which have rarely been favourable to the people interviewed. The testimonies used in this article are those of individuals who sometimes found themselves opposed in the governance of the project, who saw their work and their intentions thwarted and called into question, or who had to take responsibility, sometimes publicly, for the difficulties and failures associated with the project. Constant efforts must therefore be made to place the often critical retrospective views of the various parties involved in the DMP in context.

The second type of material is the result of extensive documentary work covering a period of more than thirty years, since the early 1990s. In addition to a review of the general and specialist press on the subject of the DMP (*Le Monde*, *Libération*, *Le Figaro*, *Capital*, *Le Quotidien du médecin*, *TICsanté.com*, etc.), the research also drew on a study of the reports (n = 19) produced both within the framework of the project and by various outside observers. In particular, we looked at all the reports produced by the *Cour des comptes* (national audit office) on the subject of health IT between 1993 and 2019 (n = 12).

stabilising clear guidelines for the practical use of the patient record. As we shall see, the *fundamental problem* with the DMP seems to relate not so much to the lack of development in its use by healthcare professionals

as to the lack of opportunity for the institutional players behind the project to identify precisely what its practical utility will be. In this respect, while many critics have pointed out in retrospect that there was no strategic vision to accompany the deployment of the DMP,[7] this does not mean that attempts to do so were not made. To claim otherwise would be to underestimate the successive efforts of GIP-DMP and ASIP Santé, which have sought to develop consistent representations of health IT.

GIP-DMP looking for a tool with high use value

In addition to the criticisms levelled at the DMP concerning its lack of usefulness for healthcare professionals, the analysis shows that every effort was made to think about the practical uses of the patient record. These efforts, which were far from embryonic, were the driving force behind the first few years of the DMP's development within the Public Interest Grouping (GIP). They shed valuable light on fundamental disagreements over the role to be assigned to electronic health records (EHRs).

Attempts to define the practical purposes of the DMP

In the mid-2000s, a number of initiatives were taken by the GIP, with the support of institutional, industrial and academic players, to define the fundamental purposes of the DMP:

> "I had discussions with Manuel Bloch [technical director of GIP-DMP] at the time, with concerns about the value of the DMP. Is it a data vault synthesis that doctors can access when the hospital record is not available, because it is not computerised" (former *ingénieur des mines* working with GIP-DMP).

The GIP-DMP and the many institutional and academic experts involved in its deliberations sought to develop a DMP designed as a "working tool"[8], which could be integrated directly into the day-to-day practice of healthcare

7. See, for example, the recommendations made by the *Cour des comptes* (audit office) in 2019.

8. For illustrations, see Appendix 2.

professionals, helping to decipher and describe medical situations. The launch of these initiatives is interesting in two respects: the aim was both to explore the various dimensions of the problem of usage and to build up a network of actors around the project who could act as intermediaries in the fields of research and health.

These discussions focused mainly on the selection and structuring of the data featuring in the records, the reading and summary tools, and the principle of the "break glass" mode which, in the event of an emergency, would enable healthcare professionals to rapidly access useful data without the patient's permission. During this period, the DMP was conceived as a tool designed to meet specific needs that were to be identified. This ambition required in-depth work, both reflection and experimentation, in order to define the position of the DMP within the health IT ecology and, in particular, its relationship with existing professional and hospital software. In parallel with the projects pursued by GIP members, several DMP models were being designed by industrial partners for the trials launched at the end of 2006, in order to test different solutions. This approach became necessary when the GIP, hampered at the outset by the instability of its governance, but also by financial issues and the differences in the expectations of its various stakeholders (patient representatives, healthcare professionals, political leaders), decided to delegate questions relating to the technical feasibility of the DMP to the industrial sector in order to concentrate on its uses.

However, this representation of the trials within the GIP was at odds with the political message that would accompany them, with the 2006 trials presented as a decisive step towards the widespread introduction of the DMP, still announced for 2007. This initial discrepancy proved in retrospect to be detrimental both to the trials and to the initial life of the DMP. At the time, it was often reported in the press that the trials had been halted after a few months, without any real lessons being learned, following concerns raised by France's Data Protection Authority (CNIL) about the security of the system and medical data, which had the effect of interrupting the project and putting an end to the implementation of its governance. Alerted by patient associations and healthcare professionals during the trials, CNIL had expressed reservations about the level of security offered by login via the social security number. It recommended that this number should be

broken down and reassembled using mathematical algorithms, a solution that was deemed complex and costly, although more secure. However, this sequence was perceived very differently within the GIP, for which CNIL's intervention represented less an interruption than a useful contribution to the ongoing work:

> "CNIL was not the problem. When it came to defining security, data confidentiality and patient ID, the CNIL had some ideas, and we worked very well with them" (former IT manager at GIP-DMP).

Former health IT engineers confront political issues

Why was there such a discrepancy between the main players in the governance of the project? One possible explanation lies in the way the GIP operated and the profiles of its founding members. In its early years, the DMP was essentially an issue for IT engineers from the major government bodies, supervised by experienced senior civil servants, such as Dominique Coudreau, a graduate of the elite *École Nationale d'Administration* (ENA – national school administration) and former director of France's Health Insurance system, and Jacques Sauret, also an ENA graduate and, from 2003 to 2006, director of the Electronic Administration Development Agency (ADAE). They were supported by doctors, notably Nicole Janin, Director of Medical Affairs for the GIP, and Jean-Marie Picard, a doctor at the *Caisse Nationale de l'Assurance Maladie des Travailleurs Salariés* (CNAMTS – national employee health insurance fund). Among those involved in the first attempts to develop the DMP were: Jacques Beer-Gabel, a graduate of the *École Polytechnique* and Chairman of CIGREF since 2001;[9] Pierre Bivas, a graduate of the École Polytechnique and an engineer from *École des mines*; Jean Charlet, a graduate of the École Centrale de Paris with a degree in applied mathematics and a doctorate in computer science attached to the AP-HP[10] and INSERM[11]; Manuel Bloch, an engineer from *École des mines*. Other people are closely associated with the work of the GIP, such as Robert Picard, an engineer from *École des*

9. CIGREF – Club informatique des grandes entreprises françaises – large French companies' IT club.

10. Assistance publique-Hôpitaux de Paris – Paris public hospitals administration.

11. French National Institute for Health and Medical Research

mines and member of the CGE[12], or Bruno Salgues, an ENSAE (National School for Statistics and Economic Administration) engineer and director of studies at INT[13]. A closer look at these career paths reveals a tight-knit team (of a dozen or so people), shaped by mutual acquaintance and co-optation, consisting of individuals who were mostly at the end of their careers, experienced in the field of healthcare IT and focused on the desire to design and implement an ambitious technical project. This positioning was quickly challenged by the far-reaching political implications and expectations associated with the DMP, which proved too much for Pierre Bivas and Dominique Coudreau, respectively the first Director of the GIP and Chairman of its Board of Directors:

> "[Pierre] Bivas was an engineer [and he] set out the conditions from an engineer's perspective[14]. But he was setting conditions on an eminently political issue… He got the boot pretty quickly" (former mining engineer linked with the GIP-DMP).

