Emerging Health Challenges for Europe over the next 20 years

Symposium Proceedings

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Message from John Dalli

European Commissioner for Health and Consumer Policy

The health challenges that face Europe today are many and varied. All EU Member States are confronted with the need to adapt to population ageing, to fight the burden of chronic diseases and to keep their health budgets under control. All have the opportunity to use technology to improve health. We need solid partnerships across borders to address, together, Europe's health challenges.

This is why I attach great importance to strengthening our vision for health at European level. Within this context I also welcome that the study on "Emerging Health Challenges for Europe over the next 20 years" focuses on key issues such as healthy ageing and new technologies.

An ageing population will entail profound changes to society as we know it. Today one in every 6 Europeans is 65 or over. In 50 years time, 1 in every 3 Europeans will be 65 or over. Today, for every person over 65, there are four people working. In 2050, there may be only two.

This will have important consequences: demand for health services and long-term care is likely to grow; at the same time there will be fewer people working to support such increase in health service demand. Healthcare systems will need to adapt to the needs of the elderly while remaining financially sustainable.

This is no easy task in particular in times of crisis. Commission projections show, however, that if we can increase the number of years of life without disease, the rise in healthcare spending due to ageing could be cut by half.

This is why I believe that helping citizens age in good health is the key to meet Europe's ageing challenge.

The question is how do we help people age in good health? I am convinced that **promotion and prevention** is the answer. Many of the diseases that affect older people are linked to what they eat or whether or not they smoke or exercise. That is why we need to encourage our citizens to take up healthy habits that will keep them away from hospital; and to encourage health systems to focus more on prevention.

We also need **innovative and efficient solutions** for example to help us move from hospital acute care to care closer to home and more accessible in particular to an ageing population. Telemedicine and remote monitoring systems for example can

improve healthcare, increase accessibility and comfort, while also saving scarce human resources.

Estimates indicate that 14% of hospital admissions could be avoided through Telemedicine used for home monitoring. The use of eHealth would also increase the safety and quality of care. According to some estimates, 5 million errors a year could be avoided through the use of Electronic Transfer of Prescriptions.

Health technology has the potential to save lives and trigger great improvements in citizens' health and in the overall efficiency of health systems. Smart use of technology for health is an opportunity and also a challenge that is here to stay.

This study is a valuable contribution to our reflections on the way ahead and I look forward to a continued debate on these important issues.

Welcome address and Opening

Mrs Paola Testori – Coggi

Director General Health and Consumers, European Commission

It is a pleasure to be here today. I would like to start by congratulating the European Institute for Health on your forward-looking and thought-provoking report on healthcare in the future. It certainly provides us with much food for thought.
The EU Health Strategy "Together for Health" is our policy framework which guides the work of the European Commission in public health. It already addresses many of the elements of the **Europe 2020 strategy** and covers the 3 key priorities (smart growth, sustainable growth, inclusive growth) from a health perspective.

Major priorities from Europe 2020 for health policy are:
The envisaged platform against poverty;
new skills/new jobs;
the youth on the move initiative; as well as
research and innovation for the future
It is important to draw links and find hooks between the principles and objectives of the health strategy and those of the Europe 2020 strategy.

I am more than aware that the health challenges that we face are many, and only by building partnerships and working across borders and regions can we really start to address the broad concerns in health that affect us all.
Commissioner Dalli has already made it very clear that the principles underlying his mandate are to put patients and consumers first, to focus on the health challenges posed by the ageing population and on reducing health inequalities.
Yet I am fully aware of the realities faced by the health sector and its workforce. I am conscious that managers of health systems have to perform a very delicate balancing act between providing high quality and accessible healthcare, promoting innovation whilst, at the same time, containing costs.
And this is against the backdrop of the ambitious common goal to maintain the long-term sustainability of health systems faced with ageing populations, more and more expensive treatments, higher public expectations and budgetary constraints.
This is of considerable importance at European level and is an issue that requires both coordination and dialogue between us all.

Ageing of the wider population

We need to explore innovative ways to tackle the heavy burden placed on the health sector by the ageing of the wider population.

15 years from now, the share of people aged over 65 will have increased by 20%. This constitutes more than one fifth of the total European population.
The good news is - the growth in the number of elderly people shows that we have made great progress in the field of health.
The bad news is - the ageing of the population will place even greater pressure on our health systems. Demand for health services is likely to grow and spending on healthcare is expected to increase by 1 to 2 points of our GDP by 2060.
Why not, as your report suggests, provide a greater focus on preventing and treating lifestyle-related diseases and chronic diseases? This would help drive down costs and, at the same time, help people to live longer and healthier lives. (Currently, only 3% of public health spending is used for preventive care in Europe.)
What we need are "smart", innovative solutions for health systems to become more patient-centred and cost-effective.

Ageing of health workforce
As well as the ageing of the wider population, we must also tackle the problem of the ageing of the health workforce itself. Who will look after us when we are old? Who will be the doctors and nurses of tomorrow?
To help find answers to these questions, the Belgian EU Presidency will be organising a Ministerial Conference on this issue in September. This is a good occasion to explore various innovative ways to invest in our health systems.
Support for innovation in health care
We do not have an "anything goes" approach to innovation. We want to encourage responsible innovation, which pays proper regard to issues of safety and risk and which enjoys the support of the public.
A more open and inclusive debate surrounding new and emerging technologies is undoubtedly required. If successful, this would represent a major step-change in relation to the development of health products and services.
The European Commission is already playing its part.
ehealth
Our investment in eHealth is a case in point as we recognise the potential of eHealth to increase the quality and the sustainability of healthcare.
For example, if a cardiac patient can have their heart rate monitored from home instead of having to visit a hospital for their exams, they will be receiving better care, with more comfort. At the same time, we will be freeing up valuable healthcare resources – the precious time of doctors – for other more critical uses.
The European Commission has been financing research on eHealth for over two decades. So the technology is there. What we need to do now is to nurture it so that it can reach its full potential.
HTA
Due to budgetary constraints, we have to ensure that expensive new therapies are chosen and used in the most efficient way possible.
This is where Health Technology Assessment (or HTA) has an important role to play.

For example, it can look into whether a new drug is more effective in the treatment of a specific cancer than other alternatives already in use.
This is only one of many examples of why HTAs and innovation are deserving recipients of our investment.
Medical devices
Another success story for innovation in Europe is medical devices.
It plays a crucial role in the diagnosis, prevention, monitoring and treatment of diseases and helps to improve the quality of life of patients – not to mention the much-needed boost it gives to the economy.
Let's look at the figures:
Sales of medical devices amount to over □70 billion a year, representing over a third of the world market share;
This sector represents almost 11.000 companies in the European Union, of which 80% are small and medium sized businesses; and
More than half a million jobs across Europe depend on the medical devices sector.
It is quite clear that this is an area which will require adequate investment and appropriate regulation in order to maximise its benefits.
Stakeholders I have spoken to – from patients and healthcare providers to NGOs and industry representatives - all agree that responsible innovation can make a major contribution towards more efficient health systems.
An EU health innovation policy of the future must focus on the needs, expectations and concerns of Europeans as well as on the sustainability of health systems.
And this implies a continuous dialogue between us all. Only then can we achieve our objective of the highest level of health protection for all.

Health inequalities
I would like to conclude with an issue I consider to be a scar on the conscience of the European Union – health inequalities. I firmly believe it is unacceptable that, in today's world:
The difference in life expectancy for women across Europe can be as much as 8 years, and over 13 years for men;
Infant mortality rates vary nearly six-fold within the EU; and
Heart diseases can kill 8 times more people in Lithuania than in Spain.
I was recently reminded of a thought-provoking quote by Martin Luther King, who said, *"Of all forms of inequality, injustice in health care is the most shocking and inhumane"*.
Although he made this statement almost half a century ago, it still applies today.
By sharing best practice and knowledge and by co-ordinating the efforts of all 27 EU Member States, the European Union is playing its part in confining health inequalities to the pages of history.
I hope the European Institute for Health will join us on this journey.

Response:

Strachan Heppell
Chairman EIH

Thank you very much, Mrs Paola Testori-Coggi, for your opening address. It has given us an excellent start to our symposium.

On behalf of the European Institute for Health, I offer you all a very warm welcome. We are delighted to have you with us.

I would like to thank the European Commissioner for Health and Consumer Policy, John Dalli, for his kind message. It is much appreciated.

We have also received messages from a number of European Health Ministers, who wish us a successful symposium. They are the Ministers from France, Germany, Ireland, Latvia, Romania, Sweden, Slovakia, and the United Kingdom.

We thank them for their support

I would also like to thank very much all those who have given us your support and made today possible. We are most grateful to you all.

I would now like to invite my good friend and colleague, our Vice Chairman Bernard Mesuré, to speak to you.

Facts and Diagnosis :

Bernard Mesuré
Vice Chairman EIH

Tout d'abord, je veux joindre mes remerciements à ceux exprimés par notre Président Strachan Heppell. Tout particulièrement je souhaite remercier Madame Testori-Coggi de nous faire l'honneur d'ouvrir officiellement notre réunion au nom du Commissaire Dalli. Je veux également remercier deux membres du Parlement Européen :
Mme Françoise Grossetête et Mr. Jean Paul Gauzés ainsi que leur cabinet respectif pour nous avoir tant aidé à rendre possible cette réunion au sein du Parlement Européen.

Déjà, en 1952, Robert Schuman ouvrait une conférence internationale où l'idée d'une Communauté Européenne de la Santé était avancée, conférence qui concluait par la nécessité de créer une telle institution.
Pour des raisons sur lesquelles je ne reviendrai pas, les traités et principalement celui qui constitue la Communauté Economique Européenne n'ont abordé, dans leur lettre, les problèmes sanitaires et médico-sociaux que subsidiairement et dans la mesure où ils interféraient avec les objectifs de libre circulation des hommes et marchandises qui représentaient pour l'essentiel l'objectif de la CEE.

Un premier signe d'action commune se fait jour en 1971 avec la décision prise en matière de lutte contre les toxicomanies et les stupéfiants ;

En 1974, dans un rapport du CEPES (Comité français d'Etude pour un Programme Européen pour la Santé), on pouvait lire :

« L'Europe a été jusqu'à présent celle du commerce, de la finance et des investissements. Il est temps qu'elle fasse une place à la recherche de cette qualité de la vie dont on parle tant, et en premier lieu aux préoccupations de la Santé, car, s'il est une richesse que les pays d'Europe doivent s'efforcer de préserver en commun, c'est bien celle- là ».

Force est de constater qu'en dehors du médicament où des avancées communes très significatives ont été faites notamment par la reconnaissance mutuelle, la création de l'Agence Européenne du Médicament et la mise en place de règles européennes d'autorisation de mise sur le marché, les progrès d'une Europe de la Santé, notamment tournée vers les citoyens européens ont connu des avancées minimalistes.

Les années 80 marquent un tournant décisif après les crises sanitaires majeures (sida, sang contaminé)

- le niveau communautaire agit par voie réglementaire dans certains domaines ponctuels tels que les produits sanguins
- le droit à la santé et la légitimité de l'intervention communautaire ont été ensuite progressivement consacrés dans les traités (Maastricht, Amsterdam) puis dans le projet de Constitution.
- les Institutions Européennes ont ensuite progressivement reconnu les diplômes, permettant la libre circulation des professionnels de la santé.

Néanmoins, jusqu'à la fin des années 90, les dispositions de droit communautaire avaient un impact limité dans la vie des assurés demeurant liés à leur pays d'origine tant dans l'accès aux soins que dans leur prise en charge.

Depuis la fin des années 90 la situation a largement évolué:

- la jurisprudence innovante et constante depuis 1998 de la Cour de Justice de la Communauté Européenne a, par plusieurs arrêts, fait prévaloir les principes de liberté de circulation et de liberté de choix dans l'accès aux soins, en faveur des assurés, ainsi que de leur prise en charge financière.
- le Traité consolidé de Nice, (2002), dans son article 152, exprime la volonté d'assurer un niveau élevé de protection de la santé dans la définition et la mise en œuvre de toutes les politiques et actions de la Communauté.
  L'action communautaire est renforcée dans les domaines de la coordination avec et entre les Etats Membres, de l'amélioration de la Santé Publique, de la Sécurité Sanitaire, de la Prévention, de l'Information, et de l'Éducation.

A l'automne 2006 , une nouvelle étape est franchie par une large concertation de la Commission Européenne auprès de l'ensemble des acteurs concernés (Etats, Parlements Nationaux, régions, organisations de protection sociale, financeurs, représentants de la société civile, représentants des professions de santé etc…)

Plus récemment le premier, puis le deuxième programme d'action communautaire dans le domaine de la santé (2008-2013) se veulent plus précis, plus volontaristes. La stratégie communautaire en matière de santé vise clairement à améliorer la Santé Publique, à prévenir les maladies et les affections, à déterminer les causes de danger.

L' Union Européenne veut :

- contribuer à l'amélioration de la santé publique en renforçant la coopération et la coordination entre les Etats Membres
- élaborer un système d'information global

Les liens entre les politiques de santé et de protection des consommateurs sont désormais étroits, permettant de garantir un niveau élevé de sécurité dans tous les domaines, par exemple ceux des médicaments et des aliments.

Tels sont les faits, et dans son message, le Commissaire Dalli, en prenant le vieillissement comme un des exemples qui requiert des adaptations et des solutions efficaces, met en évidence un nouveau challenge auquel l'Europe doit faire face.

Toutes les enquêtes montrent combien la Santé est un bien commun et une préoccupation partagée par les citoyens européens.

Le niveau européen peut, selon nous, jouer en matière de santé, un rôle fédérateur capital, la nouvelle dynamique européenne que nous constatons depuis quelques années connaitra très certainement, à la demande même des consommateurs, une accélération importante dans les décennies à venir.

En parallèle de cette accélération du rôle joué par la Communauté Européenne en matière de santé que j'ai voulu vous décrire rapidement, l' European Institute for Health (EIH), a formulé un certain nombre de diagnostics quant aux bouleversements que connaitront dans les décennies à venir les frontières du secteur santé tel que nous l'avons connu et vécu jusqu'à ce jour.

Sans être exhaustif, citons en quelques uns :

- Comme je l'ai indiqué, le thème de la santé est une préoccupation partagée par tous les citoyens européens.

- Même si l'on constate une évolution récente le débat « santé » reste très centré sur le médicament et l'hôpital, sur la prise en charge et les enjeux financiers. Cette approche ne nous parait pas durable.

- Des éléments majeurs permettent d'anticiper un élargissement du champ de la santé vers une « santé globale » : de nouvelles problématiques de nutrition, de dermato-cosmétologie, d'hygiène et de discipline de vie se sont déjà fait jour.

- Comme l'a rappelé dans son message le Commissaire Dalli, la montée en puissance de la Prévention est nécessaire pour atteindre le niveau élevé de Santé Publique inscrit désormais dans les objectifs communautaires.

- L'apport et le développement rapide des nouvelles technologies entrainent déjà des changements visibles en matière de diagnostics et de prévention.

- Le vieillissement de nos populations, accompagné de révolutions scientifiques majeures, notamment depuis la découverte du génome humain voit naître une nouvelle culture de nos concitoyens européens. Non seulement ils sont conscients de l'allongement de leurs vies mais ils veulent vieillir « en forme », « en bonne santé »

- Les récents développements du droit des européens à accéder aux soins et à en obtenir leur prise en charge quelque soit l'endroit où ils se trouvent en Europe.

- La mise en place d'un système d'information et d'éducation élevé qui les incitent à aborder leur problème de santé de façon plus responsable et plus individuelle.

Tels sont quelques diagnostics évidents avant même de procéder à la moindre approche prospective que nous avons relevés en même temps que nous constations la prise de conscience progressive de nos concitoyens du principe fort de l'Union Européenne :

L'égalité de tous les Européens dans l'accès à une santé de qualité et à une sécurité sanitaire de niveau élevé.

Les principaux faits et diagnostics que je viens de vous décrire constituent les raisons mêmes de la création de l'E I H et de son projet prospectif.

Comme vous allez le constater par la présentation de l'étude conduite par Accenture, puis par l'intervention de Joël de Rosnay, les défis que nous allons connaître sont multiples et devront nous faire aborder un nombre considérable de sujets et de problématiques.

Nous pensons que la recherche « des solutions efficaces et innovatrices » appelée de ses vœux par le Commissaire Dalli requiert des approches multi-états et multidisciplinaires autour de la Commission Européenne, qui nous a déjà montré le chemin par sa large consultation de 2006.

Nous avons, tous ensemble un devoir commun d'anticipation devant un temps scientifique et technologique qui s'accélérera dans les décennies à venir et devant une attente de plus en plus pressante des consommateurs européens.

C'est pour répondre ensemble à ces nouveaux défis que l' E I H a été créé, désireux d'offrir à tous les acteurs, à tous ses partenaires la possibilité d'appréhender les sujets qui devront conduire, à partir d'importantes réflexions et travaux partagés, aux décisions de moyen /long terme pour le plus grand bénéfice de nos concitoyens européens.

Summary

Already in 1952, Robert Schuman opened an international conference where the idea of a European Community Health was put forward. This conference concluded with the need to establish such an institution.

In 1974, a report of CEPES (French committee to study a European Programme for Health), stated:
"Europe has so far been that of trade, finance and investment. It is time to make room for the research of that much talked quality of life, and primarily the concerns of health, because if it is a treasure that European countries must strive to preserve in common, it is this."

It is clear that outside of medicine, with the establishment of the European Medicines Agency (1993), progress of a Europe of health-oriented European citizens have been minimal.

The 80's were a turning point after the major health crises (AIDS, contaminated blood)
- The Community acts by regulation in some areas such as blood products
- The right to health and the legitimacy of the community intervention have been then gradually enshrined in the treaties (Maastricht, Amsterdam) and in the draft Constitution.
-European institutions have gradually recognized the diplomas, allowing the free movement of health professionals.

Since the late 90's the situation has greatly evolved:
- Innovative and constant jurisprudence since 1998 of the Court of Justice of the European Community has made several decisions like the principles of freedom of movement and freedom of choice in access to care, in favor of policyholders, and also of their financial support.

- The Consolidated Treaty of Nice (2002), in Article 152, expresses the will to ensure a high level of health protection in definition and implementation of all policies and actions of the Community.
Community action is reinforced in the areas of coordination with and between Member States, to improve Public Health, Safety, Prevention, Information, and Education.

In autumn 2006, a milestone was reached by a broad consultation of the European Commission among all stakeholders (Governments, National Parliaments, regions, social welfare organizations, funders, representatives of civil society, representatives of health professions etc ...)

The European Union wants
-To contribute to improving public health by strengthening cooperation and coordination between Member States
- To develop a comprehensive information system

The links between health policy and consumer protection are now close, to guarantee a high level of safety in all areas, such as drugs and foods.

The European level can, we believe, play in health, a unifying major role. The new European momentum, we are seeing in recent years, also pushed by the request of consumers, is going to experience a significant acceleration in the decades to come.

In parallel to the acceleration of the role played by the European Community, the European Institute for Health has made a number of diagnoses about the upheavals that, in the coming decades, the boundaries of the health sector will experience.

- All surveys show how health is a common property and a concern by European citizens

-Major elements can anticipate an expansion of the field of health to a "Global Health": new issues of nutrition, dermatology, cosmetology, hygiene and discipline of life have already emerged. (Alcohol, smoking, exercise)

As Commissioner Dalli recalled in his message, the rise of Prevention is necessary to achieve the high level of public health now enrolled in the Community objectives.

-The contribution and the rapid development of new technologies have already produced visible changes in diagnosis and prevention.

-Aging of our population, aware of the lengthening of their lives but who want to age "in shape", "healthy". The establishment of an information and higher education system that encourages them to address their health problems more responsibly and more individually.

These are some obvious diagnosis, before proceeding with any forward-looking approach, that we found at the same time that we see the growing awareness of European citizens ,of the strong principle of the European Union: ''The equality of all Europeans in access to quality health and safety of a high level."

The key facts and diagnosis are the reasons for the creation of the European Institute for Health and its prospective project.

We have, all together, a common duty to anticipate the rhythm of science and technology that will accelerate in the coming decades and an increased expectation from European consumers.

It is to meet all these challenges that the European Institute for Health was created. It is willing to provide to all actors, to all its partners the opportunity to understand the issues that will lead, from major reflections and shared work, the decisions of medium / long term for the greater benefit of European citizens.

High performance. Delivered.

