The nutrition hygiene as a mission of the departments of prevention

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LETTER TO THE EDITOR

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Sir:

black clouds are approaching the Italian National Health Service (Servizio Sanitario Nazionale or SSN), the perfect storm is getting closer: drowning will be a common fate if no changes will be put in place. The signs are all there: dramatic ageing of the populations, health trends toward chronicity, increase in need and demand, decrease of financial and human resources. This situation is unbearable both from a social and an economic-financial standpoint (1).

The new direction will have to move economic and human resources from the cure of illnesses to their prevention: this is the recipe suggested by some Authors, together with the proposal of re-thinking the whole SSN, through the training of a new class of preventive healthcare professionals while changing all the structures already present and placing them online (2).

On the opposite side, we find the CENSIS-Unipol recipe: «Welfare Italy. Impact and growth potential of white economy» (3). According to this Report, the social-health pillar, which is not intended as a mere cost, can become a strong economic-productive tool to re-launch growth. Population's health ceases to be a right granted by the State and becomes goods "produced" by a "strong economic-productive tool", with private companies (clinics, labs, etc.) which almost substitute the whole public health network. Private companies should take care, in a residual way, of all those performances which would not generate private profit: ER, serious and/or debilitating illnesses of low-income population, etc.

Whatever direction we take, the problem of expenses, which is present in all the countries providing a public, equal and global healthcare service, must be faced. In the United Kingdom, for instance, balance sheet deficit reached 1.6 billion pounds (almost 2 billion Euros) in six months, from April to September 2015 and in a year it will get to 2.2 billions of pounds (3 billion Euro). This did not happen because of a bad management or due to inefficiencies, which are nonetheless present, but because of structural factors, as population ageing (4).

What to do

A large proportion of individuals who are more than 65 years old is dramatically present for the first time in mankind's history (5). Unfortunately, ageing carries an increase in several illnesses; this means that

the elderly people individuals can have more than one chronic illness at the same time i.e., multimorbidity. The older the patient, the higher the number of pathological conditions which often reciprocally interact and complicate one another (6-8).

The question for the SSN is how to change this, which paths to follow to move the healthcare services from cure to prevention, trying to achieve the goal of *healthy ageing*. This is strictly linked to lifestyle, and particularly to nutrition and Nutrition Hygiene (9-11).

One of the possible ways is to place Nutrition Hygiene, taken care of by the Food Safety and Nutrition Services (SIAN), within the professional and mandatory mission of the Department of Prevention. The latter defined as "to supply a unique and efficient answer on how to safeguard health of a population who operates inside an ever-changing sociological, environmental and cultural context", and articulated according to a modular and inter-disciplinary scheme: mandate-demand-needs, offer of integrated and multi-disciplinary performances, impact on health levels.

The metaphor most used to show modular work is that of the airport, where many different enterprises (airlines, fuel companies, restaurants, catering, duty free, car rentals, etc.) cooperate in order to move goods and passengers.

Key actions

For this reason, the offers of multi-disciplinary performances come together in the integration model. This does not mean gathering or transferring competencies to a new operational unit, simplifying how the Department works. Integration means, on the other hand, completing the offer thanks to the addition of something that lacks but is necessary to improve performances and health levels.

The disciplinary characteristic of Nutrition Hygiene can be employed for the integration of scientific evidence with performance offer. In fact, the employment of the world of scientific research and University in different areas can be developed with the different SIANs on multi-faceted approaches, in order to define a new vision on the subject, which is based on scientific evidence and on adequate policies, in order to achieve a better offer for the prevention in the field of nutrition.

If we had to spot two key words to better define the challenge for Nutrition Hygiene in this particular historical moment of the welfare system, we could use verbs like "innovate" and "integrate".

In fact, the approach to innovation, thought for a world where abundance is relatively stable and almost for all, refers to a reality which does not exist anymore. The new **Jugaad** approach is based on three pillars, like **frugality, flexibility** and **participation**, which are more adequate to face an unstable reality, which changes rapidly and cannot be foreseen (13-18).

Even in the healthcare sector, in the wake of a structural crisis, innovation entails finding ingenious low-cost solutions while learning to best exploit the resources available to put into effect, distribute and provide a service. As regards to preventive medicine, in particular, the Jugaad innovation is a new way to conceive innovation in order to make it more sustainable, where the collaboration between scientific research, university disciplines applied to the hygiene ambit and the Department of prevention aim to reduce the cost of factors of production, to simplify processes and to redesign interventions based on scientific evidence.

This new vision mixes the principles of the Jugaad innovation with the mission of Nutrition Hygiene. For instance, the challenges for Nutrition Hygiene inside the Jugaad innovation can be:

- Can food safety be separated from nutrition safety?
- Can we obtain a life-course prevention regarding nutrition?

Nutrition safety and food safety – summarized as food and nutrition safety (FNS) face the theme of granting safe and good food in a sufficient quantity for everyone (19). WHO, in the 2000 Report, states that

the challenge posed by nutrition safety is by far superior than that posed by food safety (20). Nonetheless, we think, based on years of experience within the cultural and operative space of the SIANs in the field of food safety, after analyzing the risks of biological, chemical and physical origin, that food safety is the inner condition for FNS. This means that there is no FNS without food safety (21-22).