On several occasions, the GIP members found themselves blindsided by political announcements relating to the DMP, which not only distracted them from the issues at stake in setting up the project, but also placed them in the middle of power struggles between the Ministry, industrialists and healthcare professionals, where their room for manoeuvre was severely limited:

> "From the outset, Douste-Blazy talked too much, promised too much. The question of cost came up far too early; we didn't yet know what we wanted" (former IT manager at GIP-DMP).

The question of the funding of the DMP thus represented a first test for the project, which was to prove problematic. On the basis of Philippe Douste-Blazy's announcements, Manuel Bloch, the GIP's technical director, felt that the cost initially proposed by the CNAMTS was too high and suggested that Pierre Bivas conduct an investigation into the cost of IT

12. General Economic Council.

13. National Institute of Telecommunications.

14. These conditions relate to the need for experimentation to explore possible technical solutions for supporting the DMP, and the calculation of the cost of the file.

records in other fields, particularly the banking sector, but this was not completed before he left the GIP:

> "The problem was that it was supposed to be confidential, but the industrialists found out about it. Bloch found himself summoned to the Ministry, thinking he was going to get a roasting. In fact, they had received new proposals from the manufacturers, for a price of 15 euros. So Bloch was congratulated, but it was still too much for him. When you consider that, two years later, the pharmaceutical record project was launched at a cost of 10 cents per record… And Bloch's study shows that the DMP could be produced for 1 euro per year per record. […] In any case, they ended up rejecting the €15 offer. We had this big problem before we even started" (former GIP-DMP IT manager).

The second challenge related to the methods of accessing health data and, more specifically, the practical ability to deliver on the promise of a hybrid record that would both belong to the patient and be managed by healthcare professionals. Once again, the members of the GIP found themselves caught between the contradictory expectations of patient representatives, doctors and politicians:

> "We quickly came up against a problem with the doctors, who wanted to control access to the data. On the other hand, the Ministry also wanted certain things, but above all it wanted the patient to decide what information would be visible in the DMP […]. […] That was what the 2002 law said" (former GIP-DMP IT manager).

The technical, IT and medical departments nevertheless did manage to make progress on a number of points, in particular those relating to the security of access to health data and bringing the DMP into line with international standards for electronic medical records, such as EHR and IHE-XDS[15]. However, the GIP's attempts to provide answers to questions combining technical considerations and political expectations were regularly hampered by changes in its governance[16], and the CNIL's recommendations on data protection eventually convinced certain officials, includ-

15. EHR: electronic health record; IHE-XDS: Integrating the Healthcare Enterprise-Cross-Enterprise Document Sharing.

16. See appendix 1.

ing Xavier Bertrand, that the DMP represented too great a political risk, particularly in the run-up to the 2007 presidential elections:

> "The trials were supposed to happen within three months. They ended up taking place a year and a half later. Time was passing, while the date for the roll-out in 2007 remained the same, even though 2007 was an election year: the Government was being questioned in the Assembly, but it was announced that [the DMP would indeed be implemented]. And Coudreau and Beer-Gabel's GIP-DMP, followed by Sauret, were acting as if it was going to be launched. They were holding consultations on the web as if it were going to be launched, when in fact they had nothing. It was a cardboard rocket" (former mining engineer involved with the GIP-DMP).

It was against this backdrop that Xavier Bertrand decided to put an end to the trials, announcing that he would postpone the general roll-out of the shared medical record until 2008.

ASIP Santé and the definition of the DMP as a database

The need to give political weight to health IT

The issue of the political importance of the DMP would be central to the relaunch of the project and the creation of ASIP Santé. This aspect of the shared medical record was directly highlighted by Michel Gagneux in the report submitted to Roselyne Bachelot in 2008, to the detriment of considerations relating to its use:

> "The proposals I made to Mme Bachelot at the time obviously concerned the DMP itself, and the way in which it should be managed, i.e. to make it not a question of building a technical tool, but of using it to serve the needs of healthcare professionals. Technology is a secondary issue in these matters… And then, secondly, to create a space and an organisation for governance and management that would make this project possible, with a rationalisation of the organisation" (testimony given to the CHSS by the former Chairman of ASIP Santé).

The establishment of ASIP would have a number of practical consequences for the governance of the DMP. The first was a radical change in staffing levels and operating methods. Following the departure of the former

management team, the creation of ASIP-Santé signalled the sidelining of most of the former GIP leaders, whose actions were perceived by political decision-makers as being oriented more toward foresight and strategic vision than toward the operational deployment of the DMP:

> "We saw the disappearance of bodies like GIP-CPS within ASIP, with people who had real technical skills and who spoke up when they were asked to do the impossible. And when ASIP was set up, all the competent but grumpy people were thrown out. That's very important in the history of the DMP" (former engineer linked with the GIP-DMP).

By the same token, the second consequence was the cessation of forward-looking and investigative initiatives linked to the DMP's use value, such as the LERUDI project[17], which continued to involve emergency doctors in its discussions. This change was a major obstacle to the process of incentivising (*intéressement*) the medical and academic players involved in the problematisation of the shared medical record. When it came to questions of use, ASIP did seem to mark a clear paradigm shift in the way the DMP project was managed: the time for questioning was over. Rather than building a practical tool whose technical characteristics would depend on the uses envisaged, the goal now was to introduce a record which could not be accused of technical limitations, by initiating a new approach to information systems (IS). The introduction of these new governance arrangements, which meant concentrating and strengthening information systems expertise around the Minister, goes some way to explaining the change in the population and, above all, in the culture, between the GIP and ASIP. The aim was not so much to bring together experts capable of exploring the technical possibilities of the DMP as to create a group more closely aligned with the minister's concerns and needs, but also more familiar with the workings of the ministry, and with sufficient institutional weight to give substance to the political expectations associated with the DMP within the ministry[18].

