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Hospital Hygiene and Infection Prevention and Control in Italy: state of the art and perspectives

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Abstract

Although hospital hygiene has a long history in Italy it is necessary to reflect about it because of the innovation in healthcare systems and because of the evolution due to European Union related activities.
Different traditions exist in European countries about hospital hygiene and European Centre for Disease Prevention and Control (ECDC) adopted the term of "infection control and hospital hygiene" which includes all the engaged European healthcare professionals.
We propose to modify hospital hygiene as "healthcare organisation hygiene" in order to focalise the attention to all care settings not only hospitals and to adopt the following definition: "all activities aimed to guarantee, in an appropriate, scientifically sound and efficient way, that structures and processes support healthcare practices in a safe comfortable and healthy environment both for patients, caregivers and healthcare workers".
Hospital hygiene and its professionals, besides the long tradition, still remain a relevant pillar in guaranteeing quality and safety of healthcare in Italy.

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Introduction

Hospital Hygiene (HH) in Italy has a long tradition starting at the beginning of the 20th century when a national law (1) stated that this function was part of the duties of the hospital medical director who was identified as a compulsory professional figure for all Italian hospitals.

All subsequent reforms on hospitals and healthcare organisations included this function within those attributed to the hospital medical director.

Although HH has a long history in Italy it still appears necessary to reflect about it because of the innovation in healthcare systems and because of the evolution due to European Union related activities.

Hospital Hygiene in Europe

With respect to HH different traditions exist in European countries, there are countries where HH is well identified and recognised with specifically trained professionals (e.g. Germany, France, Spain, etc.) and others where it is not present but most of its activities are included in Infection Prevention and Control (IPC) units (e.g. United Kingdom, Netherlands, Nordic countries, etc.). In many cases HH and IPC are overlapped with patient safety which emerged as leading topic in health care organisation at the beginning of this century (2). Furthermore, almost in all these experiences the hospital medical direction covers other topics and not necessarily is directly involved in HH issues.

This variety of experiences among European countries is also the reason why recently European Centre for Disease Prevention and Control (ECDC) adopted for IPC professional core competencies the term "infection control and hospital hygiene" (IC/HH) which includes all the engaged European healthcare professionals.

The interlink between IPC and HH is very strict since IPC covers a relevant part of the HH activities. Based on this interlink an "European Network to promote infection prevention for Patient Safety" (EUNETIPS) was founded in 2010 to support the sharing, within European countries, of programmes and activities developed by national scientific and professional societies. Infact many scientific and professional societies exist in Europe to support research and to promote knowledge, attitudes, good practices and training on IPC but they are not coordinated. Having a network such as EUNETIPS: respects and assumes the value of histories, traditions, activities and specificities of the existing scientific and professional societies; leaves each country to evolve at its pace and to respect local characteristics; retains formal contact; shares initiatives and experiences; promotes joint projects, etc.; guarantees mutual support both for critical situations and for specific needs; allows effectively lobbying and advocating healthcare associated infections (HAIs) prevention at the different levels (regional, national, international); guarantees a larger visibility for the media, for the public opinion and for the professional and scientific arena; makes available to European Union, ECDC, international institutions and other stakeholders, a wide spread network (common platform) able to support work programmes, guaranteeing expertise, channels of communication and feedback.

At the moment EUNETIPS has 30 members societies representing more than 9,000 professionals, actively participates to research and training initiative run in Europe such as the Joint Action on Antimicrobial Resistance and Healthcare Associated Infection (JAMRAI). All its activities (e.g. shared papers and documents, videos and training materials, surveys, meetings etc.) can be found in the website www.eunetips.eu.

Hospital Hygiene in Italy: toward a definition

To find out a definition of HH is quite complex and even in the Italian tradition is difficult to report a shared definition.

Progressing toward a definition it is possible to explore some of the major characteristic of the discipline starting from the existing experiences.

An Italian specificity is that professionals eligible to serve as hospital medical director are medical doctors preferably with a post graduation degree in Hygiene and Public Health and this has been confirmed along the years by all the reforms. A further specificity is the presence of specific professionals such as IC/HH nurses and prevention technicians who traditionally supported all HH activities.

