The value based approach to treat diabetes. The case of Puglia Region

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Metabolic diseases are the most important cause of death in high income countries like Italy. They present a relevant impact on the healthcare system and on the whole community. Among these diseases, diabetes causes 73 deaths per day in Italy and 750 deaths per day in Europe [1]. Furthermore, diabetes prevalence is documented at 8% among EU adult population (32 millions of people affected). Because of population ageing, this trend is predicted to increase in the future, with 38 million patients suffering from diabetes in 2035. In Italy, more than 5% of population is affected by diabetes (3.6 millions) and this percentage is going to double by 2050 [2]. The majority of these patients with diabetes are over 65 years (2.5 millions) and this data rank Italy amongst the first 10 world countries with a high diabetes burden in the elderly [1]. Another cause of concerns regards the not uniform prevalence along the peninsula, with Southern Regions scoring a higher prevalence than North Italy [2].

From an economic point of view, the impact of diabetes is relevant. The costs faced by the Italian NHS (National Health Service) and by society have been estimated at around 20 billion euros per year, of which more than 50% are represented by indirect costs linked to productivity loss in diabetic subjects. Among direct costs, more than the half are due to hospitalizations (in Italy more than 70 thousand hospital admissions are related to diabetes or treatment of its complications) [3].

Given the above, it seems evident how diabetes represents a very relevant public health issue which undermines the sustainability of our health systems if not managed in a multidisciplinary and integrated way.

Formerly, the Italian Diabetes National Plan [4] underlined the need to develop new competencies to manage this pathology and a new governance, carried out by the scientific community and decision makers in order to better allocate resources to develop integrated and patient-centred care. This Plan was also aimed at improving patients' empowerment and the role of family doctors, at promoting integration between hospital and primary care services and at training accountable health professionals.

Despite the strategic efforts and the Italian widespread organization of diabetic services, an integrated approach is still lacking. The National Plan for Chronic Diseases, released in 2016, also underlines the need of a patient-centred and integrated approach aimed at improving health outcomes and healthcare processes [5]. To provide high quality care a population-based approach should be previewed. Population should be stratified and services should be provided according to its different levels of needs. In order to provide a personalised care, professionals and providers should work in a more integrated way, making use of appropriate informative systems [6]. The taking charge of patients should happen in an integrated and multidisciplinary approach. Sharing practices and patient's information, as well as guidelines compliance, should be fundamental in an integrated approach for chronic diseases. Moreover, the National Plan for Chronic Diseases recognizes Primary Health Care System as pivotal, and specifically family doctors are identified as

gatekeepers and coordinators of a comprehensive taking charge of patients. Furthermore, the Plan suggests actions based on widespread models to treat chronic diseases (i.e. Chronic Care Model, Expanded Chronic Care Model…), characterized by proactivity of providers and professionals. Unfortunately, in Italy such kinds of integrated model - based on risk stratification and integrated care – have been developed only in the last years and are not even uniform. Health outcomes remain different in the country. These unwarranted variations represent one of the most common critical issues for the Italian NHS, as well as in many healthcare systems worldwide.

For these reasons, introducing value-based strategies at a national level appears relevant in order to promote a holistic, sustainable and integrated diabetes care and to guarantee adequate health outcomes to the entire population. Reorganizing healthcare services means taking into account all stakeholders' (patients, professionals, politicians, companies…) needs to face the common challenges. The common aspect among stakeholders seems to be value, namely the value of the organization. In fact, value has not to be referred as the ratio between health outcomes and costs as stated by M. Porter et al, but it has to be considered according to three different perspectives [7]. The first perspective regards how much good resources are distributed to different groups of population *(allocative value)*. The second takes into account how appropriate is the use of these resources in order to produce health outcomes in people with specific healthcare needs *(technical value)*. The last perspective concerns how the produced health outcomes are consistent with individuals' values and preferences *(personal value)* [8]. Reorganizing healthcare services, taking into account these three perspectives, means incentivizing underused services, transferring resources from budget dispatched for redundant and low value services, adopting a population-based approach in which citizens access services according to a stratification of their healthcare needs. This could lead to reducing the expenditure for low value interventions and increasing it for high value services. At the same time, optimizing personal value would mean offering the patients the right information on risks and benefits for the offered interventions. Ultimately, increasing value in a healthcare system would implicate reorganizing services around a disease/condition where interventions are delivered on the basis of patients' needs, and not the needs of institutions, hierarchies or technologies [9].

According the programmatic aims of the National Plan for Chronic Diseases, each Italian Region should reorganising chronic healthcare through a population-based approach. We decide to analyse through a SWOT (Strengths, Weaknesses, Opportunities, Threats)

FIGURE 1. Puglia care program, SWOT Analysis : Results.

STRENGHTS
- Strengthening of primary care (care management perspective)
- Stratification of population according to different needs
- Operators' performance measurement
- Use of bundled payments
- Use of telemedicine
- Integration of projects (PathLab, LeanLab, etc.)

WEAKNESSES
- Absence of an active ICP (Integrated Clinical Pathways) and not clearly defined role for specialists (disease management perspective)
- Lack of involvement of patients' association in the decision-making process

OPPORTUNITIES
- Structured measurement of health outcomes and costs
- Definition of win-win partnerships (eg: pharmacies, private companies)
- Development of assistance systems and networks for specific diseases according to epidemiological and socio-demographical data
- Structured use of PREMs and PROMs

THREATS
- Restrictions due to recovery plan (eg: shortage of staff)
- Retention of professional and organizational silos between family doctors and specialists
- Delay in culture development between health professionals

the ongoing process of reorganisation in the Region Puglia. Through the Puglia Care program, the Region is trying to reorganise the chronic healthcare systems implementing chronic healthcare based both on Chronic Care Model and value-based healthcare principles [10]. Through the SWOT methodology (Figure 1), we were able to underline what is really characterised by a value-based approach and what could weaken the chronic diseases management in Puglia.

In Puglia Care, patients will be stratified in order to provide integrated pathways specific for each risk class. The stratification will be possible when a single regional database will be implemented in all services.

Family doctors and nurses will be personally involved to manage the taking charge of patients in order to prevent disability and guarantee the continuity and integration of care. The Local Health Authorities, which have the function of delivering primary care services, will be involved in multidimensional evaluations in the integration of interventions following a systematic pathway. As for the financing of the project, Puglia Care can be considered a value-based model since it comprises specific bundle payments for diseases. In fact, family doctors would receive a fee for their proactivity in managing care. The fee includes the costs of small healthcare interventions done by nurses and the costs of management software. A performance evaluation through process indicators - but not health outcomes - has been previewed. Despite a good commitment of professionals, to this day the lack of caregivers' involvement represents a critical issue.

This model seems to be more focused on the early phases of the taking charge and care management. The integration with secondary care and community services has still to be implemented. A real value-based model can be provided only through both horizontal and vertical integration, as well as through the systematic evaluation of health outcomes. Despite this, the premises for the development of personalised and value-based healthcare in Puglia according to a population- based approach are encouraging.

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