17. See Appendix 2.

18. For more details, see the personal account in appendix 3.

The DMP as a "neutral warehouse" for professional software publishers

ASIP's founding also marks the direct inclusion of industrial players in the governance of the project – such as Jean-Yves Robin, former CEO of Santéos, now the healthcare IT arm of Atos, and one of the protagonists of the 2006 trials,[19] or healthcare software publishers who had previously been outside the project. ASIP set aside the in-depth discussions begun by the GIP to concentrate on the roll-out of the DMP, relying on closer cooperation with industry manufacturers. However, this priority had raised concerns about the risk of conflicts of interest in the governance of the project, particularly during the call for tenders – supervised and evaluated by Jean-Yves Robin – following which the consortium made up of La Poste and Atos was selected as the sole host for the DMP. However, the questions raised about the conditions under which the Atos-La Poste consortium was selected in March 2010 did not prevent the DMP from being announced as ready for deployment. Furthermore, in order to ensure that the launch of the DMP avoided the same setbacks that had put an end to the trials conducted by the GIP, ASIP chose to exclude any consideration of usage from the development of the project (contrary to the position stated by the Chairman of ASIP, see above):

> "Gagneux arrived with the idea that the problem was technical[20] and not functional[21], as if there were no questions about the use of the record. […] He took no account whatsoever of all the work we had done beforehand" (former GIP-DMP IT manager).

Whereas the DMP was previously defined as a tool to help decipher and describe medical situations, with a use value for healthcare professionals, it was now envisaged as a "neutral warehouse", i.e. a space for centralising healthcare data which professional software publishers would have to grasp in order to create use value for their clients via a whole range of interfacing work. This was a major shift in thinking, and one that would

19. Within the consortium comprising Atos, France Télécom, IBM and Capgemini.

20. "Technical" here refers to secure access to the file and data coding.

21. "Functional" in this case refers to the necessity of determining what needs the DMP is designed to meet.

render obsolete any consideration of use value, which would now depend solely on professional software publishers. From now on, ASIP's activities would focus on issues of security and confidentiality (data masking and login security), as well as technical hosting capabilities:

> "The difference from the original spirit: the DMP was to have several value-added projects, proposed by industry players, and in the end, the consensus was to have a single DMP so as not to multiply costs, and for it to be functionally neutral, a neutral repository that could be put to use by other players, such as software publishers, who need to offer their customers added value. And it was built with this in mind" (former IS advisor to ASIP Santé).

It is with this new version that Roselyne Bachelot again announced that the DMP would be rolled out across the board by the end of 2010, while ASIP was planning to launch pilot trials at the beginning of the following year. However, these two phases did not produce the expected results: deployment still remained well below target[22]. Here again, the main reasons given by ASIP managers have to do with the lack of support from political representatives, in particular Xavier Bertrand, at a time when action on his part appeared decisive in launching the final phase of trials[23]. The idea that this latest failure in the implementation of the DMP was due to a lack of political support would also, a few years later, be the argument put forward by Jean-Yves Robin[24], which is still widely accepted within ASIP.

This reading of the situation should not obscure the fact that the DMP trial phase also revealed a number of practical difficulties (Mathieu-Fritz and Esterle, 2013). On the one hand, use of the DMP revealed the system's technical shortcomings: problems of interoperability with professional software, cumbersome login, input and navigation processes in the DMP which, as a storage medium, was not designed with a truly ergonomic interface[25]. This

22. 158,000 records were opened in mid-2012, against a target (set out in the call for tenders) of 9 million for the same period.

23. *TICsanté* (2010), Le lancement du DMP suspendu à la présence de Xavier Bertrand, *TICsanté*, 13 December (https://www.ticsante.com/).

24. *TICsanté* (2014), L'échec du DMP provient de la suppression de son budget de déploiement, selon Jean-Yves Robin, *TICsanté*, 16 July (https://www.ticsante.com/).

25. Doctors were not supposed to browse directly within the DMP itself.

technical limitation is not surprising, given that the trials were launched even before the issue of interoperability with professional software had been fully addressed. On the other hand, the definition of the practical utility of the system remained unanswered. Faced with a DMP designed as a "neutral warehouse", accessible to healthcare professionals and patients, but dependent on professional software to provide value in terms of use, the principle of the 2011 trials raises questions, particularly in terms of their timing: why ask doctors to adopt the shared patient record before software publishers had a chance to fully come to grips with it? This was a major pitfall in the deployment of the DMP as designed by ASIP Santé.

ASIP's strategy for the development of the shared medical record was based on the interest that doctors would show in it for the purposes of their practice, so that the question of uses could be resolved in situ. Symmetrically, it is these real-world uses that were supposed to gradually arouse the interest of healthcare professionals[26]. However, the appropriation process has its own timetable, comprising periods of testing, learning, dissemination and standardisation of practices, all the more so in the specific context of medical consultations, which are highly time constrained and already include a large number of artefacts (Mathieu-Fritz and Esterle, 2013). It therefore seemed impossible that such a process could be deployed during such short trials, with a technologically incomplete record.

The transfer of the DMP to the CNAMTS (national employee health insurance fund) in 2016 led to no new changes in the operation of the shared medical record[27]. Benefiting from the few years needed to develop interoperability between the DMP and professional software, as well as its own relations with healthcare professionals, the CNAMTS would concentrate its efforts on the conditions for deploying the records and providing data

26. This is a classic problem in the development of uses and the phase of adoption of new technical devices. This priming of uses constitutes one of the "paradoxes of innovation": for an innovation to be of real interest to stakeholders, its uses need to spread and intensify, but for this to happen, the innovation needs to have already proved itself by reaching a certain level of development (Klein and Mathieu-Fritz, 2023). For example, a DMP with insufficient inputs will generally be of no interest to practitioners and will hardly be used at all.

27. Its management would be assigned to Yvon Merlière, who had already been identified as the likely director of the project prior to the creation of the GIP-DMP.

input by means of technical developments such as the addition of an option for feeding the DMP automatically from healthcare software[28].

Ultimately, a comparative study of the work of the GIP and ASIP highlights two unsuccessful attempts to define health IT, its operation and its value. However, the work associated with these two periods was not of the same nature: while the GIP invested heavily in issues relating to the "use value" of the DMP, ASIP chose to delegate these issues to the manufacturers in order to concentrate on developing its relations with the industry and the Ministry. The succession of these representations and the difficulties encountered during the media coverage of the trial phases gradually built up an image of a DMP that aroused more mistrust than support. There was nothing linear about the innovation process at work, and this had consequences for those involved. Within the framework of the translation process, the phases of exploration, research and experimentation constitute incentive mechanisms (*intéressement*) that help to stabilise problematisation and the roles of the players involved in the project. The abrupt end of these initiatives largely neutralised the efforts made by those responsible for the DMP and hampered their recruitment efforts. At the time when the shared medical record was being rolled out across the board, only the participation of manufacturers, hosting providers and software publishers was stabilised by means of a financial incentive.