EIH Foundation Study

"Emerging Health challenges for Europe by 2030" Synthesis

May 2010

Presentation of study
Michel Moullet
Partner Strategy Accenture

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Introduction

Healthcare in Europe has been very much on people's minds—and kept there by a debate largely focused on medication, hospitalization, and issues of responsibility, liability and financing. But now we are starting to make out the main features of the next twenty years, which will significantly broaden the whole healthcare field into a concept of "total health,", involving issues of nutrition and cosmetology, increased emphasis on prevention and the contributions of new technologies. These changes will be preceded by scientific breakthroughs and accompanied by new institutional and corporate players. The 2030 time horizon will see a truly new scenario for healthcare. Describing its main features is the aim of this report

This study is the first ever conducted by EIH. It marks the starting off point for EIH's 2009 agenda, and as such tries simply to give some structure and direction to the debate, rather than to lay out a fixed and infallible vision of European healthcare in 2030.

Accordingly, we have identified five major trends or developments which should profoundly alter the healthcare ecosystem over the coming years:

1. "Youthful aging" will become a common priority and goal among Europeans.

2. Health risks will be increasingly borne by the individual.

3. Patients will be at the center of a wider ecosystem involving more players.

4. The hospital will refocus on caregiving, due to a massive inflow of new technologies.

5. Healthcare will be an engine of growth for the European economy.

1. "Youthful aging" will become a common priority and goal among the citizens of Europe.

Living in good health is obviously a priority for Europeans. But living healthily or "growing old youthfully" *until what age*? Life expectancy for some Europeans could reach 120 years in 2030, according to some scientists. In fact, long-range statistics show that life expectancy has continued to grow in Europe throughout the past decades and nothing leads us to think this momentum will slow down or reverse anytime soon. And life expectancy in countries just entering the European Union has always caught up with that of the countries already in it.

- *With an aging population, a major issue for European policy-makers will be keeping older workers in good health*

The make-up of the population in the Europe of 2030 will therefore certainly be different from its make-up today. Extended life spans and a higher proportion of people in their old age, indeed advanced old age, will entail major changes, especially in terms of employment and healthcare.

Unless immigration policies become much more open, the working population should stay more or less at the same level over the next 10 to 15 years. This obviously means that, at constant rates of employment by age group, the burden that the non-working put on the workforce is going to grow considerably. In 1965 people over 65 represented one-quarter of the population aged 15-64 but will rise to 35% in 2025, to 45 % in 2035 and nearly 50% in 2045; that is, if hardly anyone over 65 is employed, there will be one non-worker for every two workers. An increase in workforce participation among those over 55, if not 65, will thus be inevitable. And it will require that people in these age groups be in good enough health to work longer than they do today and stay young, in terms of their lifestyle, as long as possible.

- *Healthcare and related expenditures will become a leading household budget item, and will start to include such things as nutrition, mentally stimulating games, sports, and so-called cosmeceuticals*

Under these circumstances, healthcare consumption will keep steadily increasing. And healthcare can be expected to become a leading consumer category for Europeans.

Increasingly, Europeans are deciding for themselves how they will consume products good for their health. Consumers making up their own minds will come to characterize a field which as of today is still largely under the influence of healthcare professionals. Europeans are already spending more and more on "self-medication" in the broadest sense, i.e., including vitamins and food supplements. They proclaim themselves ready to make lifestyle changes in order to stay in good health, even if that means doing more preventive analyses, exercising more and watching their diet.

Health foods occupy a growing share of European diets, and this trend should not reverse itself despite the recent sharp rises in food costs, as evidenced by the success of probiotic drinks. In this regard, it is interesting to note that the diets of northern and southern Europe are tending to converge.

To age youthfully we need to start early and make it a lifelong project. We also need to take advantage of the synergies available by combining pharmaceutical and other therapeutic products with products from the food industry (nutraceuticals) and cosmetics (cosmeceuticals). Players in these industries, once quite separate, are now occasionally linked and will in the future very likely be joined, even partly merged. Health is not just something physical, but mental and emotional as well. Here the computer and media industries will have a much more important role to play. The groundwork has already been laid by electronic games that provide physical and mental exercise. Once degenerative pathologies start to upstage the traditional cardiovascular illnesses, products for social and intellectual stimulation will become a part of healthcare.

Nutrition, physical activity, resistance to stress, pleasure, social network and activity are conventionally accepted as very influential levers as far as life expectancy is concerned. Genetics and molecular biology will allow us to better understand the impact of these levers and the interaction between them. Thanks to a deeper understanding of the ageing process and to a more "systemic" and fact based approach of health maintenance, clearer guidelines and more focused prescriptions will be delivered through various channels (including health coaches), enabling European citizens to better maintain their health. The food industry will benefit as well from this progress: the range of new product opportunities will be substantially expanded.

Prevention and healthy living represent the soft path towards youthful aging. The other path deals with the basic mechanics of the aging process in order to lengthen our lives. It also employs new synergies among nanotechnology, biology, information science and cognitive science (termed "NBIC") in order, for instance, to implant miniaturized devices for diagnosing, preventing and treating without the "host" even being aware.

- *The increased desire to maintain one's "health capital" will nevertheless co-exist with risky behaviors*

All in all, consumers who are better informed about health matters and ready to spend more to stay fit and "young" while they put on years can be expected to utterly transform the healthcare picture in Europe. These trends are already at work today in each of our societies. There are also other trends making an appearance, ones that go the other way, such as the development of obesity related to sedentary living and an overly rich diet. Three million school European children are classified as obese, a figure that is rising by 85,000 cases a year. It is estimated that fully one-third of Europeans with long-term illnesses are overweight. How will these trends play out in the next twenty years? There are multiple factors and their relative weight matters quite a bit. If the main trend is towards healthy eating and physical exercise, uniformly throughout Europe; if the concerns of sustainability hold; if the higher cost of meat, especially beef, leads people to consume more vegetable proteins and these become more available, then virtue will prevail and the obesity phenomenon might merely be seen as a temporary "accident", in Europe as well as in the USA.

Right now some American companies run incentive programs to get their employees to take better care of their health. Some programs are more directive than others but can take the form of fitness programs (diet, physical exercise), wage bonuses for employees who have regular health check-ups, an insurance surcharge or even dismissal for employees with obesity or hypertension who do not follow a course of treatment with the support of a coach.[1]

Another scenario could see some differentiation of habits by socio-economic level and some inequality in terms of managing health assets. However great or small the inequality in this second scenario may be, it will remain the case that people's means will still restrict their access to the ever wider range of technology marketed for improved longevity and "youthful aging."

2. "Health risks" will be increasingly borne by the individual.

Risk, uncertainty, liability and insurance underlie all healthcare issues in the developed economies. These are the critical concepts underlying the great sociological and economic questions that fuel the debates and the policies in the healthcare field. How much effort to put into prevention and insurance? Where to draw the line between prevention and treatment? Between group and personal insurance?

Though risks to health are as old as mankind, managing these risks is a relatively new idea. With life expectancy short and primitive medical care that could neither prevent nor treat

[1] According to a survey by the National Business Group on Health, 46% of large US corporations offer financial incentives to employees to improve their health.

raging epidemics, the value that society attached to good health or to a person's life was low. With progress in science and medicine, longer life expectancy, the expansion of democracy and fewer human lives lost in conflicts has come an increased sensitivity to health risks. Prevention and insurance have developed with a clear division of roles among educators (family and school), experts (the medical profession) and organizations set up to manage the social security. Individualism and the increasing effectiveness of scientific medicine have significantly increased the value of life and consequently the justification for using all therapeutic means available in caring for people.

Financed by mandated contributions, the health insurance system, and more broadly the protection of society, constitutes a "middleman" between the consumer of care and the payer (that is, the party that settles the bill, since the contributor remains in the end the final payer.) This middleman has more or less taken responsibility away from the contributor, in that the reality of what is at stake economically with healthcare remains, for most of us, rather abstract. The ballooning of healthcare expenditures and especially the deficit of the health insurance system in most of the countries of Europe have forced a public debate on the responsibility for these expenses.

At first the debate centered on limiting healthcare costs, a legitimate concern for government given the extent of its liability. The concern which is not rightfully government's, and which the authorities have no appetite for raising, makes up the other side of the equation: Inasmuch as healthcare costs are trending upward and do represent justifiable expense (apart from a tiny fraction of waste and misuse), how much of their own savings and income should citizens be prepared to allocate to their own healthcare? Which health risks should they assume? How will our "ecosystem" deal with this risk . . . and this opportunity to contribute our economic growth?

Signals of varying strength reveal possible trends in the three main controls we have over health risk: risk prevention, risk awareness and risk management.

- *Risk prevention*

Healthcare is becoming everybody's business, no longer reserved for the experts in the medical profession or for those who pay for it and administer it. As participants in our own care, prevention largely falls to us.

If the overriding trend is for Europeans to pay greater attention to their health, then they will tend to take on more responsibility for their spending in this area, to arm themselves against risk and so to invest in prevention. Today, many households are devoting a not insignificant part of their budget to computer and telecommunications hardware, software and subscriptions. It seems only likely that as these devices and services become more commonplace, they should eat up a smaller share of our budgets and leave more room for spending on health. Sociological trends and the habits we value usually have an economic impact.

All the economic players in a position to respond are developing strategies and products, with an energy that should only increase in the years to come. This may involve food companies in terms of their products, communications and diversification or acquisition strategies or new professions such as the booming one of coaching. We can expect risk prevention to be led by a public-private partnership with a heavier private involvement. The anti-tobacco campaign

has been public; the advertising and publicity on cholesterol-prevention and the benefits of Omega-3 by a food company is private; and campaigns by insurers on "subsidies" for the insured who can demonstrate good behaviors are private.

A few mechanisms being adopted in other segments of healthcare are showing the way. Some insurers, for instance, are starting to adopt plans that allow lower premiums for drivers who buy commutation tickets on mass transit or who do not drive at night (as verified by a data reader in the vehicle.) It is easy to imagine ways to match premium adjustments very closely to people's behavior, a real-time bonus much like the airline miles earned on purchases. In a way, yield management [2] also represents the same trend of giving consumers more responsibility for their choices (in this case, for their expectations).

Once the collectivity assumes a portion of treatment costs, risk prevention is not just an individual matter. For example, should there be automatic screening for breast cancer if the business case is negative—that is, if it is less costly to treat a few cancers? At present, drawing the line between treatment and prevention is a judgment seldom made, for political and ethical reasons. But the next ten years are likely to feature debate on this topic.

- *Risk awareness*

Risk is a threat, an uncertainty and a probability. Acting on one of these terms means reducing the risk. If the threat goes away, the risk goes away. For example, in 2020 a patient reaching age 40 is identified as a high cardiovascular risk and is implanted with a device able to detect the onset of a cardiovascular incident and to treat it in real time. Technology eliminates the threat. We can expect diagnostic and epidemiological technologies to play a vital role in improving risk awareness, by producing information unavailable today through more evolved analytical techniques or through "on-board" systems, implanted and not.

The stakes for prevention are high and just as high for precisely assessing risk and consequently the cost of the risk assigned to the individual. The recurring problem here is asymmetry of information: I can have information on my condition and my risks that my insurer does not have. If such information is prejudicial to my profile and thus to the cost of my coverage, it is not in my interest to give out this information. Today such information, produced by check-ups and questionnaires, is occasional and incomplete. Tomorrow technology can be expected to enable insurers to zero in on the actual risk associated with every insured.

Beyond the risk awareness and the information asymmetry, which influence the "relationship terms and conditions" between insurers and individuals, the attitude of the European community of citizens toward risk will significantly influence health policies. The higher the risk sensitivity, the higher the price the community has to pay to protect itself, the more innovation adverse it can be in certain fields. Whether the precautionary principle will be expanded across Europe, and how it will be interpreted will be a crucial question in this regard. Will the precautionary principle ensure that uncertainties leading to high risk exposure are taken into account in a timely manner, involving the right stakeholders, with a strong responsibility ethic. Will it be considered on the contrary as an unfailing umbrella promising European citizens to live in a sterile bubble, potentially affecting our ability to bear the risks inherent to any innovation in life sciences?

[2] Variable pricing in terms of supply and demand

- *Risk management*

Europeans care more about their health than they did in the past. They invest time, money and emotion—and will keep investing more—in risk prevention. And they will be more inclined to do so if their personal responsibility is more engaged than it is today.

Today, in the majority of European countries, things work as though every insured had unlimited credit, with no justification for the reasons for the expense. Is the collectivity obliged, under a standard health policy, to take on repairs to the mogul skier's knee or the hang-glider's multiple fractures? Within the trend to transfer the social burden (the contribution system) to individual responsibility, a greater number of risks will likely fall to the individual.

And what is true for the European patient will also be true for European doctors. The latter base their diagnoses on judgment and take their risks without any directives (taken to the extreme, a scan would be required for anyone with a headache). In the USA, the investigation protocols are stricter, with systematic and documented forms, certain answers entailing certain tests and so forth. Litigiousness in medicine is already a noticeable trend, particularly in the United States, and will likely continue, especially as a consequence of the increased litigiousness in numerous businesses (such as publishing) and a general increase in the number of lawyers on company payrolls.

At least two professions are likely to benefit from the individualization of health risk: coaches and risk managers whose job it will be to evaluate and manage health risks associated with individuals or groups over time.

3. Patients will be at the center of a wider ecosystem involving more players.

The world of healthcare will widen as we ask more and more of it. The world of patients will be structured around the same actions historically taken in response to illness: diagnosis, prescription, audit of prescriptions, filling of prescriptions, intervention and follow-up. However, the landscape of this chain of activity will be very noticeably different, as new players will appear, others will disappear and roles will change.

- *Diagnostic and communications technology will shorten the diagnosis loop, which will alter the role of physicians and favor the development of new information-processing centers for remote, real-time consultation*

Technology is one of the fundamental causes of change in the cast of characters. It especially impacts diagnosis and the role of those involved in that activity. The technologies that will reshape things are those to do with diagnosis and communications.

Traditionally, diagnosis is a sequential operation: the doctor follows a branching of symptoms and causes, either at one time and in one locale or in a diagnostic loop entailing a succession of steps more or less spread over time and calling on various specialties.

Diagnosis requires serious expertise in the interface between patient and healthcare professional. The system is set up to ensure that the general practitioner or the referral doctor is best suited to carrying out the diagnosis.

In the next several years, there will be a broader range of pathologies for which a real-time diagnosis can be made. Not because the expertise of the professional in contact with the patient will be significantly greater but because diagnostic and communications technologies will make it possible to shorten the diagnostic loop. Thanks to sensors attached to parts of the home (doors, mattresses, toilets, etc.) or integrated into objects that we always carry around (like watches), a portion of diagnosis may be on-going. The expert system providing data analysis or alarm or action will be on-board if it is not too complicated or if an existing pathology requires immediate attention.[3] In some other cases, the data will be tele-transmitted and processed by off-line expert systems.

In yet others, the diagnosis will be made through a professional. While in contact with the patient, the professional will be able to concentrate on entering and transmitting the patient parameters defined in a protocol. These data will be transmitted in a short loop, practically in real time, calling up a long or short chain of people, with the potential, depending on the seriousness of the pathology, of making a real-time diagnosis and creating a treatment protocol. Diagnoses will be supported by expert systems whenever the assessment of the professional in contact with the patient is different from that of the primary care physician at the time. The point of contact may be the nursing staff or, in a different arrangement, the primary care physician. The contact may be face-to-face or by media.

Technology can head in two directions. In one case, the role of the referring physician disappears into a new chain of care. In the other, the referring physician's role becomes greater, precisely to the extent that data and decisions flow through him or her in a short loop, and do so even though physician and patient are in different places (consultation or visit).

The first scenario prevails if the technical act of consultation becomes commonplace, if the quality and certainty of the diagnosis are assured and if they are superior to those seen under the arrangement we are familiar with today (with, by analogy, an error rate equivalent to that typical of thoroughly monitored industrial processes). Tele-consultation, tele-radiology, tele-monitoring and other components of telemedicine take center stage. Whatever the scenario, the expansion of information processing operations is the new fact which is figuring more largely in this new "ecosystem". Certain data will be processed by the detection devices in contact with our body, while others will be processed remotely and require very high processing and storage capacity.

Jobs related to managing these processing centers are experiencing rapid growth. The location of processing and storage centers has been under debate for several years. At the forefront of this debate are the protection of personal data, ensured system reliability, and the qualifications of operators and analysts, and collaterally, of security operators. These questions naturally favor data analysis done by healthcare institutions (public or private hospitals) for the time being, but will gradually shift it over to diagnostic and processing centers as these are developed.

[3] As we are already familiar with in certain pacemakers

The progression could occur as follows: development of self-medication (already under debate today), the expansion of self-testing and tele-diagnosis (technically possible today and emerging in some countries), prevention-based coaching and individual assistance/advice under contracts and programs built on the "life maintenance" concept. Life maintenance programs with contractual arrangements, will involve a multiplicity of contributors organized in a "life maintenance value chain" providing guidelines, advices, prescriptions, evaluation protocols, logistics services, etc.

Such a new model based on a large scale and long term prevention policy will strongly impact the traditional positioning of the pharmaceuticals and the food industry. Change constraints on the way should not be underestimated.

In 2030, a remote or long-range relationship between patient and professional will have been widespread for many years. This does not mean that non-virtual, face-to-face relationships are not valued: some patients do not only ask their primary care physician for a diagnosis of particular symptoms. Advice and dialogue can have varying degrees of importance for the interaction. However, we will be very flexible about using the two channels, the virtual and the in-person.

- *New businesses will emerge, particularly that of "health coach", who will play a critical role with consumers*

In order to preserve our health assets and our financial assets, which are related, we use the services of health coaches. Their role is to advise us about, even to take systematic control of, our health assets and the financial assets related to it. Like an athletic coach, the health coach suggests plans of action for us, which when carried out are tracked on a factual data base.

We use the services of a health coach for a variety of reasons. We live in a region whose population is increasingly sensitive to high healthcare expenditures and which attaches great value to living into old age by staying active and independent. We also find it financially attractive, since our insurers have offered us a reduction in our health insurance premiums for having a health coach.

The health coach represents the fourth age of progress. First there was the age of office visits for everyone, then the age of selective screening for all (through campaigns), and then, still to come, will be the age of regular check-ups for everyone in certain defined segments of the population. The health coach represents the age of pro-active management of health assets.

Once we have a health coach and the technology to make diagnoses on-line rather than through a visit, the general practitioner/primary care physician can become the health coach.

If the primary care physician becomes the health coach, this broadens the scope of his or her function and introduces new challenges. The quality of advice given will depend on the doctor's knowledge and on the information he or she has at hand on a wider range of topics. Today, only pharmaceutical laboratories offer doctors information about healthcare products and promote them through office calls. The health coach will be besieged with solicitations from everyone with a health product or service to sell, from foods to fitness services.

- *Changes in the value chain will also affect pharmacists and the delivery of the prescription*

Prescriptions made in the course of family medicine are now written out on slips of paper. Filling such a prescription is done exclusively by the local pharmacy, who serves both a logistical and a medical function.

In 2030 we will have forgotten about prescriptions on paper. The prescriber will enter his prescription on line. Though human audits of prescriptions appear indispensable, that will not always be the case. A computerized comparison of the prescription with our electronic medical file will replace whatever the pharmacist does in the way of accounting. And expert systems will also be able to audit the appropriateness of prescribed dosages. Finally, information systems will be programmed with "red flags" currently used in industry, such as quantities or associations that are impossible or that require confirmation.

Will medications come to the patient or the patient to the medications? There is more than one answer. Filling a prescription when treatment needs to begin right away requires the patient to go to the medication. As to renewing a prescription, the determining factors are the alternatives and the marginal cost of distribution (last-mile logistics). Depending on circumstances, the patient will go to the medication or the medication will come to the patient.

Non-compliance primarily involves a fraction of the elderly. Just as some retailers have automatic re-stocking procedures with their suppliers, triggered by the supplier (VMI[4]), radio-frequency devices in addition to reminder alarms for taking medications will, in the case of non-compliant patients, trigger reminders or renewal orders, either for home delivery or by mail.

Lastly, a certain amount of treatments made today with medications will be administered by different means, some implemented relatively easily, such as therapeutic clothing, miniaturized medical devices (smart implantables, molecular machines) and others less so, such as cellular therapy. The easier methods will open a new area between the pharmacy and the hospital unlike what we have today. This area will consist of service centers (diagnostic and treatment centers) where we will be able to re-load our therapeutic clothing or our implanted diffusers, to reprogram our pacemakers, etc. These centers will represent an unbundling of the hospital's value-added; they will be specialized and operated by staff with different qualifications. Yet again, technology will make it possible to simplify a part of the chain of care, in this case by miniaturizing medical devices and thus requiring an infrastructure that is less cumbersome and skills that rely on shorter and less costly training than current medical training.

Whenever a diagnosis or real-time intervention can be performed remotely—i.e., whenever a unit of time can be unlinked from a unit of space—then there is room for a redistribution of roles and a revision of each participant's type and level of expertise.