According to the size of the hospital/ healthcare organisation HH can be guaranteed by multi-professional teams with variable number of members.

Within this tradition the topics which are covered in the HH activities include:

• IPC activities: HAIs prevention and control, disinfection and sterilisation, reservoirs control, epidemiological surveillance, healthcare workers infections, etc.;

• environmental sustainability: green hospitals, etc.;

• education and training of healthcare workers and citizens;

• prevention and control of non infectious risks: chemical, radiation, physical (i.e. trauma), etc.;

• safety and comfort in healthcare environments: microclimate, noise, illumination, etc.;

• quality and safety programmes.

All these functions impact horizontally on many healthcare organisation activities: epidemiological surveillance, HAIs prevention, reservoir control, occupational medicine, quality programmes, ancillary and supply services, health services management, hospital and units budget, environmental services, building construction and renovation, new technologies investment, patient involvement, healthcare continuity, education and training. Figure 1 illustrates the main interactions of HH with other healthcare sectors.

HH horizontally crosses many activities and functions, it implies multidisciplinary approach, it impacts both on processes, outputs, outcomes and on costs, it is a mix of setting regulations, inspections, governance, management and promotion of innovation.

Most of these activities are performed in cooperation and coordination with other professionals including microbiologists, infectious disease specialists, anaesthesiologists, occupational doctors and other medical doctors specialised in clinical disciplines, nurses, lab technicians, engineers, architects, physicists, technology experts, maintenance staff, environmental experts, etc.

Because of that, HH professionals besides the technical knowledge specific for the discipline should be able to interpreter different roles in different situations being able to act both as inspectors, supporters, advisors, promoters of innovation, etc.

Having all these aspects in mind a possible actual definition of HH can be formulated: “all activities aimed to guarantee, in an appropriate, scientifically sound and efficient way, that structures and processes support healthcare practices in a safe comfortable and healthy environment both for patients, caregivers and healthcare workers”.

A further reflection is needed on the name itself. The term “hospital hygiene” in fact is referred only to a part of the healthcare organisation: hospitals. This was appropriate years ago when healthcare was provided fundamentally through two levels: hospitals and general practitioners. On the contrary in these years an increasing number of activities had been moved outside

hospitals and coordination and continuity among different level of care are required. For this reason, we propose to modify HH as “healthcare organisation hygiene” in order to focalise the attention also to all care settings not only the hospitals.

Hospital Hygiene and Infection Prevention and Control in the Italian national healthcare system

The first national approach to IPC was set up in 1985 as a consequence of the SENIC study (3) by two bylaws (4, 5) that included the recommendations to set up in each hospital an Infection Control Team (ICT); those bylaws still remain the only technical recommendation on this topic at national level.

Nevertheless, IPC and HH had the possibility to be developed at regional level in relation to the increasing attention on quality in health services and specifically through the institutional accreditation process which became compulsory for all those organisations (public and private) who wanted to provide services for the Italian national healthcare system (NHS). Institutional accreditation in NHS became compulsory in 1992 (6) and besides few essential standards defined at national level each region had the opportunity to add further standards and related cut-offs which in some cases included also IPC and HH aspects.

In the first decade of this century in relation to the great attention which has been put on patient safety issues, many documents and recommendations have been developed in agreement between National Ministry of Health and regional healthcare services (http://www.salute.gov.it/portale/temi/p2_5.jsp?area=qualita&menu=sicurezza). This attention was not specifically focused on IPC and HH but the topic was mentioned as part of accreditation and quality and safety issues.

The law emanated in 2015 (7) stated a list of standards on buildings, technology, quality and quantity of care that each hospital must have in place to continue its activities. Besides these agreed standards for all Italian hospitals, regions have a central role in defining programmes and requirements to implement and monitor them as well as to add further requirements within the local hospitals.

The scenario had a further major change with the new law on patient safety and professional legal responsibility (8, 9) approved by Italian parliament. Briefly this new law identifies “patient safety” and all these activities as a right for citizens and communities and asks national, regional and hospital levels to have an organised structure dedicated to the issue. Although this law is not specifically focused on IPC nevertheless it sets up a new framework where patient safety programmes included IPC has to be managed in each hospital and in each healthcare organisation.

