

The acquired experience and the programs for the prevention of nosocomial infections in Lombardy

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SUMMARY

The authors present organization of Lombardy in the nosocomial infections' control. In particular they expose characteristics of Regional Coordination of the Hospital Committees (CR-CIO) and the plans for the CR-CIO in the two year period 2006-2007. Preliminary results of work groups show that the main problems in the control strategies are the difficulties in implementing theoretical notions in care programs. So it is therefore necessary to continue along this path to reach further goals and eventually change the adopted organizational.

KEY WORDS: Nosocomial infections, Health organization

Acquired infections in the hospital continue to represent an important public health problem as they have a major health impact in terms of elevated morbidity and associated mortalities and in economic terms for the additional days of stay in hospital and the cost of diagnosis and treatment (U.S. Department of Health and Human Services 2003). Hospital-acquired infections are also an important and sensitive pointer of the quality of attendance, because to the traditional risks and hygienic problems we must add those deriving from behaviors, practical professional and inadequate organizational orders (National Nosocomial Infections Surveillance, 1998, Yologlu *et al.*, 2005)

The necessity to support the prevention and control of nosocomial infections with adapted organizational structures has emerged since Italy first perceived the importance and the impact of such phenomenon on the health system. (Garner, 1996; McKibben *et al.*, 2005).

In 1985, was faced, at normative level, the problem of nosocomial infections was tackled in legislative terms for the first time in Ministerial Circular 52/1985, then integrated with the successive Circular 8/1988 providing indications for the constitution of a committee of control for the fight of the infections-CIO in every hospital, with a nurse dedicated to surveillance and control (Moro *et al.*, 2001, Brusaferrero *et al.*, 2003). To comply with this regulation, the regions have adopted various modalities for the realization of such objects, also in relation to the different models and regional situations (Busetto *et al.*, 2004, Luzzati *et al.*, 2001, Porretta, *et al.*, 2005).

Lombardy has promoted the coordination and comparison among their CIOs, instituting, in 2002, a regional committee, constituted by representatives of hospitals fulfilling certain quality criteria such as operating protocols, destined medical and nurse groups, documented training activity (Lizioli *et al.*, 2003).

Such coordination grouping representatives of hospitals introducing certain requirements has been called CRCIO (Regional Coordination of the Committees to fight hospital infections) and has been defined requirements hospitals must possess, so that a representative of their CIO participates; such provisions have recently been inte-

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grated with Decree no. 7855 dated 19/05/2005 "Modernization of hospital facilities to participate in the Committee of Regional Coordination of the CIO of Lombardy (C.R.CIO), according to of the Decree no. 8603 of 20th May 2002".

The competences of the Health Director General's office comprise the prevention of infectious diseases and also the prevention of hospital infections.

For such purpose in 2005 the programming and coordination of health authorities, and other targeted measures to implement the policy of prevention of hospital infections inserted among the goals of the general managers of hospitals the need to "draft a plan for the control of nosocomial infections".

In lists the requirements for accreditation as provided by DPR 14.1.1997, the Region has indicated, among the quality requirements, "the activation of appraisal programs and improvement of quality; annually they must carry out at least two programs of improvement of quality. One of the following programs must regard one of areas: ...control of nosocomial infections."

With the institution of Regional Coordination of the Committees of Control of the Infections (CR-CIO), the Lombardy Region started a process of direct involvement of peripheral health organizations in the planning and management of plans: in this logic they have admitted to the CR-CIO 37 hospitals in 2003 and 60 altogether in 2005.

In 2004 three prevention and control schemes were implemented:

1. Evaluation of Preoperative Antibiotic Prophylaxis.
2. Determination of Training Topics.
3. Surveillance by Microbiological Units (Microbiological lookouts, Antibiotic resistance, *S. aureus* bacteriemias).

In the course of 2005, the Regional Coordination of the CIO ascertained that very defined procedures and protocols do not correspond to automatic performance. This led to a search for the main critical elements to establish a process applicable to the various indications of the literature for the prevention and the control of nosocomial infections (Corrente *et al.*, 2005).

In particular, the difficulty to find nosocomial infections and, therefore, the impossibility to operate time and space comparison; the short-

age of human resources and the different organizational modalities, with the division in departments and the flexibility of the assigned staff, with a high turnover; the progressive change in the modalities and periods of stay in hospital with an acceleration of discharge and greater incidence of infections outside the hospital; the structural and functional deficiencies, not yet required for the accreditation of the facilities of specific care and treatment standard, hamper the prevention and control of nosocomial infections.

In fact the conviction that acquaintance with one operating procedure, feasible through also necessary initiatives of training does not necessarily entail behavioural changes. An analysis of the current organization and procedures and protocols must therefore investigate the various motivations underlying different measures.

A partial analysis of the objective limits of the system is possible, attributable to structural deficiencies (authorization requirement and accreditation are not sufficiently correlated to the prevention of the nosocomial infection; resources and they inadequate organizational articulation to the preventive requirements), but also to the treatment processes, that they render some measures not compatible.

In February 2006 the plans for the CR-CIO were reviewed and new lines of activity defined. The need to define a schedule of the Committee's work for the two year period 2006-2007 was established, with the objects to achieve and relative deadlines. The document drawn up entitled "Activity of the Regional Coordination of the C.I.O. - 2006-2007" contains operating proposals for the activity to carry out in the two year period 2006-2007, adopting an extremely pragmatic approach, setting up some subgroups to tackle the critical elements, for example the reason why hand washing is not among the "habits" of the operatives, or why the epidemiological data available (such drug or disinfectants consumption) are not used. Then, to consider the relative solutions and guidelines the following groups were set up:

1. analysis and appraisals on prevention and control of hospital infections in Lombardy;
2. analysis of legislative requirements for the accredited structures, correlated to the prevention and control of nosocomial infections;

3. analysis of organizational models and experiences of other regions or states and perspectives on a national level;
4. surveillance and monitoring of the NI (applicability, costs/benefits relationship, operating follow-up);
5. analysis of use epidemiological data in clinical practice;
6. analysis of protocols of prevention and control and their implementation;
7. staff training.

The work groups have been coordinated by the Unit for Prevention of the General Health Office. The first analysis of the results shows that the main problems in the control strategies of nosocomial infections are the difficulties in implementing theoretical notions in care programs.

Although the quantitative and qualitative aspects of the problem of acquired infections have been addressed, we envisage difficulties in monitoring effective improvements at the local level and in regional program. Such difficulties lie mainly at the organizational level, since the epidemiological processing and the measures of prevention and control are advanced: the problem is therefore transferring to operating level indications and validated guidelines in different settings and situations. It is therefore necessary to continue along this path to reach further goals and eventually change the adopted organizational model.

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