- *As different lines of work evolve so too will training of professionals, which will have to change extensively*

The content of training will be impacted. As jobs become redefined so will the training that leads to them. The new jobs heavily involved with tools that support diagnosis and the

[4] Vendor-managed inventory: the decision to restock the customer is passed back to the vendor

"easier" interventions will need skilled, qualified people. The emergence and growth of operational jobs should represent a major aspect of the technological revolution in healthcare. Medical training and medical careers as we know them will be significantly changed. Entry-level training periods may be shorter; but then one's career path, or gradual acquisition of skills, will be highly linked to one's progression from simple operations to more complex ones, complete with certification procedures, and therefore entail a high degree of on-going training. The on-going training will be both to obtain new certifications and to keep up with changes in operating techniques and with tools that come on the market. Simulators will, of course, be very commonly used in training programs.

Everyone involved in the chain of care will be affected by a complete shake-up in training and in the development of standards and protocols. The pharmacist or nurse will be able to prescribe and follow up a protocolized illness like diabetes, as the explosion of technologies supporting each link in the chain of care will result in a revision of all supports and all training tools.

- *Social networks will work on behalf of health*

In Europe today treatments and protocols matter to three groups: the pharmaceutical industry, including the biotechs, care institutions in their capacity of running clinical studies and payment-setting bodies. For several years now, with certain serious publicized illnesses such as AIDS, patients, through highly effective organizations, have joined the process. This increased influence and activism on the part of patients could spread and become more common with the help of the social networks. The media, with the right approach and oversight, could greatly increase the public's knowledge about treatments. Just as the power of digital computation increases by using networks instead of single machines, the personnel involved in developing treatments will be able to exploit data generated by broad groups of patients, allowing them to conduct Phase IV-type tracking at lower cost or to do meta-studies.

- *How fast will it go?*

All the trends enabling the reconfiguration of the patient ecosystem do not progress at the same pace. Diagnostic and monitoring techniques are on the fastest track. These techniques are boosted by a continuous innovation flow in electronics and in information technology, with a specific focus on concentrating more sophisticated functions in smaller smart devices.

The regenerative medicine is close to the front-runners with impactful innovations in tissue engineering, biomaterials: regenerating skin and cartilage today, "building" organs tomorrow[5].

Early diagnostic and degeneracy diseases treatments make progress. Gene therapy and cell therapy are very promising, however the pace remains slower.

4. The hospital will refocus on care, due to a massive inflow of new technologies

The hospital is one link in the chain of care. As such, its role depends on the other parts of the chain. Today, a hospital admits patients who have had an accident or trauma of any size (in the emergency room), patients seeing their doctor or nurse, and patients there for an operation or other intervention. Whatever our health problem may be, big or small, the hospital is open to us. The hospital is also a center for teaching and research. It brings under one roof the technology needed for diagnosis, interventions and serious post-operative care.

- *Diagnostic centers and treatment centers, along with home hospitalization, will serve to refocus the hospital on direct care*

With coming changes in the chain of care, the hospital will be repositioned in a narrower scope of operations. Technology will take certain activities out of the hospital. With the diagnostic and treatment centers, home-hospitalization will be a leading cause of hospitals' refocusing. Even discounting the rising cost of diagnostic and treatment techniques, the dispersion of activities now assumed by the hospital will make it possible to lower hospital costs.[6] The organizations and processes for dealing with illness will become more segmented, and the hospital itself will become a specialized locus of centralized technical platforms.

Alongside these pools, local centers will handle certain phases of diagnosis and care, now simplified by technology, and specialized institutions will handle certain pathologies.

The development of networks, of home-hospitalization and more generally of all alternative arrangements to classic hospitalization is a part of a broader movement towards refined responsibilities depending on the level of care needed. The specialization of the largest regional institutions, both in and out of universities, which possess sophisticated technical platforms and multiple competencies will be accompanied by a progressive repositioning, in terms of their responsibilities, of local and pathology-based institutions.

Advanced diagnostic techniques will enhance prevention and planning when an intervention is necessary. Advanced diagnosis will make it possible to limit the resources reserved for emergencies. At that point the situation for patients will be quite different.

- *With online surgery, the choice of a bricks-and-mortar treatment center and the choice of a practitioner do not have to be connected; robotic surgery will be employed in numerous instances*

Due to tele-surgery we will be able, with certain interventions, to uncouple choosing the actual treatment center from choosing a practitioner.

In 2030, every operating room will be equipped with a robot. Robotic surgery, based on proven technology and lower materials costs, is just coming into to its mature phase. In May 2008, a team from the Calgary medical faculty used a robot to ablate a brain tumor. Intuitive Surgical, a California company, has sold over 800 robots for help with operations for heart and cancer patients. R&D labs are working on robots able to follow the movements of an organ and thus to operate on a beating heart. "Beating heart" operations will become common practice. In 2015 a scientific journal might publish the first experiments with prototype surgical intervention systems that are totally robotized under human surveillance. It might mention the successful ablation of a dog's spleen. In 2030, certain interventions will be completely robotized with no human intervention but surveillance.

[5] see J. de Rosnay, Et l'homme créa la vie, LLL, 2010

[6] Studies put at 1:8 the ratio of the cost of a home-hospitalization to that of a traditional hospitalization. (Source: Alcimed)

- *Making use of hospital services outside one's country will create keener competition among institutions.*

When there is no hurry, we will choose the institution where we would like to undergo an intervention, within or beyond our own country or continent, with numerous possibilities of varying cost, quality and reputation.[7]

As a consequence, some insurers will include out-of-country services in their coverage, even offering incentives for costly interventions where the cost differential is significant.

The globalization of the supply side of the healthcare market and the resulting competition could go in different directions: (a) competition sees the emergence of low-cost centers of excellence in new geographic areas or (b) competitiveness brings down costs, improves quality of service and increases effectiveness in the interconnected networks of Western Europe, reducing the differential with the low-cost regions.

The ratio of outpatients to admitted patients gets reversed. With the development of non-invasive techniques along with the uncoupling of intervention centers from care centers, the fraction of outpatients will increase and lengths of stay be considerably shortened.[8] Thus the hospital of the future is both an institution and an interconnected network of centers specialized by function: diagnosis, intervention, rehabilitation (follow-up care and recovery) and so forth.

- *In 2030, the hospital will exploit technological advances to make stays more pleasant, with not only better treatment of pain but also access to recreation and hospitality services*

The hospital as we know it today is focused on treating illness. It is far less focused on treating the person. A comfortable hospital is first a hospital that knows how to treat pain. Bringing technology to bear on substitutes for surgery and on non-invasive surgery will have a powerful impact on reducing pain. Improvements in anti-pain treatments will have an effect as well.

In most consumer markets the quality of products and services tends to get better, partly due to lower costs from scale economies and competitive pressure. Treatment and care centers will be no different. In 2030, the centers will make good use of multimedia equipment not only for technical purposes—co-coordinating the ecosystem of patient management—but also for offering patients access to services not directly related to medical care, such as hospitality services (e.g., ordering meals, with gradated privileges according to the patient's condition) and above all, to communicate with their family and friends at all times (here again with gradated privileges according to the patient's condition). This standard will extend to all centers where we stay as patients.

[7] The Bumrungrad Hospital in Thailand is a leading example of the new industry of "medical tourism". In 2004, the hospital treated 350,000 foreign patients and expects to treat 400,000 in 2005 – a 14% increase in one year. Meanwhile, US-based treatment of foreign patients declined 2.5%.

[8] The average length of stay in EU hospitals declined from 12 days to 8.5 days between 1980 and 1998. Though the timelines vary, the downward trend in average lengths of stay represents a basic trend in most developed countries. (Source : "Hospitals in a Changing Europe" European Observatory on Health Care Systems, 2002)

In this reconfigured chain, jobs and skills will evolve to handle new needs. With patient management taking an increasingly important place alongside the treatment of illness, a certain amount of co-ordination and integration will be called for. One integrating factor will be the patient file, where all the information from the various players will be brought together. The health coach has an integrative role for the various ingredients that go into maintaining good health. The health coach will integrate the various medical, social and psychological components of taking care of patients, especially in regard to elderly patients and those among them stricken with degenerative disease. He or she will coordinate the network of patient care, a more specialized network than today.

Progress in biomedical technologies and differentiation and specialization of institutions should bring greater specialization of personnel, at least in the "technical pools."[9] Training courses will have to adapt to this new state of affairs, not just for entry-level training but also on-going training, the outcome of which should be new avenues of professional mobility for personnel who will be perhaps less versatile than today.

5. Healthcare will be an engine of growth for the European economy

- *By 2030 healthcare will become one of the leading industries in the economy of Europe, reflecting both increased demand in traditional healthcare segments and a broadening of the field.*

Healthcare spending has increased by 2 percentage points of GDP of the wealthiest European nations in the last twenty years, from 7.6% of GDP in 1985 to 9.7% in 2005, and the trend is only expected to accelerate. In 25 to 30 years, spending in these countries may reach the level already found in the USA today of about 15% of GDP.[10] Such acceleration is predictable no matter what the rate of GDP growth, for the increasing attention paid by European households to preserving their health assets, together with increased life expectancies, are central trends that have begun to radically transform the healthcare ecosystem.

A major issue will be keeping a handle on cost increases, largely through productivity gains and changes in how healthcare is financed, particularly the assumption by households of an ever greater share of costs.

There will also be qualitative changes in demand. A great many households will directly finance a portion of their health maintenance, and those better off and more open to globalization could quickly foster international as well as national competition in the healthcare market. Simultaneously, the significant broadening of healthcare to include spending on cosmetics, beauty aids, fitness, even to some extent intellectual stimulation and mental health—expenses already handled by households as things are—will reflect a sharp shift in attitudes and in the portion of the household budget devoted to health.

[9] As opposed to centers for follow-up care or gerontology.

[10] In France, the authors of the report by the Attali Commission on Unrestricting Growth in France (*Commission de Libération de la Croissance Française*) felt that demand for healthcare might even reach 20% of GDP by 2030.

A continuation of recent cost trends would result in untenable financial, economic and social situations; but a few alternative paths suggest other possible outcomes, whose likelihood depends on how necessary they are seen to be and how quick the various players are to adapt.

- *Greater use of new technologies, boosted by insurers, will foster personalized medical care, which will enjoy increased productivity thanks to the industrialization process and increased competitive intensity*

The system's change agents will primarily be the insurers and the technology companies who react positively to the needs and wants of consumers and help to redefine the healthcare ecosystem in Europe.

Much improved prevention will play a key role. Between now and 2025-2030 the issue for European countries is to make significant increases in the financing of prevention by making use of co-financing, such as through mutual insurance companies, extended policies or pharmaceutical manufacturers. Insurers will play a vital role in the emergence of new mechanisms for evaluating, insuring and, to a degree, sharing the requirements of individuals.[11] In order to set their premiums more accurately, they will directly encourage the use of technologies that make it possible to anticipate certain physical or mental illnesses. They will provide incentives for the development of health coaches.

Suppliers of technology and related services will, by enabling increased individualization of health services, make a significant contribution to improved quality of care, not to mention better productivity. The development of new forms of diagnosis, prevention and treatment will be critical.

If insurers and technology vendors succeed in sustaining broad-scale implementation of new technologies, prevention will be stimulated, enabling us to anticipate certain illnesses and ailments, and the insurers will be able to tailor their products to offer customized coverage of the broader and broader risks that consumers will wish to cover. Greater and greater use of robots and new technologies will lead not only to improvements in the quality and delivery of certain modes of care but also to productivity gains. By being more precise and individualized, care and treatment will be more effective. While today they are merely in prototype, often less than fully developed or adopted, the new technologies are most probably going to follow the same path as their predecessors. Operating efficiencies and volume effects arising from competition in the industry will significantly lower average costs.

Healthcare professionals will have to adapt by accommodating and exploiting these new changes. Nurses will be able to operate with greater independence as a result of specialization, and the US example of protocols used by primary care physicians in office visits could become more widespread. The results of these changes will be a new distribution of labor among the various parties. This need to adapt also applies to traditional organizations. For hospitals this will mean confronting profitability and return on investment; for organizations and divisions of organizations this will mean gradually becoming part of a network; for pharmacies, it could mean seeing their role broaden to include a certain amount of prevention and treatment. The challenge for the health professions in terms of training is huge. But it heralds a wave of growth and energy for the sector that will in time involve all the parties, even if some segments of the profession do try to fight it. A new crop of jobs and professions

[11] *"Une brève histoire de l'avenir"* (A Brief History of the Future), Jacques Attali, 2007.

will spring up by 2030, including operators of care centers, tele-medicine and experts in preserving the investment in health.

The healthcare sector in Europe is thus going to be among the most promising for the continent, in terms of creating both value-added and employment. Jobs in this field will grow much more steadily and rapidly than in most other sectors. Its contribution to improved European competitiveness will be especially important in that it will not be limited to healthcare in the narrow sense but will impact the entire economy. Europeans bent on youthful aging will make a much more productive labor force than Europeans whose health is questionable. Innovation in the health field will have indirect effects on several other areas such as food, insurance or IT.

In twenty years' time, the individual European's health will not just depend on how smoothly the organism is functioning but also on a broader understanding of the goals and realities of complete wellness—the concept of total health.
Thus, eating will no longer mean simply obtaining all the foods the organism needs but rather a way to optimize the body's functions in order to "age youthfully" without illness. The practice of medicine will be increasingly predictive. Foods themselves will increasingly be functional foods provided by a re-invented food industry.
Life involves health risks; but as these become better understood, they become less random and more manageable. The individual, who has the most at stake, will make use of individual, tailor-made preventive measures. The economics of risk will be handled less and less collectively, trending toward a system of individualized insurance.
The healthcare sector will show significant growth. New jobs, such as coaching, will appear. Scientific and technological progress will continue apace, with greater repercussions than ever before. Healthcare will no longer be viewed as a financial drain, but as one of the dominant factors in renewed economic growth.

Main trends and potential discontinuities in European healthcare to 2030: economic impact and change in the value chain

Parties concerned	Trends	Wildcards	Comments
Households	• Longer life expectancy and older workers • More attention paid to health ("youthful aging") • Increased risk for individuals • Diffusion and greater accessibility of information making consumers more involved in managing their health • Increased costs	• Desire by the elderly for greater independence (development of self-managed retirement homes) • Households foster international as well as national competition in the healthcare market • Relative increase in costs financed directly by households, i.e. new awareness of need to take responsibility for one's health, along with new technologies on the market for cure and prevention • New bird-flu-type pandemics	Occurrence of some of these "wild cards" would highlight wealth disparities among Europeans and could have social repercussions. Moreover, with the development of competition and specialization, health could gradually become an economic good, with increased branding among other things
New players (in food, insurance, IT and related services, etc.)	• A large portion of the food product category in the health category • Increased role for insurers • Increased impact of technology companies	• New partnerships prompted by insurers, reconfiguring the value chain and enabling a massive in-flow of new technology • IT companies instigate rapid & widespread development of robots, leading to improved quality and productivity • New positions of Health Coach and Health Investment Advisor • Development of web-based social networks acting as lobbies and emergence of new businesses	Players highly heterogeneous The area in which insurers operate will depend on the regulations European governments work out
Health professions (physicians, nurses, etc.)	• Towards a new allocation of roles among doctors and other caregivers; i.e. focusing of doctors on their core business and expanding the role of nurses and other caregivers. • Hospitals run like businesses, professionalization of management staff • Nearly universal accessibility of pharmacies, health superstores and first-rate prescribers	• Commonplace use of protocols by primary care physicians in office visits • Development of telemedicine and independence of nurses • Diversity of caregiving experiences (operations, care, re-education for new locales, including the home) • Specialization and virtual networking of hospitals to maximize centers of specific expertise	Diversity of baseline cases across Europe
Governments (European, national, regional, etc.)	• Willingness to rationalize and control government spending • Increased direct financing by households • Gradual convergence of the different European systems, spurred by new standards and regulations	• Prevention becomes a priority, particularly due to progress in health education • Incentives for wide-scale implementation of new technologies, creating greater effectiveness and productivity; over all, healthcare becomes a source of public debt reduction and new jobs	Given the complexity and diversity of the various baseline cases, the analysis focused on the wealthiest countries of Western Europe, assuming a scenario of convergence with the other countries in the time frame studied

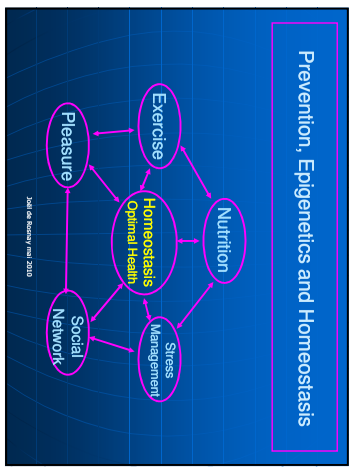
Source: Accenture 2008

Future trends in health

Joël de Rosnay

Conseiller de la Présidence Universcience

PowerPoint presentation



Converging ComTech Trends

- Mobile Net
- Blogs, podcasting, Wiki's, P2P TV…
- Multifunction terminals
- Wi-Fi (and WiMax), Hot spots interconnexion
- Wireless Broadband
- Voice over IP (VoiP) and free or low cost phone (Skype.com)
- Rfid's and intelligent tags
- Geolocalization, GPS, Wi-Fi, IPS, (*WhereWare*)

Technologies for Health : Major fields of developments

- **1- Medical Informatics and Networks**
- **2- Medical Imaging**
- **3- Biomedical Instruments**
- **4- Biomaterials**
- **5- Techologies for the Disabled**
- **6- Home Safety and Monitoring of Senior Citizens**

5-Techologies for the Disabled

- □ Virtual reality developments for re-education.
- □ Data teletransmission for monitoring re-education and evaluation on site.
- □ Technical assistance and supplementation :
  - o Analysis of biological signals for environmental controls.
  - o Assitance for education, and professional home activities
  - o Design of interfaces applicable to different types of handicaps
- □ Studies and evaluation of specific needs
- □ « User friendly » devices and equipment
- □ Simulation of movement analysis
- □ Early evaluation of needs (hearing, vision, mobility, functional re-education…)
- □ Environmental evaluation through ambulatory recording of physiological data applicable to environment control

6-Home Safety and Monitoring of Senior Citizens

- Identification of significant indicators for home stay (comportment analysis, balance quality, fall detection, specific physiological information according to medical prescription…)
- Adapted sensors for home monitoring (minimal intrusion, minimal environmental constraints, psychological acceptability, cost…)
- Data reconstruction and synthesis (multi-sensors fusion and decision-making process)
- Data transmission and warnings at different levels.
- Different organizational levels and networks around senior citizens at home.
- Psychological and social acceptability of the specific environment required for the home stay.
- Cost evaluation of organizations, equipments and personnel.