A TECHNOLOGICAL AND INSTITUTIONAL CONTEXT UNCONDUCIVE TO INNOVATION

After two decades of hesitations and aborted development attempts, the DMP still seems to lack clear utility for healthcare professionals. Since 2004, efforts to explore this issue have come up against reversals and

28. By the time the DMP arrived at CNAMTS, the technical issues had been settled: IT architecture, data and access security, interoperability. After initially entrusting patients with the task of opening the file and automating the addition of their reimbursement data, the health insurance fund could announce the definitive launch of the DMP in 2019. But the DMP continues to suffer from a lack of clear and unanimous definition of its utility. The only use clearly identified from CNAMTS data is to track the history of patients' prescriptions, which was already possible via the reimbursement information contained in the Vitale card.

ruptures, tensions and controversies – at both technological and institutional levels – which need to be described.

The complex relationship between SESAM-Vitale and the DMP

A key factor in understanding the development of the DMP is its relationship with the introduction of the SESAM-Vitale system, which is a kind of older brother in the family of major public projects in the field of digital health. SESAM-Vitale is a programme that enables the electronic processing of healthcare forms and reimbursement claims in the French health insurance system, built around the use of the Vitale card. Officially launched in 1993 with the creation of GIE-SESAM-Vitale, the system was tested in 1996 before being rolled out nationwide between 1997 and 1998. It is now widely used by healthcare professionals.

There is nothing linear about the connection between the SESAM-Vitale system and the DMP. A retrospective analysis reveals that those involved in the DMP drew lessons from the SESAM-Vitale project that proved to be counter-productive. There are two key factors in understanding the process at work. The first is that most of the people initially responsible for GIP-DMP had been involved in the roll-out of the Vitale card or in the smart card trials that preceded it, whether within GIE-SESAM-Vitale, the health insurance administration or the former Direction générale des télécommunications.[29] This experience led them to see the DMP project as a continuation of a process of health sector computerisation that had already begun, and as one that could be carried out to the tight timetable imposed by political leaders. However, this continuity proved to be illusory, contributing to a significant mismatch between the expectations placed on the project and the actual capacity for action of those behind it:

> "I had very fond memories of IT at CNAMTS. You can do extraordinary things with IT. It was a great experience. And as I was familiar with the relationship between doctors and the social security system, and as we had already started computerising with the Vitale card, I thought that part of the work had already been done, and that all we had to do was push the doctors

29. DGT, which became France Télécom in 1988.

> and it would all be done in a few years. I made an extraordinary error of judgement" (former chairman of GIP-DMP).

The second key point concerns the divergent technological choices underlying the two systems. When the SESAM-Vitale project was launched in 1993, the GIE, which had been set up at the time, was able to draw on an important institutional and industrial environment – including CNAMTS, the DGT and Bull, a specialist professional IT company[30] – as well as a decade of technological experiment in healthcare IT. At the heart of this ecosystem was memory card technology, designed by Bull in particular, which would logically become the technical foundation of the project. From the 1980s onwards, trials were carried out on the use of memory cards in healthcare, focusing largely on the creation of computerised health logs for different populations (residents of the same town, patients suffering from the same pathology, etc.). At the time, it was entirely conceivable that the DMP could be based on this technological solution in order to give concrete form to the idea of a record that would belong to the patient and be usable by healthcare professionals. The initial discussions on its development did not contradict this possibility: the Kouchner law of 2002 made no mention of a technological solution, or even of the need to create a patient record, while the Fieschi report suggested that portable solutions such as memory cards or USB sticks should be considered. In this light, the decision taken by Philippe Douste-Blazy to make the DMP part of a continuum of "hosted" electronic hospital record solutions might seem paradoxical. Conceived to comply with existing legislation and to rely on a technical solution then regarded as reliable, it deprived the DMP's promoters of nearly two decades of reflection and experimentation.:

> "There was a technical bias right from the start of the project: this was that the DMP had to be hosted, which created huge problems. It could have been on a USB stick, but that was against the law. […] But for over a year, we couldn't really do anything technical, simply because we didn't know what we were supposed to do" (former IT manager at GIP-DMP).

This choice of technology proved to be particularly problematic from the outset of the project, creating a translation process that remained

30. Nationalised in 1982, then gradually re-privatised between 1994 and 2004.

incomplete. This incompleteness would initially lead to a whole series of practical questions (most of which we have listed so far) which neither the GIP nor ASIP really had the time to answer: how could a system be technically designed to belong to the patient while being placed with a host and managed by healthcare professionals? How could it be integrated into public-hospital relations? How could it avoid overlapping with professional software and the risk of duplicate entries? How could interoperability with this software be maintained once the DMP had been designed as a storage facility accessible to publishers? Who supplies data to the DMP? What data will need to be transmitted? Under what circumstances would it be appropriate to consult the data? How would this be done?

Alongside the technical issues relating to record security and access to it and the data stored in it, it proved difficult to find clear answers to these practical questions during the development of the DMP within GIP and then ASIP. This faced the DMP's developers with a number of situations where the credibility of their approach was called into question, particularly with regard to the data contained in the record:

> "There was a creeping view, which resulted in hospital information systems being blocked, that this DMP was not a summary, but was supposed to contain everything, which was unrealistic. At the time, Bruno Salgues calculated that, if we wanted to include all medical data, the directory would be a hundred times bigger than the telephone directory, which already didn't fit on a single machine. We're talking pure fantasy" (former engineer involved with the GIP-DMP).

This succession of questions, which long remained unanswered, would make it impossible for those in charge of the DMP to impose solution that offered a convincing problematisation of uses. This was all the more detrimental to the project in that it left the field open to another narrative, which placed the shared medical record in a continuum with the SESAM-Vitale project. In the eyes of doctors, the DMP might have been seen as a tool for monitoring their professional practices, with a view to controlling healthcare spending, as announced back in 2004[31]:

31. This is a long-standing issue that has been explored, particularly by American sociologists (Starr, 1982). In France, it is now commonly associated with a series of reforms,

> "Doctors have never wanted the DMP, because they see it as an instrument for keeping tabs on them. Which is true, and they deserve to have tabs kept. They know that, and they don't want it" (former chairman of GIP-DMP).