The common title of SIAN Seminar series held in Foggia every year under the patronage of the Local Health Unit is "Integration between food and nutrition safety", while the subheadings change through the years: in 2014 it was "The role of services for food and nutrition hygiene" and in 2015 "From scientific research to SIAN best practices"; while the subheading for the 2016 seminar, scheduled on 5-7 May, has been be "Prevention based on evidence and regional plans of prevention" (23).

In addition, the Hygiene Section of the Department of Medical and Surgical Sciences of the School of Medicine at the University of Foggia organized, during the academic year 2015/16, the seminar "Integration between food and nutrition safety: methodological and operational factors", while, in the summer of 2015, a group of professionals who were engaged in Food and Nutrition Hygiene gave birth to the magazine "Themes on food and nutrition safety" (24).

Prevention is forever

As far as the second challenge for Nutrition Hygiene is concerned - life-course prevention - we think that the key word is also *integration*. According to the different type and purpose, prevention is traditionally divided into primary, secondary and tertiary. Prevention, therefore instead of though, consists of a series of activities, actions and interventions whose main aim is to promote and maintain health and avoid illness appearance and progression.

In "The Lancet", Paolo Vineis and Christopher P Wild said, regarding prevention of cancer and based on a wide variety of studies, that the primary prevention of cancer must be integrated with the secondary and tertiary interventions (25). We think that such integration for cancer can be put in place with an "active" participation to Nutrition Hygiene, as already tried with cardiovascular illnesses in the Veneto Region (26-27). Based on the suggestions of the World Cancer Research Fund/American Institute for Cancer Research, the European Code Against Cancer, and scientific evidence, an efficient Public Health Nutrition intervention can be put in place, as already testified by the success of the Med-Food Anticancer Program (28) in order to integrate primary prevention on:

- Healthy individuals with updated promotion of the benefits of a healthy choice of foods;
- Individuals with no symptoms but enrolled in screening programs (secondary prevention);
- Cancer patients and survivors.

The proposal of integration comes from the need to reduce costs that are linked to cancer, by decreasing both the occurrence (primary intervention) and progression (secondary intervention) of the illness, and reducing relapses and disability (tertiary prevention). The scope of such integration is, of course, economic sustainability in controlling the impact of cancer on welfare.

In this regard, such innovation cannot take place without a synergy with University research and investments in education and training of individuals and without the recruitment of other types of professionals within the cultural and operative space of the SIANs.

The new workload for these Services requires different types of graduates like psychologists, nutrition biologists, etc., as already stated in the DM 16 October 1998, n. 185. In the SIAN in Foggia, for instance, psychologists and nutritionists have been working for decades in shared experiences like with the "Med-Food Anticancer Program" (28) and "Food is a Friend" (29).

Both programmes involve respectively a "horizontal" integration, achieved through operational collaboration between the various professional figures concerned (doctors in public and environmental

health, nutritionists and psychologists) and a "vertical" integration with the elimination of barriers between actions of primary, secondary and tertiary prevention.

The "Med-Food Anticancer Program" promotes primary, secondary and tertiary prevention of tumours through diet, nutrition and physical activity. The programme was developed through a structured intervention including various steps and shaped according to the WCRF/AICR and European Codex Against Cancer guidelines with a view to reduce the risk for healthy subjects of becoming sick of cancer; for patients on chemotherapy/radiation therapy to address the side effects and improve compliance to therapy, and survivors to counter the danger for relapses.

The "Friendly Food" programme pursues the goal of reducing the occurrence of Eating Disorders in Adolescents by (a) promoting healthy dietary choices and lifestyle behaviours among teenagers, as well as helping them develop self-acceptance and individual psychic and physical well-being; (b) screening of Eating Disorder risks and individual interviews; (c) cognitive-behavioural rehabilitation for individuals at risk.

Both the horizontal and vertical integration with the aforementioned programmes are an operational example of Jugaad innovation (frugality, flexibility and participation) that can be developed within the operational space and competencies of the Departments of Prevention.

Conclusions

SIANs can be the "platform" to integrate interventions on food-nutrition safety and life-course prevention. Such Services are professional counterparts in the Departments of Prevention since 1992, with the Legislative Decree 502/1992, in a time for the National Health Service characterized by the implementation of internal-market and devolution of powers to the Regions. For this reason, it would be impossible to eliminate SIANs from the Regional health services or even to incorporate them within other Departments; in addition, such options would be non-sustainable and would go against the economic interests of the Welfare System (30).

In times of instability, hurry and unpredictability, the answer in terms of balance sheets and social expenses in relation to chronic-degenerative illnesses must come from the innovation of Food and Nutrition Hygiene which is based on an essential (frugal) approach, which can be adjusted to the different phases of prevention (flexible) and in synergy with the screening centers (active).

These are the milestones of the Jugaad Innovation.

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FSNS = Food Safety and Nutrition Service
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