1-Medical Informatics and Networks

- □ Health care Networks, Home monitoring of patients
- □ Medical Telematics and Telemedicine
- □ Management of medical tests,
- □ Data search and data bases
- □ Bioinformatics
- □ Biosecurity
- □ BMI : Brain Machine Interface
- □ Computer Assisted Therapy
- □ Man/machines interfaces
- □ Models and simulation « in-silico »
- □ Micro and nano-technologies

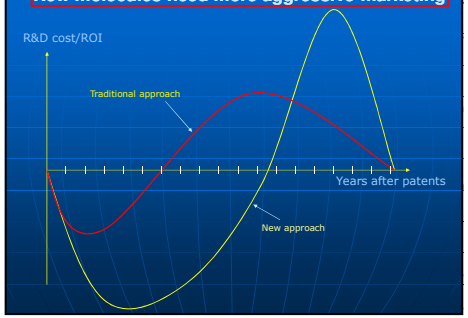
2- Medical Imaging

- 1- ***Faster diagnostic***, more precise and using all available information
  - □ Pictures quantification / practice fusion
  - □ Telediagnostic / expertise
  - □ Diagnostic assistance
- 2- ***Therapeutic follow-up*** or follow-up of treatment efficiency
  - □ Pictures quantification
  - □ Systematic detection
- 3- ***Therapeutic assistance***
  - □ Computer assisted medical intervention
  - □ Planning for radiotherapy
- 4- ***Patient confort and ergonomy***
  - □ Lowering of doses
  - □ Shortening of examination procedures
  - □ Equipments portability
  - □ Non invasive procedures
- 5- ***Increase of equipment productivity and cost reduction***
  - □ Shortening of examination procedures
  - □ Networking and information storing procedures

New Trends for the Development of personalized equipement and services

- **A growing sector for personalized prevention and care** (microtechniques, non invasive procedures, robotics, functional exploration of the body, molecular imaging…)
- **Personalized treatments** (intelligent pills, micro-stimulation…)
- **Explosive growth of « P-health »** (personalized health), with the development of broadband Internet, mobile communication systems, remote diagnosis, personalized online advices
- **Life maintenance Program** (LMP)

New molecules need more aggressive marketing



3- Biomedical Instruments

- **Biomedial instrumentation regroups :**

❖ ***In vivo*** **Equipments** (characterized by digitization and miniaturization) : **Medical equipment, implantable medical devices, signal analysis equipments, lasers, patient's health monitoring systems…**

❖ ***In vitro*** **Equipments** (characterized by nanotechnologies developments, nanolabs, biochips, bioinformatics, robotics : **dosages and biological explorations, automatic testing systems…**

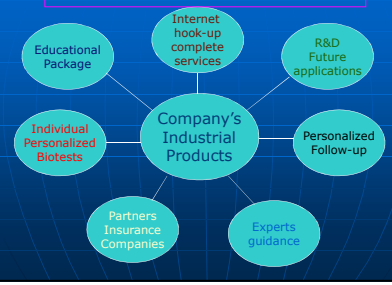
4-Biomaterials

The Chester Conference of the European society for Biomaterials, in 1986 has proposed the following definition : **« Non living materials used in a medical device which purpose is to interact with biological systems »**

- Devices in contact with a surface
- Devices communicating with the outside world
- Implantable devices

- The application field of biomaterials is wide and diversified :
  Biomaterials for internal use, external use, implantable, injectable, permanent, consumable, dental protheses, orthopedics, implants… Glues, Smart pills, cements… Artificial skin, bandages, wires, lenses…

LMP Strategy (Life Maintenance Program)



Round tables

Moderator : Alex Puissant, *Journalist, Independent Conference moderator*

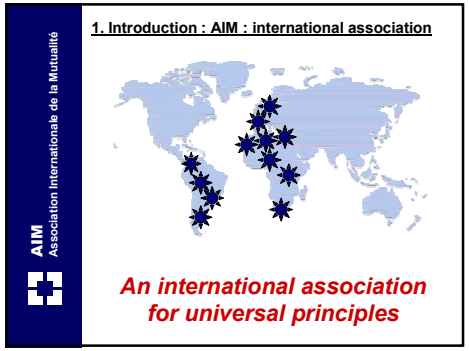
Round table I : Experts point of view

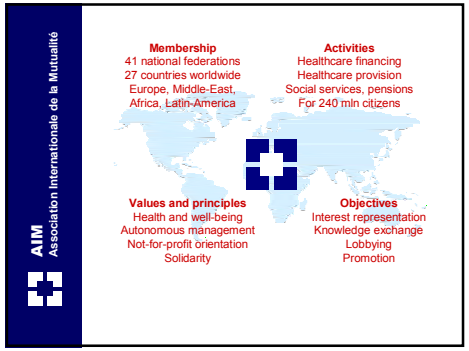
Nutrition and health :

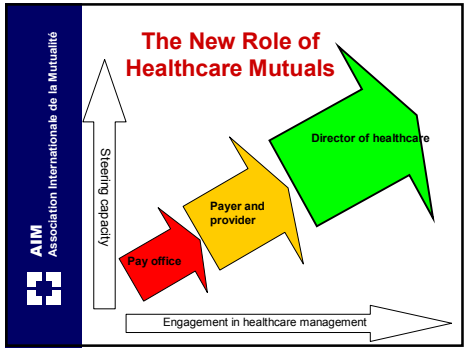
Dr Jan Van Emelin

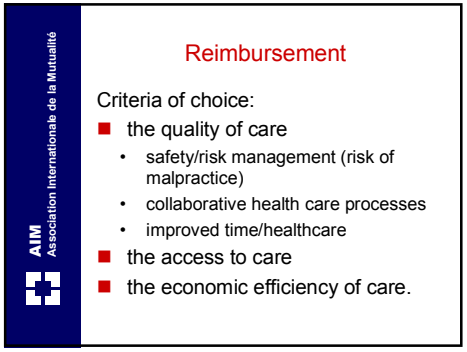
Member ENHA (European Nutrition for Health Alliance)

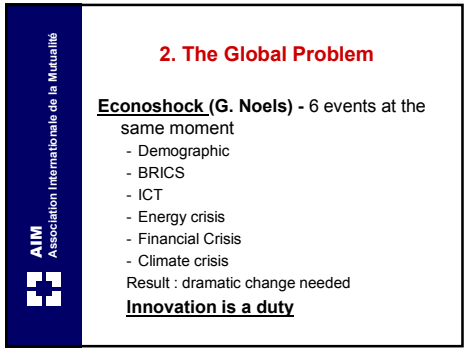
PowerPoint presentation

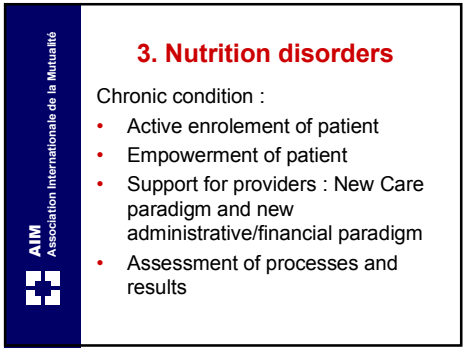


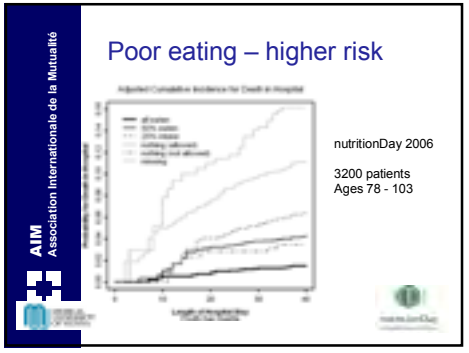










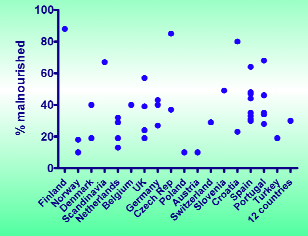


How many?

Malnutrition / at risk in Europe is reported present in

- 5% of the entire population
- 10% in those over 65 years
- 15% in ages 75-80 living at home
- 35-40% of all hospital admissions
- up to 60% in care homes

Percent of patients malnourished in European Hospitals
21 % (14.341 of 67.094)
Papers and abstracts 2002-2007.



Kondrup et al. Nestle Nutr Workshop Ser Clin Perform Programme 2009;12:1-14

EP plenary votes September 25 + October 9, 2008, White Papers:
Nutrition, Overweight and Obesity
'Together for Health': A Strategy 2008 - 2013

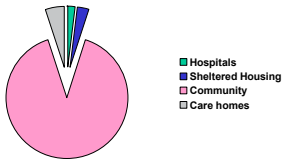
Calls on Member States, along with regional and local authorities, to use the cooperation mechanism to improve the exchange of best practice; calls on the Commission to be proactive in producing guidelines and recommendations based on such good practice;

4. Disease Management

- Agreements Health insurance funds-doctors, nurses pharmacists
- New service structures of disease management
- In Belgium : temporary consortium with IT companies – DMCoorpeation

Were do we find the malnourished?

(Elia 2009)

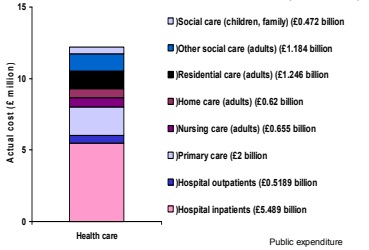


At any given point in time, > 3 million people in the UK are malnourished or at risk of malnutrition. Most are in the community.

This transforms to > 33 million people in Europe…

New health economic *evidence*
(Elia & Stratton 2009)

New UK costs of malnutrition exceed £13 billion (€15,5 billion)*



***Transformed to Europe €171 billion**

Conditions of succes

- Involvement of doctors
- Involvement of payers
- Good governance
- Businesscase
- Financial plan

DM International

- Competence centre hosted by AIM : screening, solutions, implementation, evaluation
- Scale advantages, IT solutions? Content production?
- Partnerships : CPME, COCIR, EPF, HOPE, EU institutions…

Malnutrition important?

Malnutrition increases

- need of care in all care situations
- risk for infections
- risk for complications (morbidity)
- need for treatments in hospitals
- length of stay
- risk of dying from diseases (mortality)
- ≈ 30 Million Europeans affected
- Cost for Europe ≈ €170 Billion / year

EP plenary votes September 25 + October 9, 2008, White Papers:
Nutrition, Overweight and Obesity
'Together for Health': A Strategy 2008 - 2013

Urges the Commission to take a more holistic approach to nutrition and make malnutrition, alongside obesity, a key priority in the field of health, incorporating it wherever possible into EU-funded research, education and health promotion initiatives in EU-level partnerships;

Public health initiative

- Retired population, executed by GP, capitation budget
- Contracts with cercles on vaccination programs, screening (diabetes, undernutrition, ca…,), supported by datamining and predictive modelling
- Enrollsystem in DM programs

Conclusions

- Initiatives of quality and DM are growing within health insurance funds
- Involvement of payers, providers and patients in new partnerships
- New partnerships with industry can open new markets, with win win situations.

New technologies

Patrice Cristofini

Vice- President Alliance and Strategic Partnerships Orange Healthcare

Les études de prospective sont toujours difficiles et je tiens vraiment à saluer le travail effectué par Accenture.
Les Technologies de l'Information et de la Communication (TIC) (en anglais ICT) sont des outils qui permettent de développer un usage en ''e-santé'' entre les citoyens et les professionnels de santé concernés et cela aussi bien à domicile qu'en mobilité. En effet l'informatique est un nouveau moyen pour améliorer la santé de nos concitoyens.
Orange healthcare offre des services de santé à distance à destination de trois cibles : Les professionnels de santé, les hôpitaux, et les patients. Orange essaie de mettre ces nouvelles technologies à la disposition de ces cibles. Nous analysons la stratégie et l'environnement et donc sont concernés également les compagnies d'assurance publique et privée, les directeurs d'hôpitaux etc…
Voir Orange se lancer dans la santé, à travers cette e-health qui est un nouveau paradigme, peut paraitre étonnant, et dans cette démarche, nous tenons compte que dans la notion de santé il y a deux dimensions différentes : Il y a la dimension médicale : science, diagnostic, traitements, etc.., mais il y a aussi la dimension sociale avec la prévention pour le citoyen (consommateur) qui sera l'acteur déterminant.

Insurance (1):

Marcel Smeets

Former Director AIM
(Association Internationale de la Mutualité)

" Beyond the borders of today´s health care and social protection paradigm "

The ACCENTURE prospective study is very valuable and inspiring. Nevertheless, the problem of any prospective study is, that it is often too much based on current assumptions, knowledge, technics and practice. That makes them often a little predictive and even less surprising.

ACCENTURE indeed has pointed to the right issues. Today´s problems in EU health care are ageing, budget, workforce, lack of innovation. It is clear that these issues have to be solved – although not only these issues.

Perspective for next 5 years is very negative

- **Health care budgets based on economic growth :**
  - Health care budgets grow faster than GDP. There is a growing gap between what is needed and what is possible.
  - Since the economic and financial crisis, there is even no economic growth at all. Without adequate measures, these gaps will keep on growing.

- **Government bail-outs will have impact :**
  - The massive financial/capital injections into national economies have proven that 1) there was enough money to spend and that politics have neglected the need to invest in health care and social protection and 2) that there will be no money left to invest in health care and social protection, since it has all gone to automotive industries, banks and other sectors.
  - The massive capital injection will have for sure an effect on the value of money, be in terms of inflation or deflation. The exact effects will only show up over a decade or even more, bringing more insecurity now.
  - Either way, inflation or deflation will effect the health care sector in terms of prices and wages.

- **Unemployment will increase:**
  - As a result of the financial and ecomical insecurity, unemployment will rise, as does health care consumption. Today´s restricted health care budgets will face even more pressure.
  - As a side-effect, more unemployment will lead to lower tax and premium income for governments and health care financers. As a result, budgets will run in deficits.

- **Competition-concept in health care to be tested :**
  - All the above-mentioned will test the concept of competition and market in health care systems. Long time seen as the solution and tool to manage health care budgets, it is now questionable whether this concept turns out to be effective and efficient.
  - And if yes, the question is who will have to pay the price. Lower budgets may put accessibility and quality in question. Co-payments, own-risks, non-reimbursement may have a positive impact on the budget, but not on the patient.

- **Problems in today´s health care**
  - It is clear that putting more money in health care systems is excluded. Solutions therefor have to found in the design of health care systems themselves. Not more euros for the same health care, but more health care for the same euro is the motto for future health care debates in the EU.

– Today´s health care paradigm is based on ideas, infrastructure, attitudes and logistics of the 1960s. A paradigm shift should focus on logistics and coordination of activities, rather than in more of the same. Coordinated health and well-being coaching instead of fragmented curative actions should be a basis for this paradigm shift.

Where are you in 2030 ?
A paradigm shift – as prospective studies – should also focus on future needs, instead of current deeds. The basic question is "What do I do and what do I need in 2030", being then a patient ourselves.

- Youthful ageing is our priority. We all want to stay healthy and in good condition as long as possible. This means prevention (persons) and adaption (environment). This new goal will define a new way of organizing health care provision.
- Individualism in rights and duties. Health care and social protection have too long been seen as a state-business, financed collectively and consumed collectively. Today´s health care consumption patterns are more individualized, but the financing does not follow. Auto-financing and accepting individual (financial and preventive) responsibilities will be key in future health care systems.
- Social protection = private prevention. State pensions, compulsory health care insurance, social housing and the like will be at a minimum level by 2030. It is clear that youthful ageing is becoming a private matter, in which the state can only stimulate and guide – and no longer finance.

What do I need in 2030 ?
Being a patient of 60 years by then, my personal worries concentrate on three aspects :

- Health care. Am I physically well enough to reach a youthful age? Who will take care of my health?
- Retirement. If I´m in good condition by 2030, then I want to profit from it as well. Is there any financial basis to live my youthful age?
- Housing. To live my youthful age I need an adequate environment. Housing should be in function of my (health care) needs and economic (retirement) means.
- Security or trust. Having seen the problems EU health care and social protection systems face today, I do not trust the good conditions for my youthful ageing. I do want to invest and to save for my youthful age, but do not trust that current organizations and provisions can realize and satisfy my future needs.

Towards a "well-being insurance" ?
New health care logistics, new financing mechanisms and new well-being attitudes seem to call for a new well-being insurance concept. This public/private framework should be based on an obligation to participate (individual), an obligation to accept (financing organization), a risk equalization system, legal basic provisions and legal basic contributions.

Basic conditions for sustainable health care

- **Distinction "need" and "want"**
  – What is needed (social, collective), what is wanted (private) ?
- **Re-definition of "solidarity" and "equality"**
  – Income vs. generation; health vs. contribution
  – Uniformity vs. diversity
- **Integration of vital life-basics**
  – Health care, Living, Housing
- **In-kind services instead of money**
  – Active role of new style-health care and well-being organizations

Insurance (2):

Dr Gary Bolger
Chief Medical Officer
CMO AXA PPP Healthcare

I am pleased the study recognises the important part insurers have to play in the health of the population. I am also gratified to think that we will be around for the foreseeable future!

I am a firm believer in **individual choice** and the individual's own responsibility for the outcomes of that choice. The increasing trend towards this is made much of in the study. I share the view that people will be much more involved in decisions affecting their own health, but I would like to make a couple of observations:

Firstly, people don't make choices in a vacuum. Decision is influenced by a wide range of factors, not simply by what is logical. Information alone is not enough - as evidenced by the continued prevalence of smoking. There will remain a large role for society and its political leaders to ensure a healthy environment and to make good health choices both the norm and the easy choice.

Secondly, there exist wide disparities in health between and within the countries of Europe. We need to continue to tackle these.

Thirdly, influencing health choices isn't easy. Current evidence in favour of incentives e.g. through insurance premiums, is poor.

Moving on to **technology changes**: I have no doubt healthcare will continue to evolve and technology will increase. However, the tensions of an ageing population, medical inflation and raised consumer expectation versus ability to pay will remain. For this reason, a couple of points need strengthening:

Health technology assessment. We need much better information on what treatments work, for whom, by how much and what are the harms they might cause. Simply judging healthcare provision on how much is spent or how many people are treated is not enough. Better information will help people to know which treatments to offer and also help patients decide which to choose.

The ever increasing complexity of healthcare means patients and healthcare professionals will need help. The role of 'health counsellors' is highlighted in the report. I believe the increasing complexity of choice, risks, benefits and probability of these will become too complex for the human mind to cope with without the help of computer based decision support systems. Health choices are usually not simple pathways that can be traced with an algorithm. Rather, they are a judgment of a complex interaction of the probability of many benefits and harms.

Cosmetics:

Bertil HEERINK

Director General COLIPA, the European Cosmetics Association

On findings:

1) **'Youthful aging' will become a common priority and goal among Europeans**

- This finding coincides with the trends we observe Europe wide in our industry. It will lead to an increase in consumer's demands in functional cosmetics of the highest quality and diversification.
- It is –indeed – sometimes referred to as 'the quest for cosmeceuticals'.
- It calls for a constantly innovative industry, driven by ongoing research and product development, new technologies and – of course – the application of the highest safety standards.

2) **We need to take advantage of the synergies available by combining pharmaceutical and other therapeutic products with products from the food industry (nutraceuticals) and cosmetics (cosmeceuticals)**

- Correct assessment; there are ample opportunities, look at the 'borderlines developments' in product innovation. This will continue. But: synergies can only be fully exploited if a science driven industry remains to have the capacity to innovate.
- (reference to Innovation Event in December)
- We see this trend also reflected in the diversification of retail channels: in increased number of personal care products is offered to the consumer through the pharmacy.

3) **Health is not only physical, but also mental, emotional**

- A fundamental assessment, which needs to drive many policy options and industry activity.

- It confirms our own research on the value of well being, the curative opportunity of increased self esteem, to which cosmetics and personal care products contribute.

- It is the fundament of the societal value and the contribution to the quality of life, which we make.

- Refer to the Look Good Feel Better initiatives across the world Significance:

a) Direct: raise of hygiene standards (WHO collaboration), protection of environmental changes (skin care, sun care etc)
b) Indirect: self esteem, well being

4) **Health care will be an engine of growth for the European economy**

- Cosmetics industry's contribution is already large (70 billion Euros, 4000 companies, 500.000 employees, direct and indirect) and can further expand its significance, if well embedded in the European agenda for an innovation of this European Commission (Barroso agenda)

Economy :

Christian Labrousse

Professeur d'Economie, Université Panthéon–Assas -Paris

1- Le concept de « santé globale » crée un nouveau secteur économique porteur :
. des nouvelles technologies bouleversent non seulement la médecine réparatrice, mais la prévention.
. des domaines d'activité santé apparaissent dans l'alimentation, l'hygiène, l'assurance, la gestion, la communication…
. des emplois nouveaux et nombreux alimentent une demande de plus en plus forte de tous les acteurs concernés.

2 - Le risque santé devenant de plus en plus individualisé implique une analyse et une gestion également personnalisées. Les schémas collectifs sont de plus en plus remplacés par des approches particularisées. Le nouveau métier de conseiller de santé va se développer très rapidement.

3 – La globalisation, c'est-à-dire l'ouverture internationale à la concurrence de tous les segments de santé, induit une baisse des coûts de production comme dans les autres domaines économiques, par la mise en cause des monopoles de toutes natures.

4 – Les pays européens les plus riches consacrent 9 % du PIB à la santé traditionnelle, les Etats Unis 15 % . Les projections pour 2030 portent ce nombre à 20 % . En rapprochant cette donnée des prospectives démographiques il est possible d'affirmer que la santé subit une révolution à la fois idéologique, scientifique, qualitative et quantitative.

5 - Dès que l'approche n'est plus comptable, au sens strict, l'économiste de la santé devient fondamentalement optimiste pour l'avenir. La santé globale apparaît comme un des principaux moteurs de la croissance européenne, beaucoup plus porteur qu'on ne le considère généralement. A côté d'activités en décroissance apparaît enfin un secteur indéniablement dynamique.

Discussions (excerpts)

Alex Puissant (AP)

Dr Van Bladeren What would be your role ?

Dr Peter Van Bladeren *(Vice-President Nestlé Science and research, CH)*
The views of the future that we're seeing here are very interesting**.** For Nestlé personalized nutrition is something which we have very high in our view, in the future as well. The difficulty, yes, of course, in getting there I'll speak about the actors, the economic circumstances that we need to be in agreement with working in this preventive way. I think it is one of the other aspects and I think it is part of the fact that we have all these wonderful new technologies available. The validated bio markers to see whether there somebody is sick or has a chance to be sick are not really available. In that sense nutrition is a different thing from a pharmaceutical drug. If you're dealing with a sick person you can usually see this quite clearly. If you're dealing with somebody who is going to get sick, you're still healthy. Dealing with a healthy person and dealing with different things in different health situations demands diagnoses that are more subtle and much more precise than in a pharmaceutical way. To get there I think there is a lot of money needed to research, a lot of effort needed to research.