The shared medical record may thus have been perceived by healthcare professionals as a surveillance tool that could potentially constrain their practices and reduce their autonomy. This perception may also have contributed to slowing down use of the system. In this respect, other observable tensions between the actors in the healthcare system also seem to have hampered the deployment of the DMP.

A context of emergence marked by strong tensions between healthcare system actors

In parallel with the launch of the DMP, the 2004 Health Insurance Financing Act provided for a transformation of the CNAMTS's modes of governance and of its relations with the primary health insurance funds, which at the time appeared to represent a loss of autonomy for the funds and the CNAMTS vis-à-vis the state[32]. The launch of the DMP thus took place in a context of sharp tensions between healthcare professionals, institutional players and politicians. In order to signal his desire to calm things down, Philippe Douste-Blazy chose to limit the role of CNAMTS in steering the DMP and to organise shared governance between the Ministry of Health, the Caisse des dépôts et consignations (CDC) and the health insurance administration. However, this decision led to strained relations between the CNAMTS and successive DMP managers, who were quick to complain about the limited support given by the health insurance administration (Cour des Comptes, 2008), until the latter once again took charge of the project:

> "CNAMTS has never supported the DMP, so much so that even when the 2012 medical agreement was negotiated, when the DMP was already

particularly in the health insurance and hospital sectors, especially since the new public management initiatives of the 1990s and 2000s (Belorgey, 2010; Bergeron and Castel, 2015; Bergeron *et al.*, 2011 ; Palier, 2002).

32. Cf. the testimonial for the CHSS by Alain Bourez, former accountant at CNAMTS (2016).

> operational, it introduced the notion of the "medical record" under which doctors were required to complete a summary document for each of their patients once a year. If they had just told them to put it in the DMP, it would have completely changed the face of the project. […] They didn't even do that" (former IS advisor to ASIP Santé).

To explain the difficulties encountered by the DMP, the interviewees also mentioned the issues relating to the deadlines imposed. As early as 2004, the timing of the project and the short roll-out timescales announced only made complete sense in terms of the political calendar, which was structured by the 2007 presidential elections.[33] A similar dynamic can be observed five years later, with the 2012 presidential elections. The launch of the DMP was announced at the height of the election period, even though the technical difficulties had not been resolved. The project was then halted by the new government team, then relaunched under new leadership, while a series of reports emphasised the limitations of the previous government[34]. It was not just the time targets, but also the strategies for contextualising the difficulties encountered, which were implemented by the political leaders and institutions responsible for evaluating the project (Cour des Comptes, 2012); and there was never any question of terminating the DMP, because no political figure wanted to bear the responsibility for the failure of a project which, although explicitly framed as a project to control public spending, cost half a billion euros between 2004 and 2012[35].

CONCLUSION

An analysis of the development of the DMP reveals a succession of main ways in which it came into existence, all of which were thwarted. Attempts to define the shared medical record and its place in the world of healthcare, as well as the governance of public health IT projects, ran into difficulties that GIP-DMP and ASIP Santé lacked the resources to overcome. When

33. See Appendix 4.

34. While the electoral logic of political decision-makers may be questioned, the case of the DMP also seems to reveal a change of era and paradigm in the conduct of technical innovation projects in the field of healthcare IT: see Appendix 5.

35. Report by the Cour des Comptes, 2013.

the project finally becomes technically viable, and could be rolled out on a large scale thanks to the resources available to CNAMTS, the time for expectations and fears about the DMP seemed to be over. While it is difficult to establish the primacy of any one of the factors behind the difficulties encountered, as they are so numerous and intertwined, it is clear that the changes in the types of problematisation inherent in the shared medical record and, above all, the conflicts of timeframes and the phasing mismatches in the governance of the project had deleterious consequences on the development and use of the DMP.

The "unfinished translation process" represented by the shared medical record seems to best understood in relation to the political dimension of the project's governance. We have shown the structuring role of the political announcements surrounding the DMP, which played a major part in determining the technical choices, expectations and objectives, the timetable for its development and, ultimately, the assessment of its difficulties. They also contributed to compressing and tensioning certain temporal phases inherent in the innovation process. In his analysis of the development of communication technologies, Patrice Flichy notes in this respect that the misalignments that can arise between technical innovation and its use arise from the need for the innovation to be integrated into "social know-how" in order to be accessible to appropriation: this implies taking into account not only the modes of social organisation in which the innovation is intended to be used, but also temporal sequencing. In this sequencing, it is important to distinguish between *technical time* (the exploration and assembly of technical possibilities), *industrial time* (integrating innovation into production [or administrative] processes*),* then the *time of uses* and *skill changes* (Flichy, 1987) – all of which have their own timeframes whose overlaps or conflicts can hinder the innovation process itself.

The DMP's development timeline is heavily marked by the overlapping of phases linked respectively to the exploration of technical possibilities, its appropriation by manufacturers and its use by professionals. These temporal characteristics are therefore an important factor in understanding the difficulties encountered by the shared medical record. They are also one of the main factors that distinguish it from the development of SESAM-Vitale, for which smart card technology had been widely identified and tested prior to the project. For fifteen years, the governance of

the DMP had to juggle the weight of political expectations, the hopes and hesitancy of healthcare professionals and patient groups, and the technical challenges associated with a large-scale project. The DMP's (long) translation process, which was marked by a number of abortive and unsuccessful attempts, finally led to its widespread introduction. But even today, the delicate question of whether it can be integrated into the "real work" of users and can increase its uses to encompass new forms of coordination between healthcare professionals and, by extension, improved patient care, remains unresolved.

REFERENCES

AKRICH M., CALLON M., LATOUR B. (1988), À quoi tient le succès des innovations ? 1. : L'art de l'intéressement ; 2. : Le choix des porte-parole, *Gérer et comprendre*, Les Annales des Mines, n° 11 et n° 12, p. 4-17 et p. 14-29.

AKRICH M., CALLON M., LATOUR B. (2006), *Sociologie de la traduction. Textes fondateurs*, Paris, Presses des Mines.

ALAUZEN M. (2021), Splendeurs et misères d'une start-up d'État. Dispute dans la lutte contre le non-recours aux droits sociaux en France (2013-2020), *Réseaux*, vol. 1, n° 225, p. 121-150.