Future perspectives

HH and its professionals, besides the long tradition still remain, as illustrated in Pasquarella et al. paper (10), a relevant pillar in guaranteeing quality and safety of care in Italy. Nevertheless to continue to play this role some challenges have to be faced.

First of all, the necessity to think over the definition of “hospital hygiene” and adjust it to “healthcare organisation hygiene” in order to focalise the attention also to all the settings where cares are provided.

A second challenge is related to some relevant progresses that have been changed the state of the art in the last few years so that policies and plans at national level are now available as well as accreditation standards at regional and autonomous provinces level progressively include IPC. The challenge is to guarantee a common approach all over

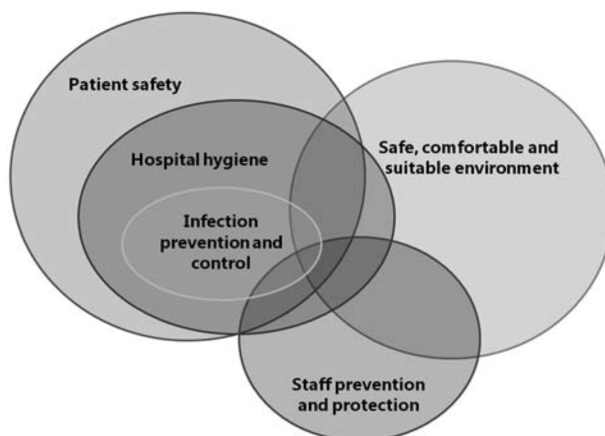

Figure 1 - Main interactions of Hospital Hygiene with other healthcare sectors.

the country and to be more effective and standardised defining clearly which are the essentials duties related to all the topics that need to be managed for guaranteeing the better HH approach.

Furthermore a special attention should be put on professional training both in pre and post graduation courses as well as in the continuous professional education, defining clearly basic core competencies that HH professionals should have. An example is the ECDC document "Assessment of infection control, hospital hygiene capacity and training needs in the European Union" (2) that defines the basic and the advanced competencies for IC/HH professionals in Europe, in particular to IPC activities.

Moreover in the European context the harmonisation of HH should be sustained through the development of multidisciplinary and multinational community of practises which networks could help in sharing knowledge, good practices and in reducing quality variability within and among countries. An example of this approach is EUNETIPS, which as a network, focuses its attention on patient safety and quality of care. Finally HH besides its own national tradition and specificities needs to define its common specific competencies and areas of interest in light of the current evolution of healthcare systems. This is necessary for training professionals able to support the emerging healthcare organisation needs.

Riassunto

L'igiene ospedaliera e la prevenzione e il controllo delle infezioni in Italia: stato dell'arte e prospettive

L'igiene ospedaliera in Italia ha una lunga e solida storia che però richiede una necessaria riflessione per poter restare al passo con quelle che sono le innovazioni e gli sviluppi dei sistemi sanitari anche connessi a quelle che sono le attività dell'Unione Europea.

A livello europeo infatti esistono diverse tradizioni nazionali che riguardo l'igiene ospedaliera e per questo motivo l'European Centre for Disease Prevention and Control (ECDC) ha adottato il termine "controllo delle infezioni e igiene ospedaliera" per poter così includere tutti i professionisti sanitari dei singoli Paesi.

La nostra proposta è sia quella di modificare il termine di "igiene ospedaliera" in "igiene delle organizzazioni sanitarie" per poter focalizzare l'attenzione anche ai numerosi livelli di cura non ospedalieri, sia di adottare la seguente definizione: "tutte le attività volte a garantire, in modo appropriato, scientificamente valido ed efficiente, l'assistenza in un ambiente sicuro, confortevole e salubre per i pazienti, i *caregiver* e gli operatori sanitari".

L'igiene ospedaliera ed i suoi professionisti sono un pilastro necessario per garantire la qualità e la sicurezza dell'assistenza sanitaria in Italia.

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