I'm sure the views of the economic difficulties that exist but I think that the fact that everybody is here around this table is a very good sign.

Helmut Voigtlaender *(Vice President World Health Assembly, DE)*
I have been former director in the Federal Ministry of Health in Germany. Now I would like to give an echo to Mr Smeets when he said that we should have a closer cooperation between different sectors which are of influence to the health sector. For instance, housing or pension systems, health care..... I mean we have in WHO (World Health Organization)**,** that since years, strengthening health systems and cooperation. In former times it was intersectoral cooperation and we have it in EU since the new strategy in 2007 that we have devised health in all policies. So that is already happening. But the problem is that they come together, they inform each other of what they are doing but everybody is working alone in his garden. That is to say, in international organizations, if you take for instance the WHO, the EU and the council of Europe, the three major actors in Health in Europe, they come together, inform each other once or twice a year of what they are doing but cooperation is more than neutral information and that is really the problem; it does not work, it has to be achieved.

A P
Anybody wanting to react to that?

Marcel Smeets
The remark may be addressed to me. Maybe I can just respond because I fully agree that it is not about mutual information or mutual cooperation; it goes much further actually. It is complete integration of pension and health care. But why today is pension just a

bag of money? Why in Europe lots of insurance products, health care insurance are just a bag of money? What we need, I think, and what I would like to have as when I am sixty years or older is not a bag of money and then sort yourself but some organization that can be the health coach or can be vitality coach or whatsoever but some institution, some organization that organizes my vitality and not informs you what is possible but really does it and in that I think if I might speak on behalf of the insurers which is not my right since a few months but I think that they have understood that the only reason of evolution from day office to care organizer, like a travel office ; you pay money and you get a service in return, not just a bag of money. That should be the total integration also in terms of pension and retirement because I am getting older and don't need money I even don't trust to give today at [sic] institutions, a little premium and then knowing that within forty (to) fifty years there will be some kind of capital but we have seen what can happen with a capital of an insurance. But I think the future of health care and of the elderly is more interested in services than in money. That should be an integration of pension and health care.

A P
Who wants to say a point?

Dr Jan Van Emelin
I can support this completely in terms of service that they should deliver – and I propose – we are delivering – we are developing two kinds of services. The first one is different services for disease management including under-nutrition as a huge problem, including malnutrition as a huge problem and that cost a lot of money. The second service and I think that the WHO and Europe should come together towards they don't have a public health system for the elderly people. We have wonderful public health systems for young children, for children of school age. We have occupational health services for public health and then we get pensions and at the moment of the pension we are retired. There is no, one public health organization that can give identification of under-nutrition or identification of chronic diseases. We need an initiative from Europe or from WHO or the combination of both – and we are taking the initiative anyway – practically in terms of how can we deliver together with the health care providers an initiative of public health for the elderly? That's quite interesting.

A P
Anybody else? A question? You have one?

A participant
We heard a lot about opportunities for new jobs. We talked about the health coach. At the same moment we heard that there is a shortage of workforce in health in Europe – there is a green paper about that. - There's a big debate. So, how do you see those two evolutions moving on? On what side? New challenges, new jobs, new demands and on the other hand less people working in health, what choices have to be made?

Pr Christian Labrousse
The response is both simple and complex: It is complex because if we follow your reasoning, term to term, there will be shortages and surpluses in some sectors, but there is a regulator: it is the market and this market will regulate the individual health.

A P
Let me check with the chairman of the European Institute of Health. You called on all of the participants to come up also with ideas on where to go from here, what kind of topic to discuss. Are we on the right track or still some way to go?

Strachan Heppell
What we are looking for is to use this occasion to study and your reactions to identify the key more specialized topics that we ought to take first. What should be our priorities? That's for the key feedback we want from today.

A P
So let's go and see whether anybody else wants to say something on that point? What should the Institute be dong over the next couple of years?

Pr Gorän Bondjers *(Senior advisor, Global Health Europe, SE)*
Listening to this I should be very pleased because I've been working on chronical diseases. But I seem to lack a perspective. And that is infectious diseases and what's happening with them which is both a question about how to organize health care, because it is rather difficult, always, to take care of your own health in relation to infectious diseases. Also, I think that with the – what's happening now with globalization – we're going to be exposed to infectious diseases we haven't seen before. And we know that the pharmaceutical industry does not produce antibiotics as a very simple remedy for infectious diseases.

Dr Jan Van Emelin
For infectious diseases there are lots of initiatives that have been developed in Europe. I think the European Centre for Disease prevention and Control (ECDC) for instance. It's an agency with a very quick system of information – and all the member countries are asked to participate in a quick information system. I think there is a lot to do. You are in Sweden (where) I was last week with the Haemophilia Organization. The best organization you find is Sweden because you have a model for chronic diseases that functions very well. In the rest of Europe this kind of approaches are missing actually so I think that a lot of these interventions should be developed in Europe.

A P
On this theme of what the Institute should get involved with over the next couple of years. Maybe Dominique Vacher, you might want to say something on that point?

Dominique Vacher *(Directeur Général, laboratoires Genevrier, FR)*
Health industries retain many advantages of discussions made during this session, because future directions are essential in the context of our development projects and

naturally we must think of various issues of Europe with different demands in terms of disease and future health actors.

A P
Well, and in the remaining three minutes, I'll ask each of the panel members to say in twenty-five seconds what the European Institute of Health should be doing over the next couple of years?

Marcel Smeets
I think that the Institute should go on organizing platforms of discussions kind of future. So maybe we should go and try to set up more of these discussion sessions, maybe in a smaller scale. But these discussions, I sincerely said at the beginning of my intervention are about me, about my health care and pension, and also about your health care: so please don't think it is the health care of the future, it is your health care.

Dr Gary Bolger
I think we should be promoting a healthy environment and also put much more effort into technologies so that we know what is going to work.

Bertil Heerink
Research: I have heard little about the role of research and whether this is a task for this Institute or not but since we are in the process of making up our minds on the health frame programme on research and development I really believe we should focus on the role of research and in that context also, on the possibilities of public/private partnerships in research in order to make a difference. And that came hardly across and I would be very much interested and also convinced of the need to make progress in that sense.

Dr Jan Van Emelin
Three things – first of all: how can we organize links using new technologies and how can we do that in practice, what are the legal, the social links, secondly: how can we organize further risk management, let's start with risk management and third: what is the link between technology and society? These issues could be discussed.

Pr Christian Labrousse
I draw the attention to the fact that from 9 to 15 % (or 20%) of GDP is a real revolution. This is not a simple adjustment, but a revolution in what we call health professions.

Round table II : Parliamentarians point of view

John Bowis (OBE)
Former Minister of Health
Former MEP

Headlines of the intervention:

After what he had heard from the presenters and experts, John Bowis developed the following points:

- the inter-relationship between health needs and the economic crisis,
- the links between physical and mental health,
- the needs assessment not becoming a shopping list of wants.
- the cost of longevity in terms of health care and long-term social care, pensions and the need to devote more investment in healthy ageing.

He stressed the unique expertise that comes from living with a disorder or disability and the need to harness that expertise when considering both individual care and the design of service provision.

Lastly he looked ahead to an era of less hospital care and more day surgery, hospital at home schemes and the diversion of patients from Accident & Emergency departments to hospital based GP teams.

Antonyia Parvanova
MEP

Headlines of the intervention:

- Welcome the development of the study developed by the European Institute for Health - This is the kind of research definitely needed in order to have a long-term view on the development of public health policies at national and EU level

- **Out the five challenge identified, the ageing of the European population and its impact on public health and social system is certainly the key one**, as it will have an impact on all the other ones, and raises a wide range of issues to be addressed:
  - The financial sustainability of our healthcare systems
  - The increased burden of certain chronic diseases and the need to better manage health risks
  - The way healthcare is delivered
  - The management of our healthcare workforce
  - etc...

- The result of the EIH study actually demonstrates the **need for a real preparedness plan at EU level to address these challenges**. There is a need for a long term view at EU level in order to address these future health challenges, and the issue of subsidiarity too often mentioned by Member States should not be an excuse to avoid looking at these questions from a European perspective

- The ageing of the European population will have a significant impact on the sustainability of our social, economic and health systems. A shift in the way public health management is currently considered will be needed in order to address - in terms of financing, organisation and effectiveness - this impact of the ageing population on public health in Europe

- **The role of healthcare professionals** is obviously crucial in addressing those challenges. They are not the one to blame, but they should be at the forefront of the change in practices, and the training and management of the EU health workforce should be one of our top priorities

- **Technology and innovation** have certainly a great role to play in responding to the issues and challenges identified by the EIH study, with **for example the great potential of eHealth**
  - There is a need however to **develop a clear and dynamic regulatory framework for the implementation of technologies applied to healthcare**, which should work towards the same objectives: **patients well being and concrete public health outcomes**

- Another issue to keep in mind, if we want to address these challenges successfully is the **need to reduce health inequalities**. There is a need for a **broader action, at EU level, involving all stakeholders.** The definition at EU level of basics standards guaranteeing an equal access to timely, safe and quality health services could be an efficient tool in order to reduce health inequalities. This is the sense of the **EU patients' rights initiative** (and not only when they cross a boarder!)

Discussions (excerpts)

Alex Puissant *(AP)*

Mr Smeets, you want to say something?

Marcel Smeets
I understand that I had to invite everyone for my sixty-sixth birthday as I understand that it would be an exceptional event, so please welcome everyone. Secondly, isn't it strange that you are saying that there are no patients. Don't you consider yourself not as a patient, then? So, why can't we reflect on the future of health care and without the formal patient because that's actually maybe the problem we had today – and I feel free as a consultant, and I'm happy with that, to speak [about] what you want yourself because it is your health care. You are the patients of the future, in a sense.

John Bowis
That's perfectly fair and I've always said that before I'm [sic] a politician, I'm a patient and I'll go on saying that because some people think I'm a doctor [which] I'm not. But I am very anxious, though, that – it comes back to some of the things you've been Alex talking about – which is the opportunities for patients to take control and to do things. I'm anxious that that should not be just for either (well-)educated patients or for well-off patients and we must make sure that we are providing something which embraces all patients. And sometimes those patients do not have the ability to speak for themselves and so there are adequacy groups and so on, which speaks for them. And I think you're not without knowing that. But I think we just have to remind people that is important because we do want to hear from them and we do want to enable them to have the benefit of whatever is coming in the future.

A participant
What do you want to know except what I have observed already? Innovation, research and a broader scope to meet high quality in a wider range?

Geoff Thompson *(VP Regulatory and EU Public Affairs, Danone, UK)*
I'm very interested here in the debates and the issues and the items coming out here today. And I think it is welcome to see people from different backgrounds and areas and different states coming together which I think has to be the key –Representing the food companies which I do, I'm very interested in the debate on the role of nutrition and good nutrition as a contribution to useful aging as preventive measures. And I do think that the way the food industries have this responsibility to play that right **,** to make sure that we do give people healthy choices, meaningful healthy choices and give them the means to make those choices by the due care labelling, by the due for example promoting things that profiles and so on and so forth, and I do think that if we do that right, if we do that correctly, then there is a key role for the food industry to play within this debate as part of the solution.

A P
As part of the solution, Mrs Parvanova. You would accept that?

Antonyia Parvanova
I would like to reflect upon that because actually we have been exposed on different types of advertisements, on different types of goods. Have you ever heard of a good advertisement for a healthy lifestyle ? Or health ? So we have to make our health sexy. We call it now awareness campaign but it is not enough. In this way, the many points of view we have, the better idea we'll give for example to the European Institute for Health, for indicators that they have to do a research on. And we'll have the complete picture how to make it a priority and what kind of compounds when we mix them. We have the best value for our money because, as I said previously, we have the same amount of money and we have to make choices. It's extremely difficult to make a healthy choice ; it's extremely difficult to manage your life in the right direction. But it's also extremely difficult to make people aware that they would like to make exactly this choice which we call the right or the balance healthy lifestyle choice. So this is the thing that if we have these indicators and if we have the right research and the right arguments and the right data provided by the Institute, then, probably – and if we have the right campaign – then, probably, we will be more successful by convincing people that this is the right way to go. Otherwise the other way we know is that the younger and as much as the healthier as possible not to burden the economy.

Helmut Voiglaender
I would like to echo a bit what Mrs Parvanova said before – the difficult position of health in Parliaments. Now we have of course to put question why is that so ? And I think the reason for that is because the economic meaning, the economic importance of health has been underestimated for so many years. It is not only in Parliaments like that, also, if you take governments, the health minister is very often not the strongest personality. Now let me give you just one example from the country I know best, from Germany. Last year we had a national budget of 282 Billion Euros. If we take together all what hospitals do, doctors do, nurses do in the pharmaceutical industry and express that in terms of management, it is 292 Billion Euros; that means it is more than the whole national budget. In other words, every ninth job in Germany is somehow in connection with health. Now, that has been underestimated for many, many years, and I think in the European Commission it has arrived but it has not arrived everywhere in the conscience, in the awareness of our states. It was one of the last Commissioners for health, Mrs Vassiliou: she said health means also wealth. And I think this is something which we should make better aware in our states.

A P
Mr Bowis**,** It is not going to end there?

John Bowis
No. Part of it is that, you see, in Europe, we have a rotten Treaty where health is concerned. And I would like to see this Treaty clause changed. But I don't think I have the power, personally, to make that happen. Goodness knows what I would do politically if I did. But It's a very fair point and I think it goes back further than Mrs Vassiliou – I think

– David Burn, actually, first started talking about health and wealth. And it's something, you know – we're talking about when in my other hat, when I was in Parliament, of development – we well understood, when we talked about investing in developing countries, we totally understood that without healthy people, you could not have a healthy economy ; they weren't fit enough to earn and to contribute and they were a burden rather than a bonus and so we understand that when it comes to developing countries, why don't we understand that when it comes to our countries ? And when we looked at what was the Lisboan agenda – but it's now moved on twenty/twenty, whatever it is, of Mr Barroso – in this new Parliament, then we should be saying that a pre-requisite to a competitive Europe are healthy people. A healthy environment as well, but a healthy people. And then, perhaps, we can get this across but it is an uphill struggle to make that connection. And so I think we also have to look to the people out there creating the wealth to start shouting about their successes too, whether they are in pharmaceuticals or medical devices or health insurance or all the things that generate good health. You know the sports facilities, the advisors, wherever it may be. Let's hear from them. The importance of what they are doing in terms of the economy of their country and of Europe, perhaps we can get on that.

Paolo De Angeli *(General Manager, International Division, Chiesi Farmaceutici Spa IT)*
I represent Chiesi Pharmaceutical (Italy) but I don't want to talk about this. I think that the debate was quite interesting for objecting about the future of development of personal medicine and how we are going to treat our patients, etc... But Mrs Testori-Coggi, at the beginning, said there is one objective of the new Commission which is also to reach a homogenization –For the better homogenization you fight for the better you are. Now the question for me is one that was not at all treated after this intervention of Mrs Testori-Coggi.
It is quite contradictory: we thought, most of the things we have seen during the different presentations –because we are going back to–and I think that Mrs Parvanova knows very well what we are talking about – the difference that lays between these countries and other countries is striking definitely.

A P
So your basic starting point was that there is a lot of inequality; she gave figures and she said it was unacceptable and you say it is unacceptable.

Paolo De Angeli
Yes, but how are we going to call – to take this issue together or the other issues?

A P
But what is your answer to your question?

Paolo De Angeli
It is – and I am going to pray – and to become more used to have poverty, – *"Consommation"* – that is the point, and, today, we are calling for more "*consommation"* in order that to *"re-arrange"* the economy. I wonder how we can *"re-arrange"* the economy for *"consommation"* if we have this kind of powers.
A P

In this complex environment, it is going to about choice, isn't it? You can't do it all, Mrs Parvanova?

Antonyia Parvanova
It's complicated. If it was only about the choice, it'd be easier but actually, we're to say, how are we going to change? I think the answer is easy to say but difficult to fulfil. This is just to change the Treaty and to put health on it rather than work on it. But there was something else that here the colleague from Germany Helmut Voigtlaender said. He was talking about the health budget and the comparison between health budgets. If you look at the same time at this health budget not comparing one country to another one but in one and the same country, 77 % from this health budget is found for workforce, is found for something that actually does not make more health. And that's complicated; this problem also needs to look at. And there is also a tax for the Institute I think. And there are many other topics we talked about the. We always have been told about the holistic approach when we tackle a patient. If –when we tackle the health policy, I think we should use the health – the holistic approach. And we should not avoid also talking about education because without education and in poverty we will have more and more people who will do the wrong choice. And it's going to be very complicated to explain what is the right choice and how we are going to do that choice

A P
Anybody else wants to respond? Yes, Mr Bowis?

John Bowis
There are certainly paradoxes, aren't there, because we want to give people more control over their own health. But if they make the wrong decision, are we going to intervene? Or are we going to let them go downhill? One of the presentations, I think, referred to the hand glider who breaks his legs or whatever and should we, the taxpayers or the insurance papers, have to pick up the bill for that if in his decision he made a mistake, should he not cover? You are going to argue that the hand glider should take out an insurance to cover any potential cost. But what about smokers? Unless the insurance people in this room are going to say they've got a wonderful policy for smokers against the possibility of them having, in later life, problems in hospital we're going to have to pay for it. But I think there are some things which are actually quite difficult for politicians to resolve. And there are these sorts of problems. Just as on a British – I think it was a – radio programme, recently, they were pointing out that the ever increasing costs of public services is geared almost overwhelmingly to the aging population. It's the pensions, it's the health, it's the long-term care. So what's the answer to that? Well, one of the problems, of course, is that the ever aging population are the people who are more likely to vote. And so the suggestion being laid was, just as you have a limit when you're very young as to when you can start voting, there is the suggestion that perhaps you should get a limit once you become over a certain age as well as when you should go on having the right to vote. Now, that's not something the politicians would ever bring in, nor would it be right to say that it just shows the paradoxes there are in trying to balance these things. But if I come back to why we're here today and the report we've had today, these are proposals, I think, not all of them – because the hand glider once was in there, was he? But most of them I would wholeheartedly endorse, but we've got to take the public with us, we've got to provide the resources for the initial investment and, Helmut, of course, not any was the policy wealth/health but it's been developed into health in all policies. Because a lot of the problems for the point you are raising – why health is not high enough on the agenda – is because all the other departments of state in governments and commission directorates who [sic] are not labelled health don't think health is important. And they don't understand that their actions contribute to good or bad health. And so they should be part of the team.

A P
We're almost finished with this panel of discussions. I think it's only fair but we should have the last intervention from the floor on the part of the patients or the organization. So after having heard all the discussions, what would your final comment be?

Kaisa Immonen *(Policy Officer, European Patients Forum, FI)*
I represent the European Patients Forum. First of all, it's been a very interesting discussion and I might say a particular thank you to the political panellists, here in the second panel, for raising so many important points. I was slightly concerned about the absence of any patients' representative in the previous panel. And for that matter for our health professionals or organizations as well. I do believe that in these discussions we must not forget the political dimension and I also do believe that there is a role for patients' organizations to play in these debates and although I appreciate Marcel Smeets' point, I still think that...

A P
It was of course for all patients...

Kaisa Immonen
Yes but, still, our perspective is not the same; I can't speak for myself as a non-patient. As well, I cannot have the patient perspective that is actually living with a long-term condition and depending on the health services in the everyday life – and in fact for their lives. So I very much welcome the last openings and I hope that we'll continue this discussion with all the stakeholders.

AP
Thank you very much for that intervention. You're all politicians so you're used to speaking in depth at seminars like this but you're also used to suddenly seeing that TV camera and then you've got to say the same thing but in sixteen seconds

Thibault de Lary *(Mrs Grossetête MEP, representative)*
We must really focus on the issues of research and innovation. If there is no research and innovation, that go outside Europe

John Bowis
One item which we haven't picked up – which I would raise, and then I may want to come into response to our patients' representatives. The thing we did not pick up is the needs assessments. Whether it is a patient or a career, we need to develop needs assessments. And I would underscore needs assessments and it's not getting a shopping list of

wants. And that's something I learnt from a past life when I was interested in Community Care Legislation. and on the point about patients, I totally agree, there is nothing like the experience of a patient. And we can all be that person. I mean, I know from a year ago when at a twenty-four hours' notice – I have no idea where it was coming – I was in Brussels and had to have a triple-heart bypass I learnt a lot about heart disease and I learnt a lot about cross border health So that experience is something that I add to my compendium of life-learning. And we go on like that and we should always listen to the people who've experienced a health problem.