ASIP SANTÉ (2019), *Étude pour l'accompagnement au déploiement de la télémédecine. Étude comparative sur le développement de la télémédecine à l'international*, juillet, [online] https://gnius.esante.gouv. fr/sites/default/files/2020-10/ANS_synthese_de_l_etude_sur_la_telemedecine.pdf (accessed on 31/01/2025).

BELORGEY N. (2010), *L'hôpital sous pression. Enquête sur le « nouveau management public »*, Paris, La Découverte.

BERG M. (1997), Of Forms, Containers, and the Electronic Medical Record: Some Tools for a Sociology of the Formal, *Science, Technology & Human Values*, vol. 22, n° 4, p. 403-433.

BERG M. (1999), Patient Care Information Systems and Health Care Work: a Sociotechnical Approaches, *International Journal of Medical Informatics*, vol. 55, n° 2, p. 87-101.

BERG M., BOWKER G. (1997), The Multiple Bodies of the Medical Record: Towards a Sociology of an Artifact, *The Sociology Quarterly*, vol. 38, n° 3, p. 513- 537.

BERGERON G., CASTEL P. (2015), *Sociologie politique de la santé*, Presses universitaires de France.

BERGERON H., CASTEL P., NOUGUEZ É. (2011), Un entrepreneur privé de politique publique. La lutte contre l'obésité, entre santé publique et intérêt privé, *Revue française de science politique*, vol. 61, n° 2, p. 201-229.

BEZES P. (2012), État, experts et savoirs néo-managériaux. Les producteurs et diffuseurs du *new public management* en France depuis les années 1970, *Actes de la recherche en sciences sociales*, vol. 3, n° 193, p. 16-37.

BEZES P., MUSSELIN C. (2015), « Le *new public management*. Entre rationalisation et marchandisation ? », *in* BOUSSAGUET L. (dir.), *Une French touch dans l'analyse des politiques publiques,* p. 125-152.

BOURRET C. (2007), « Les enjeux de la construction de la confiance autour de Dossier Médical Personnel (DMP) », *Sixième Congrès du chapitre français de l'ISKO*, université Paul-Sabatier, Toulouse, 7 au 8 juin p. 275-292 [online] https://isko-france.asso.fr/pdf/isko2007/index.html (accessed on 31/01/2025).

CACOT P. (2016), Les enseignements d'une histoire récente : l'utopie du DMP,

Les tribunes de la santé, vol. 2, n° 51, p. 89-98.

CALLON M. (1986), Éléments pour une sociologie de la traduction. La domestication des coquilles Saint-Jacques et des marins-pêcheurs dans la baie de Saint-Brieuc, *L'année sociologique*, vol. 36, p. 169-207.

COUR DES COMPTES (2008), *La gestion du GIP « Dossier médical personnel », rapport*, [online] https://www.ccomptes.fr/fr/media/735 (accessed on 03/03/2025).

COUR DES COMPTES (2012), *Communication de la Cour des comptes à la commission des finances de l'Assemblée nationale. Le coût du dossier médical personnel depuis sa mise en place*, Juillet, [online] https://www.ccomptes.fr/sites/default/files/EzPublish/rapport_cout_dossier_ medical_personnel.pdf (accessed on 03/03/2025).

CRESSWELL K., SHEIKH A. (2013), Organizational Issues in the Implementation and Adoption of Health Information Technology Innovations: An Interpretative Review, *International Journal of Medical Informatics*, vol. 82, n° 5, p. 73-86.

FIESCHI M. (2003), *Les données du patient partagées : la culture du partage et de la qualité des informations pour améliorer la qualité des soins. Rapport au ministre de la Santé, de la Famille et des Personnes handicapées*, [online] https://www.vie-publique.fr/files/rapport/pdf/074000714. pdf (accessed on 31/01/2025).

FLICHY P. (1987), Communication : progrès technique et développement des usages, *Réseaux*, vol. 5, n° 24, p. 99-110.

FLICHY P., DAGIRAL É. (2004), L'administration électronique : une difficile mise en cohérence des acteurs, *Revue française d'administration publique*, vol. 2, n° 110, p. 245-255.

GAGLIO G. (2018), *Du neuf avec des vieux ? Télémédecine d'urgence et innovation en contexte gériatrique*, Presses universitaires du Midi.

GAGLIO G. (2011), *Sociologie de l'innovation*, Paris, PUF, coll. « Que sais-je ? ».

GAGNEUX M. *et al.* (2008), *Mission de relance du projet du dossier médical personnel. Recommandations à la ministre de la Santé, de la Jeunesse et de la Vie associative*. *Pour un dossier patient virtuel et partagé et une stratégie nationale*

des systèmes d'information de santé, [online] https:// www.vie-publique.fr/files/rapport/pdf/084000279.pdf (accessed on 31/01/2025).

GHANDOUR E. K., FORTIN J.-P., MARQUIS J.-P., BINETTE J., GAGNON M.-P. (2016), Le dossier de santé personnel électronique : la clé de la continuité informationnelle pour des soins centrés sur le patient ?, *Le point en santé et services sociaux*, vol. 12, n° 1, p. 54-58.

GHANDOUR E. K., FORTIN J.-P., MARQUIS J.-P., BINETTE J., GAGNON M.-P. (2017), Conditions d'adoption du dossier de santé électronique personnel par les professionnels de la première ligne au Québec : perspectives professionnelle et organisationnelle, *Santé publique*, vol. 29, n° 6, p. 837-850.

GREENHALGH T., STRAMER K., BRATAN T., BYRNE E., MOHAMMAD Y., RUSSELL J. (2010), Introduction of Shared Electronic Records: Multi-site Case Study Using Diffusion of Innovation Theory, *British Medical Journal*, n° 340, [online] https://www.bmj.com/content/340/bmj.c3111 (accessed on 17/01/2025).

HÄYRINEN K., SARANTO K., NYKÄNEN P. (2008), Definition, Structure, Content, Use and Impacts of Electronic Health Records: A Review of the Research Literature, *International Journal of Medical Informatics*, vol. 77, p. 291-304.

JOSEPH I. (2004), *Météor. Les métamorphoses du métro*, Paris, Economica, coll.

« Études sociologiques ».

KLEIN N., MATHIEU-FRITZ A. (2023), Mon espace santé et le DMP, des dispositifs à l'épreuve des usages, *Acteurs publics*, n° 163-164, p. 64-69.

LASCOUMES P., LE GALÈS, P. (2004), *Gouverner par les instruments*, Presses de la Fondation nationale des sciences politiques, [online] https://shs.cairn.info/gouverner-par-les-instruments--9782724609492?lang=fr (accessed on 17/01/2025).