Antonyia Parvanova
I would conclude by looking forward to collaborate with the European Institute of Health because I am of those kinds of politicians who, first, are very rebellious and, second, are very committed to the final goal. And to me, the final goal is to have health as a part of the Treaty so does mind the Treaty – if this is the goal for all of us – so we're looking for partners and to achieve it.

Conclusion et clôture

Bernard Mesuré
Vice Chairman EIH (*)

Nous voici arrivés au terme de cette réunion. Je remercie sincèrement tous les intervenants et tous ceux qui nous ont apporté leur contribution Je suis sûr que les différentes présentations et les riches discussions qui ont suivies vous ont permis :

- de mieux appréhender les importants bouleversements à venir, les changements drastiques de nos modèles au fur et à mesure que nous avancerons vers une « Santé Globale »dans un environnement européen scientifique, technologique, culturel, très différent de celui que nous connaissons aujourd'hui.

- de mieux percevoir le rôle que jouera la Communauté Européenne pour, progressivement, nous aider à aborder, dans l'intérêt des consommateurs européens, ces nouvelles problématiques.

- de mieux percevoir le sens du projet de l'European Institute for Health, de son objectif de facilitateur dans le rapprochement, la confrontation des idées de « l'ensemble » des acteurs, dans l'enrichissement de leurs réflexions à la recherche, comme le souhaite le Commissaire Dalli, de solutions partagées « efficaces et innovatrices ».

Pour ce faire, une approche multi-états et multidisciplinaire sera nécessaire, comme je l'ai indiqué dans mon introduction.
Nous vous remercions pour votre présence nombreuse et qui répond déjà à ce besoin de réflexions et de travaux partagés, puisque, dans cette salle étaient réunis cet après-midi, des représentants d'une vingtaine d'Etats Membres et de la totalité des acteurs cités dans l'étude prospective d'Accenture.
Je pense que nous pouvons dire que, pour la première fois , tous les acteurs de cette « Santé Globale » que nous anticipons à un horizon 2030 ont été réunis aujourd'hui.

Vous l'avez compris, les thèmes de nos réflexions seront nombreux. Pour nous aider à dégager des premières pistes et en attendant que vous nous rejoignez, nous espérons nombreux, nous vous remercions de bien vouloir nous indiquer sur le questionnaire qui vous a été remis les 3 sujets qui, a vos yeux, vous semblent prioritaires .

Je terminerai, en citant Victor Hugo qui avait déjà des visions très européennes :

« Etre de son temps, c'est travailler à le pousser vers l'Avenir »

Alors ,ensemble, soyons de notre temps le plus nombreux possible pour travailler à cet avenir pour le plus grand bénéfice de nos concitoyens européens .

(*) Bernard Mesuré has been appointed Chairman of the Board in June 2010.

Conclusion and closing address

We are at the end of this meeting. I sincerely thank all contributors and all those who gave us their support. I am sure that the various presentations and fruitful discussions that you have followed, have helped you :

- To better understand the significant changes coming, the drastic changes in our models progressively as we move toward a "Global Health" in an European scientific, technological, cultural environment, very different from that we know today.

- To gain insight the role that will play the European Community to gradually help us to address, in the interest of European consumers, these new issues.

- To gain a clearer sense of the project of the European Institute for Health, with its goal of facilitator in bringing the confrontation of ideas of "all" players, in the enrichment of their reflection looking for shared "effective and innovative" solutions, as advocated by the Commissioner Dalli.

To do this, a multi-state and a multidisciplinary approach will be necessary, as I indicated in my introduction.

Thank you for your large attendance which already meets this need for reflection and shared works, since in this room were gathered this afternoon, representatives of twenty Member States and all the actors mentioned in the Accenture prospective study.

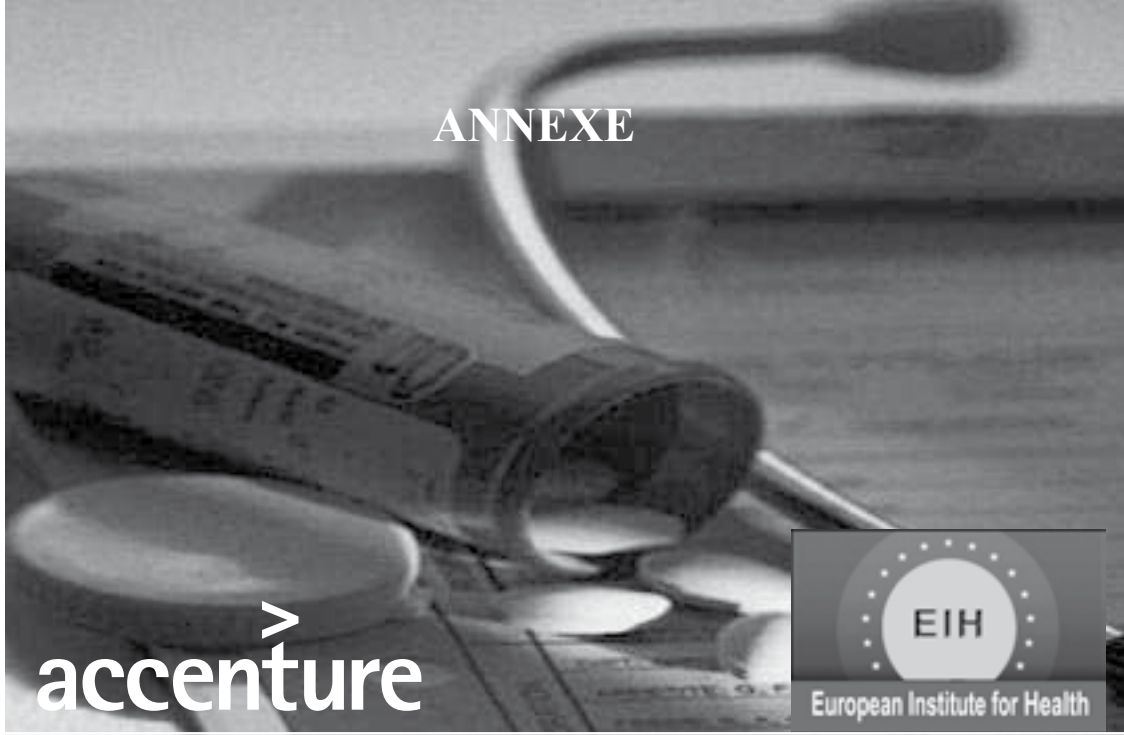
I think we can say that for the first time, all actors of this "Global Health", we anticipate at 2030, were met today.

You've understood, the themes of our discussions will be many. To help us identify the first tracks and until you join us, we hope many, we thank you for to indicate on the questionnaire that was handed the three subjects, in your eyes, seem to be priorities.

Let me conclude by quoting Victor Hugo, who had very European visions:

"Being in his time, is working to push it towards the Future"

So together, being in our time the greater number possible to work towards this future for the benefit of citizens of Europe.



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Tendances et ruptures dans le domaine de la santé en Europe à l'horizon 2030 – synthèse

Mai 2010

Sommaire

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Introduction

Le thème de la santé occupe l'esprit de tous les citoyens européen, dans un débat qui reste encore très centré sur le médicament et l'hospitalisation, sur la prise en charge et ses enjeux financiers. Or, nous voyons déjà émerger aujourd'hui les fait majeurs qui marqueront les vingt prochaines années : l'élargissement considérable du champ de la santé, vers une « santé globale » avec l'entrée sur scène des problématiques de nutrition, de la cosmétologie, la montée en puissance de la prévention et l'apport des nouvelles technologies. Ces évolutions seront précédées de nouveaux apports scientifiques et s'accompagneront de nouveaux acteurs institutionnels et économiques. L'horizon 2030 marquera une véritable « nouvelle donne » de la santé. L'objet de cette étude est d'en décrire les principales composantes.

La présente étude est la première étude conduite par EIH. Elle constitue un point de départ du programme de travaux de l'EIH sur l'année 2009. A ce titre elle prétend structurer et orienter un débat, non pas établir une vision définitive et indiscutable de ce que sera la santé dans l'Europe de 2030.

Cette note de synthèse repose principalement sur la revue d'un nombre significatif d'études publiées en Europe sur la santé et sur les facteurs d'environnement tels que la démographie, l'économie, la sociologie ou encore l'évolution technologique touchant directement ou indirectement la santé. La très grande majorité des études met en lumière des tendances fondées sur un passé récent et en déduit des projections à moyen terme. Rares sont celles qui raisonnent à un horizon de 20 ans. La projection des tendances de santé à cet horizon nécessite donc de compléter ces études par des essais à visée davantage prospective et de prendre des risques. Cette synthèse résume les problématiques qui nous semblent être déterminantes pour rendre compte de l'évolution de la santé dans les pays européens à l'horizon 2030.

Quelques principes structurent l'approche qui a été retenue pour cette étude.

La santé est appréhendée comme un écosystème complexe et multi dimensionnel qui requiert une approche globale de la vie des citoyens européens prenant en compte la famille, la région, le pays, l'Europe, les modes de vie, les risques, etc.

La plupart des facteurs qui influencent les tendances à long terme sont interconnectés et exigent donc une approche systémique.

En matière de prospective, et sur une période de 20 ans, des signaux faibles et des tendances peuvent être utilisés comme vecteurs de la réflexion, porteurs d'accélération pour certains, de ruptures pour d'autres, sans lendemain pour d'autres encore. Classer ces tendances constitue le risque de la prospective et doit permettre d'alimenter les débats.

L'autre risque est celui de la détermination du moment où l'impact de telle ou telle évolution se fera réellement sentir ? Quelques exemples. Le changement climatique peut entraîner des changements majeurs en matière de santé publique mais probablement pas à l'horizon 2030. L'évolution technologique joue un rôle essentiel dans l'évolution de nos sociétés et tout particulièrement sur notre santé : par exemple, la vitesse à laquelle les thérapies géniques se développeront sera clé. Leur impact se fera-t-il sentir vers 2015 ou vers 2030 ? Compte tenu

de la multiplicité des facteurs à l'œuvre et donc du niveau d'incertitude, l'étude ne prend pas position sur les dates clé qui pourraient marquer les tendances de santé à l'horizon de l'étude.

Identifier les tendances à long terme nécessite « d'organiser » la complexité en quelques thèmes clairs et simples sur lesquels les décideurs publics devront concentrer leur action.

Cinq tendances ou évolutions majeures qui devraient changer en profondeur l'écosystème de la santé dans les prochaines années ont ainsi été dégagées :

1. « Vieillir jeune » deviendra une priorité et un objectif que partageront les Européens.

2. Le « risque santé » sera de plus en plus un risque individualisé.

3. Les patients seront au cœur d'un écosystème élargi à de nouveaux acteurs.

4. L'hôpital sera recentré sur les soins grâce à une diffusion massive des nouvelles technologies.

5. La santé sera un vecteur de croissance pour l'économie européenne.

1. « Vieillir jeune » deviendra une priorité et un objectif que partageront les citoyens européens.

Vivre en bonne santé est de manière évidente une priorité des Européens. Mais vivre en bonne santé ou « vieillir jeune » jusqu'à quel âge ? L'espérance de vie de certains Européens pourrait atteindre 120 ans en 2030 selon certains scientifiques et chercheurs. De fait, les séries statistiques longues montrent que l'espérance de vie a continué de croître régulièrement en Europe au cours des dernières décennies et rien ne laisse à penser que le mouvement peut se ralentir ou s'inverser dans les prochaines années. Ainsi, l'espérance de vie des nouveaux pays entrant dans l'Union Européenne a toujours rattrapé celle des pays déjà intégrés dans l'Union.

- *Dans une Europe vieillissante, conserver en bonne santé la fraction la plus âgée de la population active constituera une problématique majeure pour les décideurs européens*

La composition de la population Européenne en 2030 sera donc très certainement différente de sa composition actuelle. L'allongement de la durée de vie, et l'accroissement de la part du 3^{e} âge, voire du 4^{e} âge, entraîneront des changements majeurs, notamment en termes de travail et de santé.

Sauf à recourir à une politique d'immigration massive, la population active devrait rester quasiment stable d'ici 10-15 ans. Cela signifie évidemment que, à taux d'activité par âge inchangé, la charge que les inactifs âgés feront peser sur les actifs va croître très fortement. Les plus de 65 ans représentaient ainsi un quart de la population des 15-64 ans en 2005, mais cette proportion passerait à 35% en 2025, 45% en 2035, et près de 50% en 2045, soit un inactif pour deux actifs, si la quasi-totalité des plus de 65 ans ne travaillait pas. Un relèvement du taux d'activité des plus de 55 ans, voire des plus de 65 ans sera donc inévitable, et exigera que les personnes de ces générations soient en assez bonne santé pour travailler plus

longtemps qu'aujourd'hui et « rester jeune » en termes de modes de vie le plus longtemps possible.

- *Les dépenses liées à la santé deviendront une composante importante du budget des ménages et couvriront un spectre large incluant la nutrition, certaines activités de stimulation mentales et physiques et les produits "cosméceutiques"*

Dans ce contexte, la consommation « santé » continuera donc d'augmenter régulièrement. La santé deviendrait ainsi l'un des premiers postes de consommation des européens.

De plus en plus les Européens décident eux-mêmes de leur consommation de produits bénéfiques pour la santé. La liberté de choix des consommateurs tendra à s'imposer dans un domaine encore, à ce jour, largement influencé par les prescripteurs professionnels de santé. Les Européens dépensent en effet déjà de plus en plus pour de « l'auto médication » – au sens large c'est-à-dire en incluant les vitamines et les compléments alimentaires. Ils se déclarent prêts à modifier leurs modes de vie pour rester en bonne santé, quitte à multiplier les analyses préventives, à faire davantage de sport et à soigner leur régime alimentaire.

Les aliments fonctionnels prennent une place croissante dans l'alimentation des Européens et cette tendance ne devrait pas s'inverser malgré la hausse récente et brutale du coût de l'alimentation, comme en témoigne le succès des boissons probiotiques. A cet égard, il est intéressant de constater que les régimes alimentaires du nord de l'Europe et du sud de l'Europe ont tendance à converger.

Pour vieillir jeune nous avons besoin de nous y prendre tôt et de nous préparer tout au long de notre vie. Nous avons également besoin d'exploiter de nouvelles synergies d'offres combinant les offres pharmaceutiques et autres offres à vocation thérapeutiques avec des offres issues de l'agro-alimentaire (« nutraceutique ») et de la cosmétique (« cosméceutique »). Hier distincts, les acteurs de ces industries sont aujourd'hui ponctuellement connectés, ils seront demain très probablement articulés voire partiellement intégrés. La santé n'est pas que physique, la santé est également mentale et intellectuelle. Ici l'industrie informatique et celles des medias joueront un rôle beaucoup plus important. Les prémisses s'en font déjà sentir aujourd'hui avec des offres d'équipements électroniques ludiques permettant de pratiquer des exercices physiques et intellectuels. Dès lors que les pathologies dégénératives disputent le devant de la scène aux traditionnelles maladies cardio-vasculaires, les offres de stimulation sociale et intellectuelle entrent dans le périmètre de la santé.

La nutrition, l'activité physique, la résistance au stress, le réseau et l'activité sociale sont reconnus comme des éléments essentiels de l'espérance de vie. La biologie génétique et moléculaire nous permettra de mieux comprendre l'influence de ces éléments et leur interaction. Grâce à une meilleure compréhension du processus de vieillissement et à une approche plus scientifique et « systémique » des conditions de maintien en bonne santé, des principes et des prescriptions précises pourront être dispensées au travers de multiples canaux (en particulier par l'intermédiaire de conseillers santé). L'industrie agro-alimentaire bénéficiera de ces progrès : l'éventail d'opportunités d'innovation produits sera considérablement élargie.

La prévention et l'hygiène de vie constituent le volet « soft » de la réponse à la question : comment vieillir jeune. L'autre volet travaille sur la mécanique intime du processus de vieillissement pour accroître notre longévité. Il fait aussi appel à de nouvelles synergies entre

les nanotechnologies, la biologie, l'informatique et les sciences cognitives (les « NBIC ») par exemple pour implanter des dispositifs miniaturisés permettant de diagnostiquer, de prévenir et de traiter à l'insu de la personne « porteuse ».

- *Le désir croissant de maintenir son "capital santé" coexistera cependant avec des comportements à risque*

Au total, des consommateurs mieux informés sur leur santé, prêts à dépenser plus pour se maintenir en forme et « rester jeune » en vieillissant devraient profondément bouleverser le paysage de la santé en Europe. Ces tendances sont déjà au travail aujourd'hui dans nos sociétés. Il en est d'autres, contraires, qui se manifestent également : le développement de l'obésité liée au sédentarisme et à un régime alimentaire trop riche. 3 millions d'écoliers sont classés comme obèses en Europe, un chiffre qui augmente tous les ans de 85 000 cas. On estime que plus du tiers des Européens qui souffrent de maladies de longue durée sont des personnes en surpoids. Comment vont se combiner ces tendances dans les vingt ans à venir ? Les facteurs sont multiples et leur poids relatif jouera un rôle important. Si la tendance lourde est à l'hygiène alimentaire et à l'exercice physique, de façon homogène dans les différents pays d'Europe, si les préoccupations de développement durable s'imposent, si le renchérissement de la viande bovine notamment pousse à consommer davantage de protéines végétales, elles-mêmes plus accessibles, alors la spirale sera vertueuse et le développement de l'obésité pourrait être considéré comme un « accident » conjoncturel en Europe comme aux Etats-Unis.

Déjà certaines entreprises américaines incitent leurs employés à prendre soin de leur santé dans le cadre de dispositifs d'incitation. Plus ou moins directifs, ces dispositifs peuvent prendre la forme de programmes de remise en forme (régime alimentaire, exercice physique), d'un bonus sur le salaire pour les employés réalisant un bilan de santé régulier, d'un malus voire d'un licenciement pour les employés sujets à l'obésité et à l'hypertension s'ils ne suivent pas un programme de traitement avec le support d'un « conseiller »[1].

Un autre scénario pourrait voir une différenciation des habitudes selon le niveau socio-économique et une inégalité en matière de gestion du capital santé. Quelque soit le degré d'inégalité dans ce second scénario, il restera que les moyens financiers restreindront toujours l'accès à une l'offre technologique de plus en plus large permettant d'améliorer la longévité et de « vieillir jeune ».

2. Le « risque santé » sera de plus en plus un risque individualisé

Risque, incertitude, responsabilité et assurance sont au cœur des problématiques de la santé dans les économies développées. Sur ces notions clés se polarisent les grandes questions sociologiques et économiques qui alimentent les débats et les politiques en matière de santé : quels efforts allouer à la prévention et à l'assurance, quels arbitrages entre la prévention et le traitement, entre l'assurance collective et l'assurance individuelle ?

[1] Selon un sondage du National Business Group on Health, 46 % des grandes entreprises américaines offrent des incitations financières à leurs employés pour qu'ils améliorent leur santé.

Si le risque santé est inhérent à la condition humaine, la gestion de ce risque est en revanche une notion relativement moderne. Avec une espérance de vie courte, une médecine peu développée ne permettant ni de prévenir les épidémies ravageuses ni de les soigner efficacement, le prix que la société reconnaît à l'intégrité physique ou à la vie d'une personne est faible. Avec les progrès de la science et de la médecine, l'allongement de la durée de vie, le développement de la démocratie, la raréfaction des conflits coûteux en vies humaines, la sensibilité au risque santé s'est développée. La prévention et l'assurance se sont développées avec une répartition claire des rôles entre les éducateurs (famille, école), les experts (le corps médical), les organismes de gestion de la protection sociale. L'individualisme et la montée en puissance de la médecine scientifique ont considérablement augmenté le prix accordé à la vie et en conséquence la justification de l'emploi de tous les moyens thérapeutiques pour soigner les personnes.

Alimenté par des « cotisants », le système de l'assurance maladie et plus largement la protection sociale constituent une « intermédiation » entre le consommateur de soins et le payeur (c'est-à-dire l'organisme qui règle, celui qui paye restant in fine le cotisant). Cet intermédiaire a plus ou moins déresponsabilisé le cotisant dans la mesure où la réalité des enjeux économiques de la santé reste abstraite pour le plus grand nombre d'entre nous. Avec le gonflement du montant des dépenses de santé et surtout le déficit du régime d'assurance maladie dans la plupart des pays européens, le débat de la responsabilité des dépenses s'est imposé sur la place publique.

Dans un premier temps le débat s'est porté sur la limitation des dépenses de santé, question sur laquelle la puissance publique est légitime dans son périmètre de responsabilité. Les questions sur lesquelles la puissance publique n'est pas légitime et que les instances politiques répugnent à poser constituent l'autre volet de la même question : dans la mesure où les dépenses de santé sont amenées tendanciellement à augmenter, dans la mesure où elles constituent des dépenses fondées (hors gaspillages ou mauvais emplois pour une fraction minime), quelle part de ses propres investissements chaque citoyen doit être prêt à allouer à sa santé ? Quels risques santé doivent redevenir son affaire ? Comment notre « écosystème » va-t-il gérer ce risque… et cette opportunité de contribution à notre croissance économique. ?

Des signaux plus ou moins faibles montrent des tendances possibles sur les trois principaux leviers du risque santé : la prévention du risque, la connaissance du risque, la gestion du risque

- *La prévention du risque*

La santé devient l'affaire de tous : elle n'est plus réservée aux experts - le corps médical – elle n'est plus réservée aux gestionnaires – les payeurs. En tant qu'acteurs de notre santé, la prévention nous incombe pour une large part.

Si la tendance prédominante voit les Européens porter de plus en plus d'attention à leur santé, alors ils seront conduits à davantage assumer la responsabilité de leurs dépenses en la matière, à se prémunir contre le risque et donc à investir dans la prévention. Aujourd'hui, beaucoup de foyers consacrent une part non négligeable de leur budget à leur équipement et abonnement informatiques et de télécommunication. Rien n'interdit de penser que la banalisation de ces équipements et services réduise considérablement la part de notre budget que nous leur allouons et cède la place à notre budget santé. Les tendances « sociologiques » et les habitudes que nous valorisons ont le plus souvent une traduction économique.

Tous les acteurs économiques qui peuvent apporter des éléments de réponse développent des stratégies et des offres dans une dynamique qui devrait s'amplifier dans les prochaines années : qu'il s'agisse des entreprises agro-alimentaires à travers leurs produits, leur communication et leur stratégie de diversification et d'acquisition, des nouveaux métiers dont le métier de coaching en fort développement. L'alliance public-privé avec une présence de plus en forte du privé devrait « animer » la prévention du risque : la campagne anti-tabac est publique, la communication sur la prévention du cholestérol et les bienfaits des omega 3 par tel groupe agro-alimentaire est privée, les campagnes des assureurs sur la « subvention » des assurés justifiant des bons comportements de prévention sont privées.

Quelques mécanismes se mettant en place dans d'autres secteurs de la santé montrent la voie. Certains assureurs par exemple commencent à mettre en place des dispositifs permettant de diminuer le montant des primes pour les conducteurs ayant un abonnement à des transports en commun ou ne conduisant pas la nuit (avec enregistreur de données dans le véhicule permettant un contrôle). Rien n'empêche d'imaginer des dispositifs ajustant à échéance très rapprochée le montant des primes en fonction des comportements (bonus en temps réel équivalent au principe de « miles » accumulés lors de nos achats). D'une certaine façon le « yield management[2] » correspond également à la même tendance de responsabiliser le consommateur sur ces choix (en l'occurrence sur ses anticipations).

Dès lors que la collectivité supporte une partie des coûts de traitement, la prévention du risque n'est pas uniquement une question individuelle : par exemple faut-il faire un dépistage systématique du cancer du sein si le « business case » financier est négatif c'est-à-dire si cela coûte moins cher de soigner quelques cancers ? Aujourd'hui les arbitrages entre traitement et prévention sont peu abordés pour des raisons politiques ou éthiques. Les débats en la matière devraient caractériser les 10 prochaines années.

- *La connaissance du risque*

Le risque est une menace, une incertitude et une probabilité. Agir sur l'un des termes revient à réduire le risque. Si la menace n'en est plus une, le risque n'en est plus un. Par exemple : en 2020 un patient est identifié dès 40 ans comme un sujet à risque cardio-vasculaire élevé, un dispositif capable de détecter l'imminence d'un accident cardio-vasculaire et le traitant en temps réel est implanté. La technologie supprime la menace. On peut attendre des technologies de diagnostic et d'épidémiologie qu'elles jouent un rôle important pour améliorer la connaissance du risque, en produisant des informations non disponibles aujourd'hui grâce à des techniques d'analyse plus élaborées soit grâce à des systèmes « embarqués », implantés ou non.

L'enjeu est important en matière de prévention, il est tout aussi important pour évaluer le risque au plus juste et par conséquent le coût du risque à imputer à la personne. Le problème récurrent ici est l'asymétrie d'information : je peux disposer d'informations sur mon état et mes risques de santé dont ne dispose mon assureur. Si ces informations sont préjudiciables pour mon profil et donc le coût de ma couverture, j'ai intérêt à ne pas donner cette information. Aujourd'hui ces informations, produites par des examens et des questionnaires, sont ponctuelles et partielles. Demain les technologies devraient permettre à l'assureur de cerner beaucoup mieux la réalité du risque santé attaché à chaque assuré.

2 Tarification dynamique en fonction de l'offre et de la demande

Au-delà de la connaissance du risque et de l'asymétrie d'information qui influencent les termes de la relation entre l'assureur et l'assuré, l'attitude des citoyens européens envers le risque influencera les politiques de la santé. Plus la sensibilité au risque sera élevée, plus le prix que la communauté devra payer pour se protéger sera élevé, plus la résistance à l'innovation dans certains domaines se développera. Les conditions dans lesquelles le principe de précaution se développera dans les différents pays d'Europe et la façon dont il sera traité constitueront une question essentielle à ce titre. Le principe de précaution permettra-t-il de traiter à temps les incertitudes porteuses de risques majeurs, en impliquant les parties prenantes, avec une préoccupation éthique démontrée ? Sera-t-il considéré comme une « assurance tous risques » permettant aux citoyens européens de prétendre vivre dans un environnement totalement protégé ? Si cette deuxième interprétation prévaut, notre capacité à porter les risques inhérents à l'innovation dans les sciences de la vie sera considérablement limitée.

- *La gestion du risque*

Les Européens se sentent davantage concernés par leur santé que par le passé. Ils investissent du temps, de l'argent, de l'affect et continueront d'investir davantage dans la prévention de leurs risques. Ils y seront d'autant plus enclins que leur responsabilité individuelle sera davantage engagée qu'elle ne l'est aujourd'hui.

Aujourd'hui, dans la majorité des pays européens, tout se passe comme si chaque assuré bénéficiait d'un crédit illimité sans justification des raisons de la dépense. La collectivité doit-elle prendre en charge la réparation du genou du skieur de bosses, les fractures multiples du praticien de parapente dans le cadre d'une couverture santé « standard » ? Dans la tendance à transférer la prise en charge collective (système par répartition) vers la responsabilité individuelle, un plus grand nombre de risques sera vraisemblablement pris en charge individuellement.

Ce qui est vrai pour le patient le sera également en Europe pour les médecins. Ceux-ci établissent leur diagnostic au jugement et prennent leur risque sans directives (à l'extrême, il faudrait faire un scanner à tous les gens qui ont des maux de tête). Aux USA, les protocoles d'investigation sont plus stricts (questionnaires systématiques et documentés, réponses déclenchant des analyses etc.). La judiciarisation de la médecine constitue une tendance déjà observable, en particulier aux Etats-Unis, et devrait se prolonger, notamment comme conséquence de la tendance à la judiciarisation dans bon nombre de professions (édition notamment, et plus généralement augmentation du nombre de juristes dans les entreprises).

Au moins deux métiers devraient se nourrir de l'individualisation du risque santé : les conseillers et les risk managers dont la fonction sera d'évaluer et de gérer dans le temps les risques santé attachés à des personnes ou à des groupes.

3. Les patients seront au cœur d'un écosystème élargi à des nouveaux acteurs

L'univers de la santé s'élargira à la mesure de l'extension de nos demandes en la matière. L'univers des patients se structurera autour des mêmes actes liés aux maladies : le diagnostic,

la prescription, le contrôle de la prescription, la délivrance de la prescription, l'intervention, le suivi. Cependant le paysage des acteurs intervenant dans cette chaîne d'activités sera très sensiblement différent: de nouveaux acteurs apparaîtront, d'autres disparaîtront, des rôles changeront.

- *Les technologies de diagnostic et de communication raccourciront les boucles de diagnostic, modifieront le rôle des médecins, et favoriseront le développement de centres de traitement de l'information avec des consultations en temps reel à distance.*

La technologie constitue l'une des causes essentielles du remodelage du système d'acteurs. Elle joue en particulier sur le diagnostic et sur le rôle des acteurs impliqués dans cette activité. Les technologies structurantes ici sont les technologies de diagnostic et les technologies de communication.

Traditionnellement, l'activité de diagnostic est séquentielle : une arborescence de symptômes/causes est parcourue par le médecin soit dans une unité de temps et de lieu, soit dans une boucle de diagnostic comprenant une succession d'étapes plus ou moins étalées dans le temps, faisant intervenir des métiers différents.

L'activité de diagnostic nécessite une très forte expertise au point de contact entre le patient et le professionnel de santé. Le système est configuré de sorte à s'assurer que le médecin généraliste ou le médecin référent est le plus apte à porter un diagnostic.

Dans les années à venir, le champ des pathologies pour lesquels un diagnostic pourra être porté en temps réel sera plus large. Non pas parce que l'expertise du professionnel en contact avec le patient sera significativement plus forte, mais parce que les technologies de diagnostic et de communication permettront de raccourcir la boucle de diagnostic. Grâce à des senseurs attachés à des équipements au domicile (portes, matelas, toilettes, etc.) ou intégrés dans les objets qui nous accompagnent en permanence (montre par exemple) celui-ci pourra être permanent en partie. Le système expert d'analyse des données et d'alerte ou d'action est embarqué lorsqu'il est simple ou lorsque la pathologie déjà en place nécessite une action immédiate[3]. Dans d'autres cas, les données seront télétransmises et traitées par des systèmes experts déportés.

Pour une autre partie, le diagnostic se fera par l'intermédiaire d'un professionnel. En contact avec le patient, il pourra se concentrer sur la « saisie » et la transmission de paramètres patients définis dans un protocole. Ces informations seront transmises en boucle courte, quasiment en temps réel, permettant de mobiliser une chaîne plus ou moins longue d'acteurs avec la possibilité (utilisée ou non selon la gravité de la pathologie) de porter un diagnostic en temps réel et de définir un protocole de traitement. Les diagnostics seront supportés par des systèmes experts Dès lors le contenu de l'expertise du professionnel en contact avec le patient sera différent de celui du médecin généraliste actuel. Le point de contact pourra être le personnel infirmier, le médecin généraliste dans une configuration différente. Le contact pourra être direct en face à face, ou à distance, médiatisé.

La technologie peut orienter dans deux directions. Dans un cas, le rôle du médecin référent se dissout dans une chaîne de soins différente. Dans l'autre cas le rôle du médecin référent se renforce, précisément dans la mesure où les informations et les décisions peuvent lui revenir

[3] Ce que nous connaissons déjà avec certains pacemakers

en boucle courte, et ceci sans qu'il soit dans le même lieu que son patient (consultation ou visite).

Le premier scénario prévaut si l'acte technique de consultation se banalise, si la qualité et la certitude du diagnostic sont assurées et si elles sont supérieures à celle observées dans le dispositif connu aujourd'hui (par analogie : avec un taux d'erreur équivalent à celui qui caractérise des processus industriels parfaitement sous contrôle). La téléconsultation, la téléradiologie, le télémonitoring et autres composantes de la télémédecine occupent le devant de la scène. Quel que soit le scénario, le fait nouveau qui occupe progressivement la scène dans ce nouvel « écosystème » est le développement d'usines de traitement d'information. Certaines informations sont traitées par le dispositif de détection au contact de notre corps, d'autres sont traitées à distance et nécessitent des capacités de traitement et de stockage très importantes.

Les métiers liés à la gestion de ces centres de traitement sont en fort développement. La localisation des centres de traitement et de stockage a fait débat pendant plusieurs années. Au tout premier plan de ce débat : la protection des données personnelles, le contrôle de la fiabilité des systèmes, la qualification des opérateurs et des analystes, et en corollaire des opérateurs de confiance. Ces questions positionnent tout naturellement dans un premier temps les établissements de santé (hôpitaux publics ou privés) sur l'activité d'analyse des données, mais la reportent progressivement sur les centres de diagnostic et de traitement au fur et à mesure du développement de ces derniers.

La progression pourra être ainsi la suivante : le développement de l'automédication (déjà en débat aujourd'hui), l'extension de l'autotest et du télédiagnostic (techniquement possible aujourd'hui et émergent dans certains pays), le coaching centré sur la prévention, l'accompagnement individuel dans le cadre de contrats et de programmes structurés autour de la notion de « life maintenance program ». Ces programmes, qui pourront contenir des clauses contractuelles, impliqueront une multiplicité d'intervenants organisée dans une « chaîne de valeur » fournissant des conseils, des recommandations, des prescriptions, des protocoles d'évaluation, des services logistiques.

Un tel modèle fondé sur une politique de prévention à grande échelle et à long terme modifiera significativement le positionnement des industries pharmaceutique et agro-alimentaire. Cependant les résistances au changement en chemin ne doivent pas être sous-estimées.

En 2030, la relation à distance entre le patient et le professionnel de santé est banalisée depuis de nombreuses années déjà. Ceci ne signifie pas que la relation de face à face non virtuelle n'est pas valorisée : certains patients ne demandent pas uniquement à leur médecin « référent » un diagnostic sur des symptômes précis. Le conseil et l'échange peuvent occuper une part plus ou moins importante du contact. Cependant nous sommes très flexibles sur l'utilisation des deux « canaux » virtuels et face à face.

- *De nouveaux métiers émergeront, en particulier le "conseiller santé" qui jouera un rôle clé en matière de prévention.*

Afin de préserver notre capital santé et le capital financier qui lui est lié, nous utilisons les services de « conseillers santé ». Leur rôle est de nous conseiller voire de prendre en charge de façon systématique notre capital santé et le capital financier qui lui est lié. Comme un

coach sportif, le conseiller santé nous propose des plans d'action dont la réalisation est suivie sur une base factuelle de données.

Plusieurs motivations nous conduisent à utiliser les services d'un conseiller santé. Nous vivons dans une région dont la population est de plus en plus sensible à limiter les dépenses de santé et qui valorise très fortement le fait de pouvoir vivre vieux en restant actif et autonome. Nous y voyons également un intérêt financier immédiat : avoir un conseiller santé nous permet de réduire le montant de nos assurances santé (réduction/augmentation de prime) car ce type d'avantage nous est proposé par nos assureurs.

Le conseiller santé constitue le quatrième âge d'évolution après l'âge de la consultation « curative » pour tous, l'âge du dépistage sélectif pour tous (via des campagnes), l'âge du « check up » régulier pour toutes les personnes appartenant à des segments de population définis (à venir). Le conseiller santé correspond à l'âge de la gestion pro-active du capital santé.

Dès lors que nous disposons d'un conseiller santé d'une part et que la technologie permet d'établir des diagnostics par « connexion » plutôt que par consultation, le médecin généraliste/référent peut devenir le conseiller santé.

Si le médecin référent devient le conseiller santé, alors son périmètre s'élargit et de nouveaux challenges apparaissent. La qualité de ses conseils dépend de sa connaissance et de l'information dont il dispose sur éventail plus large de domaines. Aujourd'hui les laboratoires pharmaceutiques sont les seuls à proposer aux médecins de l'information sur des produits de santé et à en faire la promotion via la visite médicale. Le conseiller santé quant à lui sera l'objet de nombreuses sollicitations de la part de l'ensemble des acteurs proposant une offre de produits ou de services de santé (agro-alimentaire, services fitness…)

- *L'évolution de la chaîne de valeur affectera également les pharmaciens, le contrôle et la délivrance des prescriptions.*

La prescription médicamenteuse en médecine de ville passe par une ordonnance sur papier. La délivrance de cette prescription passe exclusivement par notre pharmacien : il est un acteur médical et logistique.

En 2030 nous aurons oublié notre ordonnance papier. Le « prescripteur » saisira sa prescription en ligne. Si le contrôle humain de la cohérence des prescriptions peut sembler incontournable, cela ne sera pas toujours le cas : un rapprochement automatisé de la prescription et de notre dossier médical électronique remplacera l'intervention éventuelle du pharmacien sur le contrôle de compatibilité. Des systèmes experts pourront également assurer le contrôle de la cohérence de la posologie prescrite. Enfin des « détrompeurs », couramment utilisés dans l'industrie, seront programmés dans les systèmes informatiques (quantités et associations impossibles ou nécessitant un message de confirmation, etc.).

Le médicament viendra-t-il au patient, ou le patient ira-t-il au médicament ? La réponse n'est pas univoque. Le premier acte de délivrance lorsqu'un traitement doit prendre effet immédiatement nécessite que le patient aille vers le médicament. En ce qui concerne le renouvellement, les alternatives et le coût de la distribution capillaire (la logistique du dernier kilomètre) seront déterminantes. Selon les cas, le patient ira au médicament ou le médicament viendra au patient.

L'inobservance concerne notamment une fraction des personnes âgées. De la même façon que certains distributeurs mettent en place avec leur fournisseurs des processus de réapprovisionnement automatique déclenchés par le fournisseur (le « VMI[4] »), des dispositifs électroniques à radio fréquence, en plus d'alarmes de rappel sur les prises de médicament, pourront déclencher, pour les « inobservants » avérés ou potentiels, des rappels ou des ordres de réapprovisionnement, soit en livraison directe soit par voie postale.

Enfin, une partie des traitements aujourd'hui par médicaments sera administrée par d'autres moyens plus ou moins légers à mettre en œuvre tels que les « vêtements thérapeutiques », les dispositifs médicaux miniaturisés (puces implantables, machines moléculaires….) ou plus lourds à mettre en œuvre comme la thérapie cellulaire. Les moyens de traitement légers ouvriront un champ nouveau entre la pharmacie et l'hôpital tels que nous les connaissons aujourd'hui. Ce champ sera occupé par des centres de service - centres de diagnostics et de traitement - dans lesquels nous pourrons recharger nos vêtements thérapeutiques ou nos diffuseurs implantés, reprogrammer des pacemakers, etc. Ces centres correspondront à un redécoupage de la chaîne de valeur de l'hôpital : ils seront spécialisés et seront opérés par un personnel disposant de qualifications différentes. Une fois encore, la technologie permettra de simplifier un élément de la chaîne de soins, ici par la miniaturisation des dispositifs médicaux nécessitant des infrastructures d'intervention moins lourdes et des compétences nécessitant des formations moins longues et moins coûteuses que les formations médicales actuelles.

A chaque fois que le diagnostic ou l'intervention en temps réel peuvent être réalisés à distance, c'est-à-dire à chaque fois qu'unité de temps et unité de lieu peuvent être dissociées, des marges de manœuvre se créent pour redistribuer les rôles et revoir le type et le niveau d'expertise de chaque intervenant.

- *En parallèle des métiers, les modalités de formation des professionnels de santé évolueront significativement.*

Le contenu des formations en sera affecté. A la différenciation des métiers correspond la différenciation des formations. Aux nouveaux métiers très étroitement liés à la manipulation des outils d'aide au diagnostic et aux interventions « légères » seront attachées des compétences « d'opérateurs » qualifiés. L'émergence et le développement de métiers d'opérateurs devraient constituer un volet majeur de la révolution technologique au service des soins. La formation et le parcours seront très sensiblement différents de ce que nous connaissons pour les professions médicales. La formation initiale pourrait être plus courte, en revanche le parcours de progression professionnelle (progression en compétence) sera très normé sur la base d'une progression de manipulations/opérations simples vers des actes plus complexes, avec des procédures de certification et par conséquent une part très importante consacrée à la formation continue. Ceci à la fois pour acquérir de nouvelles certifications et pour suivre l'évolution des techniques d'opération/manipulation et des outils proposés. Bien entendu les simulateurs seront des outils très utilisés dans les processus de formation.

Tous les acteurs de la chaîne de soins seront concernés par une refonte en profondeur de la formation, le développement des normes et des protocoles. Le pharmacien ou l'infirmière pourront prescrire et suivre une pathologie « protocolisée » comme le diabète, l'explosion des

[4] Vendor managed inventory : la décision du réapprovisionnement du client est déléguée par le client à ses fournisseurs

technologies supportant tous les maillons de la chaîne de soins conduira à revoir l'ensemble des supports et des outils de formation.

- *Les réseaux sociaux au service de la santé*

Aujourd'hui la pertinence des traitements et des protocoles en Europe se joue à trois : l'industrie pharmaceutique (incluant les « biotechs »), les établissements de soins en tant qu'acteurs des études cliniques et les organismes décidant des remboursements. Depuis quelques années, les patients, pour certaines pathologies graves et médiatiques telles que le sida, et au travers d'associations très actives, se sont invitées dans le jeu. Aujourd'hui militante, cette montée en puissance des patients pourra s'étendre et se banaliser avec le support des medias sociaux. Ils permettront, sous certaines conditions méthodologiques et de contrôle, d'enrichir considérablement l'information sur les traitements. De la même façon que la puissance de calcul informatique exploite les réseaux plutôt que la puissance de machines isolées, les acteurs impliqués dans la mise au point des traitements pourront exploiter un contenu généré par de larges communautés de patients, permettant d'élargir à moindre coût des suivis de type « phase IV », ou donnant lieu à des analyses secondaires.