LATOUR B. (1992), *Aramis ou l'amour des techniques*, Paris, La Découverte, coll. « Textes à l'appui ».

LEHOUX P., SICOTTE C., DENIS J.-L., RAYMOND D., LAFRANCE A. (1998), L'informatisation du dossier médical et ses (détr)acteurs, *Sciences sociales et santé*, vol. 16, n° 1, p. 81-121.

MATHIEU-FRITZ A., ESTERLE L. (2013), Les médecins et le dossier santé informatisé communiquant. Analyse d'une expérimentation du dossier médical personnel (DMP), *Réseaux*, vol. 2, n° 178-179, p. 223-255.

MATHIEU-FRITZ A., ROUQUET R. (2014), Le dossier médical personnel et ses secrets, *Pratiques. Les cahiers de la médecine utopique*, n° 64, p. 76-78.

MERLIÈRE Y. (2022), Les enjeux de l'information médicale du patient : du dossier médical personnel (DMP) à Mon espace santé (MES), *Journal de droit de la santé et de l'assurance maladie*, n° 34, p. 168-180.

MERLIÈRE Y. (2021), L*e dossier médical partagé : le début d'une grande histoire…*, Paris, Librinova.

MORLET-HAÏDARA L. (2019), L'espace numérique de santé : une création de la loi relative à l'organisation et à la transformation du système de santé, *Journal de droit de la santé et de l'assurance maladie*, vol. 3, n° 24, p. 17-21.

MORLET-HAÏDARA L. (2021), Le futur espace numérique de santé : un formidable outil de prévention, *Journal de droit de la santé et de l'assurance maladie*, vol. 1, n° 28, p. 30-35.

ODEH S. (2016), Du dossier médical personnel au dossier partagé : vers un dispositif de médiation documentaire, *Les cahiers du numérique*, n° 12, p. 31-50.

PALIER B. (2002), *Gouverner la sécurité sociale*, Presses universitaires de France.
POUGNET R., POUGNET L. (2019), Le dossier médical partagé : pour un usage centré sur la personne ?, *Éthique & santé*, vol. 16, n° 2, p. 64-70.

POUSSOU-PLESSE M. (2024), « D'un mythe de l'informatique médicale à la doctolibisation de la santé : les tribulations de l'interopérabilité du dossier médical partagé français », *in* PIERRON J.-P., BOGAERT B. (dir.), *De l'IA à l'intelligence clinique. Ce que le numérique fait au soin*, Bordeaux, Éditions Le Bord de l'eau, p. 179-200.

STARR P. (1982), *The Social Transformation of American Medicine*, Basic Books.

SCHWEITZER L. (2010), Le DMP ou comment constituer un gigantesque fichier des données de santé, *Terminal*, n° 107, p. 91-111.

SIMON P., MOULIN T. (2022), Téléconsultation, télé-expertise, télésurveillance médicale : l'apport de « Mon espace santé », *Bulletin de l'Académie nationale de médecine*, vol. 206, n° 5, p. 643-647.

APPENDICES

APPENDIX 1. THE MAIN POLITICAL AND INSTITUTIONAL MILESTONES IN THE DEVELOPMENT OF THE DMP PRIOR TO ITS INTEGRATION INTO "MON ESPACE SANTÉ" (2002-2019)

4 March 2002: the "Kouchner" law establishes the patient's right of access to their full medical record.

June 2003: the "Fieschi" report states that a common electronic record for healthcare professionals would represent a radical change in healthcare practices and that the technical solutions available at the time do not allow the project to be developed.

August 2004: Philippe Douste-Blazy, Minister for Health, officially launches the DMP development project. The project was presented from a financial perspective, with the DMP expected to generate savings of €3.5 billion a year by reducing redundant drug prescriptions. Deployment of the DMP is due to start in the first half of 2005, with widespread roll-out scheduled for July 2007.

April 2005: official formation of the GIP-DMP, with the appointments of Pierre Bivas as project director, Dominique Coudreau as GIP chairman and Jacques Beer-Gabel as "IS consultant". Their first task was to draw up the DMP specifications for July 2005, prior to the launch of trial tests with manufacturers.

June-July 2005: Xavier Bertrand, the new French Health Minister, replaces Pierre Bivas with Jacques Beer-Gabel as Director of the GIP.

Early 2006: GIP's Board of Directors terminates Jacques Beer-Gabel's directorship and replaces him with Jacques Sauret, former director of ADAE (electronic administration development agency), who had been involved in the roll-out of the Vitale card.

June 2006: Xavier Bertrand announces the launch of trials, which are due to continue until December, with the general roll-out of the DMP still set for July 2007.

14 April 2007: The CNIL (French data protection agency) expresses its concerns about the trials, noting in particular their short duration and the poor security of access to files. Following these conclusions, Xavier Bertrand puts an end to the trials and announces a postponement of the roll-out of the DMP to 2008.

Summer 2007: Roselyne Bachelot, the new Minister for Health, appoints Michel Gagneux, Inspector General at the IGAS (General Inspectorate for Social Affairs), to examine the conditions for relaunching the project.

23 April 2008: the "Gagneux" report highlights the need to redefine the technical purposes and uses of the DMP and proposes, in particular, the creation of a new structure reporting to the Minister of Health to deal with information technology issues, leading to the creation of ASIP Santé in 2009.

November 2008: Roselyne Bachelot appoints Jean-Yves Robin as director of the GIP-DMP.

February 2009: Michel Gagneux replaces Dominique Coudreau as Chairman of the GIP. The French Audit Office (Cour des Comptes) publishes a critical report on the governance of the DMP, highlighting the unachievability of the timetable and initial objectives announced in 2004 in terms of the human and financial resources allocated, as well as the lack of a clear definition that continues to hamper the project, both in terms of technical choices and in terms of explaining how the DMP will be used in the future by healthcare professionals.

July 2009: creation of ASIP Santé by merging the GIP in charge of the personal medical file (GIP-DMP), the "healthcare professional card" GIP (GIP-CPS) and the "interoperability" part of the Groupement pour la modernisation du système d'information hospitalier (GMSIH (hospital information system modernisation group). First relaunch of the DMP.

November 2009: launch of the call for tenders to identify a single host (the principle of multiple hosts – which could vary from region to region – is abandoned). The aim is to open 2 million records in 2010, 5 million in 2011, 9 million in 2012, 11 million in 2013 and 13 million by the end of the cycle in 2014, i.e. 20% of the target population (65 million).