- *Quel sera le rythme d'évolution des innovations techniques ?*

Toutes les tendances qui marqueront la reconfiguration de l'écosystème de la santé ne progresseront pas au même rythme. Les techniques de diagnostic et de « monitoring » suivent le chemin le plus rapide. Ces techniques sont soutenues par un flux continu d'innovations dans l'électronique et dans les systèmes d'information, avec une focalisation particulière sur la miniaturisation afin de concentrer des fonctions toujours plus complexes dans des dispositifs toujours plus petits.

La médecine régénératrice évolue aussi de façon très rapide avec des innovations déterminantes dans la reconstitution des tissus et dans les « biomatériaux » : régénération de la peau et des cartilages aujourd'hui, reconstruction d'organes complets demain.

Le diagnostic et le traitement précoce des maladies dégénératives progressent. La thérapie génique et la thérapie cellulaire sont très prometteuses, cependant le rythme de progression est plus lent[5].

4. L'hôpital sera recentré sur les soins grâce à une diffusion massive des nouvelles technologies

L'hôpital constitue un maillon de la chaîne de soins. A ce titre, son rôle dépend des autres éléments de la chaîne. Aujourd'hui, l'hôpital reçoit les patients qui ont subi un incident (aux urgences), il reçoit les patients ayant subi un accident (aux urgences toujours), il reçoit les patients en consultation, il reçoit enfin les patients subissant une intervention. Quel que soit notre problème de santé, mineur ou majeur, l'hôpital nous est ouvert. L'hôpital est également un centre d'enseignement et de recherche. Il concentre la technologie nécessaire aux diagnostics, aux interventions et aux soins post opératoires « lourds ».

[5] voir J. de Rosnay, Et l'homme créa la vie, LLL, 2010

- *Le développement des centres de diagnostic, des centres de traitement, et de l'hospitalisation à domicile permettront de recentrer l'hôpital.*

Avec l'évolution des rôles au sein de la chaîne de soins, l'hôpital se repositionnera sur un champ plus limité d'activités. La technologie permettra de sortir certains actes de l'hôpital. Avec les centres de diagnostics et de traitement, l'hospitalisation à domicile sera un des contributeurs majeurs au recentrage de l'hôpital. Même si on peut escompter un renchérissement des techniques de diagnostic et de traitement, la « dispersion » des activités aujourd'hui assumées par l'hôpital permettra de réduire le coût de l'hôpital[6]. Les structures et processus de prise en charge seront davantage segmentés et l'hôpital deviendra un pôle spécialisé avec une centralisation des plateaux techniques.

A côté de ces pôles, des centres proximité prendront en charge certains actes de diagnostic et de soins que la technologie permettra de simplifier, des établissements spécialisés prendront en charge certaines pathologies.

Le développement des réseaux, de l'hospitalisation à domicile et plus généralement de toutes les structures alternatives à l'hospitalisation classique participe d'un mouvement général de graduation des prises en charge. La spécialisation des plus gros établissements d'une région, universitaires ou non, disposant d'un plateau technique sophistiqué et de multiples expertises, s'accompagnera d'un repositionnement progressif des établissements de proximité ou spécialisés dans une pathologie, sur un niveau de prise en charge différent.

Les techniques de diagnostic avancé permettent de mieux prévenir et lorsqu'une intervention est nécessaire, de mieux planifier. Le diagnostic avancé permet de limiter le volant des urgences. Dès lors la donne change pour les patients.

- *Avec la chirurgie "on line", le choix d'un centre de traitement et le choix d'un praticien ne seront plus nécessairement lies; la chirurgie robotisée sera utilisée dans de nombreux cas.*

Grâce à la télé-chirurgie, nous pourrons, pour certaines interventions, déconnecter le choix du centre « physique » de traitement et le choix du praticien.

En 2030, chaque bloc opératoire est équipé d'un robot. La chirurgie robotique, fondée sur une technologie éprouvée et une baisse du coût des matériels, entame sa phase de maturité. En mai 2008, une équipe de la faculté de médecine de Calgary a utilisé un robot pour l'ablation d'une tumeur du cerveau. Intuitive Surgical, une entreprise californienne, a vendu plus de 800 robots d'assistance opératoire sur des interventions liées à des problèmes cardiaques ou à des cancers. Des équipes R&D travaillent sur des robots capables de suivre les mouvements d'un organe et donc d'opérer un cœur en battement. Les opérations à « cœur battant » constitueront une pratique courante. En 2015, une revue scientifique pourrait évoquer les premières expérimentations de systèmes prototypes d'intervention chirurgicale totalement robotisée sous surveillance humaine. Elle pourrait mentionner l'ablation robotisée de la rate d'un chien réalisée avec succès. En 2030, certaines interventions sont totalement robotisées sans intervention humaine autre qu'une surveillance.

[6] Des études estiment le rapport de 1 à 8 entre le coût d'une hospitalisation à domicile et le coût d'une hospitalisation « traditionnelle » (source Alcimed)

- *L'accès à de services hospitaliers hors du territoire national créera un environnement plus compétitif.*

Si rien ne presse, nous pouvons choisir l'établissement où nous souhaitons subir une intervention, dans nos frontières nationales ou européennes ou encore hors de nos frontières, avec des cas de figures multiples selon des critères de coût, de qualité ou de renommée[7].

En conséquence, certains assureurs incluent dans leur couverture le recours à des services hors des frontières, proposant même des incitations pour les interventions coûteuses pour lesquelles les différentiels de coûts sont significatifs.

La globalisation de l'offre de soins et la concurrence qui en résulte peut prendre plusieurs voies : la concurrence voit l'émergence de centres d'excellence à moindre coûts avec une nouvelle cartographie établie ou bien cette dynamique concurrentielle pousse à la diminution des coûts à l'augmentation du niveau de qualité du service et à l'efficacité des réseaux interconnectés dans les pays d'Europe de l'Ouest réduisant le différentiel avec les régions à bas coût.

Le rapport entre les patients en consultation externe et les malades hospitalisés s'est inversé. Avec le développement des techniques non invasives d'une part, la déconnection entre les centres d'intervention et les centres de soins, la part de patients en consultation externe prédomine et les durées de séjour sont considérablement raccourcies[8]. Ainsi l'hôpital du futur est à la fois un établissement et réseau interconnecté de centres différenciés en fonction de leur rôle : diagnostic, intervention, soins de réhabilitation (soins de suite et « récupération »)…

- *En 2030, l'hôpital exploitera les avancées technologiques pour rendre les séjours plus agréables, non seulement grâce à un meilleur traitement de la douleur, mais également en proposant une offre de services récréatifs et d'hospitalité.*

L'hôpital que nous connaissons aujourd'hui est centré sur le traitement de la maladie. Il est peu soucieux du traitement du malade. L'hôpital confortable est d'abord l'hôpital qui sait traiter la douleur. L'apport des technologies à la substitution de la chirurgie et à la chirurgie non invasive constitueront un puissant facteur de réduction de la douleur. L'amélioration des traitements antidouleur y contribuera également.
Dans la plupart des secteurs de la consommation le niveau de qualité des produits ou des services tend à s'élever, en partie grâce à la diminution des coûts liée aux effets d'échelle et à la pression concurrentielle. Les centres de traitement et de soins n'y échapperont pas. En 2030, les centres bénéficient d'un équipement multimédia non pas uniquement à des fins techniques (la coordination de l'écosystème dans la gestion du patient) mais permettant également aux patients d'accéder à des services non directement liés aux soins tels que l'hôtellerie (commande de repas, avec « droits » différenciés selon l'état du patient), et surtout de communiquer avec leurs proches à tout moment (ici encore avec des « droits » différenciés

7 L'hôpital Bumrungrad en Thaïlande est un exemple de la nouvelle industrie du « tourisme médical ». En 2004, l'hôpital a traité 350 000 patients étrangers.
8 La durée moyenne de séjour dans les hôpitaux de l'UE est passée de 12 jours à 8,5 jours entre 1980 et 1998. Si les points de départ varient, la tendance à la décroissance des durées moyennes de séjour constitue une tendance de fond dans la plupart des pays développés (Source : Hospitals in a changing Europe, European Observatory on health care systems, 2002)

selon l'état du patient). Ce standard s'étendra à l'ensemble des centres où nous séjournerons comme patients.

Dans cette chaîne recomposée, les métiers évolueront pour prendre en charge des besoins nouveaux. La gestion du patient prenant une place de plus en plus importante à côté du traitement de la maladie, les fonctions d'intégration et de coordination vont s'imposer. Le dossier patient concentrant l'ensemble des informations issues des différents intervenants joue un rôle d'intégrateur. Le conseiller santé déjà évoqué est une fonction d'intégration des différents éléments contribuant à préserver notre santé. La fonction de « care manager » intègrera les différents éléments médicaux, sociaux et psychologiques de la prise en charge des patients, tout particulièrement s'agissant des patients du 4ème âge et de ceux d'entre eux touchés par une maladie dégénérative. Il coordonnera le réseau, plus différencié qu'aujourd'hui, de prise en charge du patient.

L'évolution des technologies biomédicales, la différenciation et la spécialisation des établissements devrait conduire à une plus grande spécialisation des personnels, au moins dans les « pôles techniques »[9] . Les formations devront s'adapter à cette nouvelle donne, pour ce qui concerne les formations initiales mais aussi pour ce qui concerne les formations continues qui devraient permettre de redonner des perspectives de mobilité professionnelle à des personnels moins polyvalents qu'aujourd'hui.

5. La santé sera un vecteur de croissance pour l'économie européenne

- *A l'horizon 2030, l'industrie de la santé deviendra l'une des industries majeures de l'économie européenne, traduisant l'impact à la fois une demande croissante sur les segments traditionnels et un élargissement considérable du champ de la santé.*

Si les dépenses en matière de santé ont cru de près de deux points de PIB en vingt ans, en passant de 7,6% du PIB en 1985 à 9,7% en 2005 dans les pays les plus riches d'Europe, cette évolution devrait s'accélérer : dans 25 à 30 ans le niveau de dépense dans ces pays pourrait atteindre le niveau déjà atteint par les Etats-Unis aujourd'hui, soit environ 15% du PIB[10]. Une telle accélération est envisageable quelle que soit l'évolution du PIB: l'attention croissante qu'accordent les ménages européens à la préservation de leur capital santé, ainsi que l'augmentation de l'espérance de vie sont des tendances de fond qui viennent transformer radicalement l'écosystème de la santé.

Un des enjeux majeurs résidera dans la maîtrise de la croissance de la dépense, grâce notamment à des gains de productivité et à l'évolution de son financement, avec notamment la question de la prise en charge directe par les ménages d'une proportion croissante de leurs dépenses.

La demande évoluera également de manière qualitative. Un grand nombre de ménages financera directement une partie de l'entretien de leur capital santé et la fraction la plus aisée et la plus ouverte à la « mondialisation » pourrait rapidement mettre en concurrence les offres de soins sur le plan national et international. Parallèlement, l'élargissement considérable du

9 Par opposition aux centres de soins de suite ou de gérontologie
10 En France les auteurs du rapport de la « Commission de Libération de la Croissance Française » estiment que la demande de soins pourrait même atteindre 20% du PIB d'ici 2030.

champ de la santé aux dépenses relatives à la cosmétique, à l'esthétique, au bien-être, voire dans une certaine mesure à la stimulation intellectuelle et à la santé mentale -dépenses d'ores et déjà directement prises en charge par les ménages- traduira une profonde évolution des mentalités et la part de leur budget que les ménages consacreront à leur santé.

La prolongation des tendances récentes aboutirait rapidement à des situations non tenables sur les plans financier, économique et social, mais quelques pistes alternatives, dont la probabilité de réalisation dépendra de la prise de conscience de leur nécessité et de la vitesse d'adaptation au changement des différents acteurs, permettent d'esquisser d'autres évolutions possibles.

- *L'utilisation croissante des nouvelles technologies pour étendre la médecine personnalisée permettra d'accélérer les gains de productivité grâce à une plus grande industrialisation et à une concurrence accrue.*

Les acteurs de la transformation du système seront notamment les assureurs et les entreprises de technologies, dont les initiatives répondront aux attentes des ménages et contribueront à redéfinir l'écosystème de la santé en Europe.

La montée en puissance de la prévention jouera un rôle clé. D'ici 2030 l'enjeu pour les pays Européens est d'augmenter significativement le financement de la prévention en s'appuyant sur des cofinancements (secteur mutualiste, assurances complémentaires, industries pharmaceutiques). Les assureurs joueront un rôle primordial dans l'émergence de nouveaux mécanismes propres à évaluer, assurer et mutualiser dans une certaine mesure les besoins individuels [11] . Ils encourageront directement l'utilisation de technologies permettant d'anticiper certaines maladies physiques et/ou mentales afin de calibrer leur prime. Ils inciteront au développement de l'activité des « conseillers santé ».

Les fournisseurs de technologies et de services associés, en permettant une individualisation croissante des services de santé, contribueront de manière très significative à l'amélioration de la qualité des soins, mais aussi la productivité de ces derniers. Le développement de nouvelles formes de diagnostic, de prévention et de traitement joueront un rôle clé.

Si assureurs et fournisseurs de technologies parviennent à soutenir la diffusion massive des nouvelles technologies, la prévention pourra prendre un nouvel essor, permettant d'anticiper certaines maladies et affections, et les assureurs pourront adapter leurs services afin d'offrir des réponses personnalisées aux risques de plus en plus larges que les ménages voudront couvrir. L'utilisation de plus en plus en grande des robots et nouvelles technologies permettra non seulement d'améliorer la qualité et les modalités de certains soins, mais aura également un impact sur la productivité. Plus précis et plus individualisés, les soins et interventions seront plus efficaces. L'industrialisation, les effets de volumes associés à la concurrence entre les acteurs entraîneront une sensible diminution des coûts moyens. Aujourd'hui à l'état de prototypes, souvent immatures ou très peu répandues, les nouvelles technologies devraient vraisemblablement suivre le même chemin que leurs « aînées » : l'industrialisation, les effets de volumes associés à la concurrence entre les acteurs entraîneront une sensible diminution des coûts.

Les professionnels de santé devront s'adapter, accompagner et tirer partie de ces nouvelles évolutions : les infirmières vont pouvoir gagner en autonomie grâce à la spécialisation, et

11 « Une brève histoire de l'avenir », Jacques Attali, 2007.

l'exemple américain d'utilisation de protocoles par les médecins généralistes dans leur consultation pourrait se généraliser. Ces changements auront pour conséquence une modification de la répartition des tâches entre les différents acteurs. Cette nécessité d'adaptation concerne également les structures traditionnelles : pour l'hôpital, les notions de rentabilité et d'investissements productifs prendront tout leur sens, pour des entités qui seront progressivement mises en réseaux tandis que les pharmacies pourraient voir leur rôle élargi à la prévention et aux traitements de certaines pathologies. Le défi pour les professions de santé en termes de formation est énorme mais est porteur d'une vague de croissance et de dynamisme pour le secteur qui emportera à terme l'adhésion des parties prenantes, même si des résistances au changement surgiront évidemment dans certains segments de la profession. Une vague de nouveaux métiers surgira d'ici à 2030, dans laquelle figureront les opérateurs des nouveaux centres de soins, les opérateurs de la télémédecine, les experts en gestion du capital santé etc.

Le secteur de la santé en Europe constituera l'un des secteurs porteurs pour l'Europe, tant en termes de création de valeur ajoutée que d'emplois : les emplois dans ce domaine croîtront de manière beaucoup plus constante et rapide que dans la plupart des autres secteurs. Sa contribution à l'amélioration de la compétitivité européenne sera d'autant plus importante qu'elle ne se limitera pas au champ de la santé « stricto sensu » mais qu'elle aura des effets sur l'ensemble de l'économie : des Européens « vieillissant jeunes » seront une force de travail beaucoup plus productive que des Européens qui seraient en santé précaire, et l'innovation dans le domaine de la santé aura des effets indirects sur plusieurs autres domaines, comme l'alimentation, l'assurance ou encore les technologies de l'information.

Ces évolutions ne seront pas sans défis : l'Europe a accumulé un retard conséquent en matière d'innovation - les Etats-Unis déposent trois fois plus de brevets que l'ensemble de l'Europe réunie- et la compétitivité des entreprises de biotechnologies est challengée par certains pays asiatiques qui déploient des efforts considérables pour attirer cette industrie porteuse de forte croissance. L'enjeu pour les pouvoirs publics est d'encourager l'évolution de cet écosystème pour lequel son action a toujours été importante et perçue comme telle. Une grande partie de l'avenir de l'économie européenne se jouera dans la façon dont les Pouvoirs Publics encourageront ou non l'émergence et le développement d'un nouveau secteur de la santé dans les prochaines décennies.

EIH Foundation Study

Principales tendances et ruptures potentielles dans l'Europe de la santé à l'horizon 2025 : impact économique et évolution de la chaîne de valeur

Acteurs	Tendances	« Wild cards »	Commentaires
Ménages	• Espérance de vie allongée et seniors au travail • Attention accrue à la santé i.e. « vieillir jeune » • Montée des risques individuels • Diffusion et plus grande accessibilité de l'information permettant aux ménages d'être plus actifs dans la gestion de leur santé • Accroissement des dépenses	• Recherche d'autonomie de la part des personnes âgées (développement des maisons de retraites autogérées) • Mise en concurrence par les ménages des offres de soins au niveau national et international • Accroissement relatif des dépenses financées directement par les ménages i.e. prise de conscience de la nécessité de prendre en charge sa santé en phase avec des nouvelles offres technologiques de soins préventifs et curatifs personnalisés • Nouvelles pandémies type grippe aviaire	L'occurrence de certaines de ces « wild cards » accentuera la visibilité des écarts de richesse entre européens et pourrait provoquer des réactions sociales. De plus, du fait du développement de la concurrence et des spécialisations, la santé pourrait progressivement devenir un bien économique, y compris dans la dimension de développement de « marques »
Nouveaux acteurs (Alimentaire, Assurance, Fournisseurs de technologies et services associés…)	• Une grande partie du champ de l'alimentaire dans le champ de la santé • Rôle croissant des assureurs • Accroissement de l'impact des entreprises de technologies	• Nouvelles alliances initiées par les assureurs qui reconfigurent la chaîne de valeur et permettent une diffusion massive des nouvelles technologies • Les fournisseurs de technologie à l'origine d'un fort développement de la robotisation permettant une amélioration de la qualité et des gains de productivité • Nouvelles fonctions de « Conseiller santé » ou « Conseillers en Gestion du Capital Santé » • Développement des réseaux sociaux Internet agissant comme des lobbies et émergence de nouvelles activités économiques	Grande hétérogénéité des acteurs Le champ d'action des assureurs dépendra des réglementations élaborées par les pouvoirs publics en Europe
Professions de santé (Médecins, Infirmières...)	• Vers une nouvelle répartition des rôles entre médecins et autres personnels prenant soin des patients i.e. focalisation des médecins sur leur « core business » et développement du rôle des infirmières et autres personnels soignants • Les hôpitaux gérés comme des entreprises, professionnalisation des fonctions de gestion • « Quasi - banalisation » des pharmacies, grandes surfaces de la santé et prescripteurs de premier rang	• Généralisation de l'utilisation des protocoles par les médecins généralistes dans leur consultation • Développement de la télémédecine et autonomisation des infirmières • Diversité des « parcours de soin » (opération, soins, rééducation dans des lieux différents, y compris à domicile) • Spécialisation et mise en réseau virtuelle des hôpitaux pour maximiser les centres d'expertise spécifiques	Diversité des situations au niveau européen
Pouvoirs Publics (Européens, Nationaux, Régionaux…)	• Volonté d'optimisation et maîtrise de la dépense publique • Montée en puissance des financements directs par les ménages • Convergence progressive des différents systèmes européens sous l'impulsion de nouvelles normes et règlementations	• La prévention devient une priorité, notamment du fait des progrès de l'éducation dans le domaine de la santé • Encouragements à diffuser massivement les nouvelles technologies, sources de gains d'efficacité et de productivité : au total, la santé source de réduction des déficits publics et de nouveaux emplois	Etant donné la complexité et la diversité des situations de départ, l'analyse a été focalisée sur les pays d'Europe de l'Ouest les plus riches, en posant l'hypothèse d'un scénario de convergence des autres pays à l'horizon étudié

Source: Accenture 2008