10 March 2010: selection of a consortium notably including La Poste and Atos.

July 2010: Roselyne Bachelot announces that the DMP will be available by the end of 2010.

October-November 2010: ASIP Santé declares in October that the pilot tests (in Alsace, Aquitaine, Franche-Comté and Picardie) will not begin until 2011. In November, Roselyne Bachelot is replaced by Xavier Bertrand.

January 2011: in view of the initial objectives set out in the call for tenders, ASIP announces that it will be satisfied with opening 500,000 records by the end of the year. During the parliamentary debates in November, as part of the Social Security Financing Act for 2012, the number of records opened is put at 39,000.

October 2012: Marisol Touraine, the new Minister for Health, announces her intention to relaunch the DMP as part of a change in development strategy. By this date, around 158,000 DMPs have been created. The French National Audit Office (Cour des Comptes) severely criticises the costs associated with the project, estimated to total €500 million, and points to shortcomings in the state's strategy and management.

30 November 2013: Jean-Yves Robin is relieved of his duties as director of ASIP.

Summer 2014: the Social Security Finance Bill for 2015 provides for the transfer of the DMP to CNAMTS (effective in 2016), with ASIP continuing to exist as a "support structure", with no operational control. Within CNAMTS, the project will fall to Yvon Merlière, while the Director General, Nicolas Revel, announces that the project will need two years to be redefined and launched.

December 2016: second relaunch of the DMP; "DMP 2" is introduced in nine pilot French *departments*. The full roll-out of the patient record scheme is announced for October 2018, while a medical agreement provides for "financial assistance with computerisation" for doctors who have approved software that is compatible with the DMP.

24 July 2019: the law on the organisation and transformation of the health-care system provides for each insured person to be allocated a digital health space (ENS) – the future "My Health Space" – in which the DMP will be one of the main components.

APPENDIX 2. TESTIMONIAL FROM A FORMER ÉCOLE DES MINES ENGINEER WITH GIP-DMP

"At the time, we were thinking about confidentiality and data protection. We had another seminar on the subject, organised by the CRG (management research centre). With the support of Bloch, this was an opportunity to launch a project in collaboration with a researcher, Michelle Grosjean, from the University of Lyon, who had worked on the relationship between the public and hospitals, and [on the role] of the nurse coordinator, where the DMP was supposed to play this coordinating role in the public-hospital relationship. There was the famous LERUDI project. It was an initiative of Manuel Bloch. […] Even though it didn't work out in the end, he did everything he could to focus on the question of what the DMP was actually for. […] We set ourselves a target, to see the DMP as a summary record for emergency situations, with the emergency doctors. And he had contacted the head of the learned society of emergency physicians to work on emergency cases. […] There was a team at INSERM, led by Jean Charlet, who was concentrating on computer ontology for data models in which we were trying to reconcile information according to context and need. […] At the time, the doctrine was that the DMP was a summary record, which did not contain everything, but where we tried to include what was important, and in which a GP or an emergency doctor could have rapid access to essential information."

APPENDIX 3. TESTIMONIAL FOR THE CHSS FROM THE FORMER PRESIDENT OF OF ASIP SANTÉ

"In particular, there was the creation of the ASIP, but also the implementation of a whole series of new instruments to have a real digital health strategy. The proposals included two in particular. One was the need to create a department within the ministry responsible for steering strategy and coordinating public action on IS and digital health, the future DSI [Information Systems directorate, currently part of the Health Digital Agency]. And the other proposal was to create a kind of strategic council, reporting to the Minister on IS, so that the Minister would be surrounded by a group of high-level decision-makers to validate the national strategic priorities in terms of IS. This would mean that all the major players implementing their information systems, which had and still have a tendency to roll out their IS in large vertical silos, with no convergence between them in terms of objectives, agenda or resources, could start to really work together on national priorities validated by a strategic body, which would have given force to these orientations, a force greater than a speech or an announcement."

APPENDIX 4. TESTIMONIAL FOR THE CHSS FROM THE FORMER PRESIDENT OF OF ASIP SANTÉ

"From 2005 to 2007, this project accumulated everything you don't want to achieve in a public project of general interest: firstly, unrealistic announcements and objectives, made by the minister who proposed that the DMP should be part of the Health Insurance project, Mr Douste-Blazy, who announced that it would be possible to generalise the project in three years, whereas these are very, very long-term structural issues, which would generate billions in savings. And so, on the basis of these completely unrealistic and unattainable announcements and objectives, the project was conducted under this constant pressure for three years".

APPENDIX 5. CHANGES IN GOVERNANCE AND THE ROLE PLAYED BY THE STATE

In 1999, a report by the Cour des Comptes (national audit office), criticising the governance of SESAM-Vitale, advocated a greater role for the state as the instigator and prime contractor for innovation projects in the healthcare sector. In 2003, the Fieschi report encouraged the state to play a guiding role in exploring technological solutions for health IT. These recommendations were based on projects carried out in the 1990s – the Vitale card and the healthcare professionals' card (CPS) – and technical trials dating back to the 1980s, based on smart card technology. By taking these into account, we are better able to understand the direction of the GIP's early work and its members' desire to play an active role in defining the value of the DMP. However, the 1990s and 2000s were a period of profound change in public action, particularly in the context of the application of new public management principles, which had an impact on the capacity to manage large-scale innovation projects (Bezes, 2012; Bezes and Musselin, 2015).

It was precisely this discrepancy between the will and the power to act of the GIP's first managers that characterised the early days of the DMP. It was all the more marked because of their desire to continue the computerisation of healthcare practices that had begun with SESAM-Vitale. As we have seen, this project enjoyed institutional and technical support which was no longer available to the GIP in 2004: the Health Insurance administration was removed from the project, while public companies such as Bull and France Télécom were privatised. In addition to the capacity to manage a large-scale technical project, these changes also had an impact on relations between GIP members and the Ministry:

"What's fascinating is that there were people on the GIP team, like Manuel Bloch, who were never listened to. The changing of the guard played its part. The appointment of directors was eminently political. We had people who didn't understand, who didn't take the time because they had to move forward" (former École des Mines engineer working with the GIP-DMP).

The approach adopted by ASIP appears to have been a rational one, taking account of the growing importance of private industry in the conduct of

public policy. The aim was to act as an intermediary for the political actors, and then to produce a general framework for relations with the economic actors, who would have to define how the DMP is to be integrated into doctors' practices via professional software. The establishment of these relationships at a technical level, directly linked to interoperability issues, nevertheless required time for development, particularly with regard to security and interoperability factors, which ASIP did not have before the 2011 trials.