Integrated Management Of Chronic Diseases In Multiunit Shared Surgery

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Abstract
Chronic diseases have a significant impact on health and socio-health care, in terms of premature death, chronicity or disability. Numerous scientific evidences have shown that some pathologies affecting the immune system depend on common pathogenetic mechanisms in which the number of patients presenting with Rheumatological, Dermatological or Gastroenterological comorbidities ranges between 25% to 40%. The research was conducted through an expert panel, which share skills and knowledge about the management of IMiDs pathologies. The panellists suggested a new planning of the treatment path. They recommended the presence of the hospital pharmacist, who guarantees the safety of treatments. The study highlights how the multidisciplinary approach in the hospital setting is able to increase the effectiveness of treatments and at the same time reduce indirect costs.

Keywords: clinical governance, multidisciplinarity, effectiveness, IMiDs.

Introduction
Chronic diseases have a significant impact on health and socio-health care, in terms of premature death, chronicity or disability (Merengoni, 2011). The World Health Organization estimates an annual increase of 10% in chronic diseases with a consequent reduction in economic growth of 5%. 70-80% of healthcare costs are allocated precisely for these diseases, also because these patients weigh heavily on care and assistance services. Healthcare costs and the risk of unnecessary hospitalizations increase significantly as comorbidities. Polymorbidity is significantly associated with an increase in mortality and disability and a poor quality of life (Boyd, 2010).

Prevalence is estimated at around 20-30% in the general population, reaching 55-98% if we consider older people or socially disadvantaged classes. Immunological pathologies represent a class of chronic pathologies with heterogeneous symptomatic pictures, apparently unrelated to each other (Barnett, 2012). Numerous scientific evidences have shown that some pathologies affecting the immune system depend on common pathogenetic mechanisms in which the number of patients presenting with Rheumatological, Dermatological or Gastroenterological comorbidities ranges between 25% to 40%. These are different phenotypes and clinical manifestations of a process that can be traced back to a common matrix, that is, a serious dysfunction of the immune system. The introduction of the new drugs has practically posed the problem of confronting a completely new pharmacology in its aspects, both pharmacodynamic and pharmacokinetic, compared to traditional drugs.

The research aims to design a shared path between multiple specialist areas for the management of immunological pathologies in the Mater Domini Hospital in Catanzaro (Italy). The second objective is to verify, with the support of a panel of clinical experts and pharmacists operating in the hospital, the possible options for a modification of this path. These options would be aimed, among other aspects, at reducing the cost of the route, maintaining its final objective, represented by the prescriptive appropriateness of the drug and the adequacy of the follow-up.

Materials and methods
The research was carried out on the basis of existing evidence on the current path and on a perceptual assessment of the main criticalities of this path and the opportunity to modify it by a panel of experts (Jommi, 2019). Through the creation of a multidisciplinary team (Rheumatologist, Dermatologist, Gastroenterologist, Pharmacist) it was possible to share skills and knowledge (Brescia, 2019) about the management of IMiDs pathologies (analysis of the current therapeutic variability as well as of clinical-
diagnostic investigations, frequency of services provided in the control and follow-up). Subsequently, a governance model was designed and structured for the integrated management of people with chronic diseases and disabilities, through functional, intersectoral and interinstitutional integration between all the articulated subsystems of the socio-health system (McMullin, 1999). The benefits of shared management were subsequently analyzed.

Results
Immunological pathologies represent a class of chronic pathologies with heterogeneous symptomatological pictures, apparently unrelated to each other.

Several scientific evidences have shown that some pathologies affecting the immune system depend on common pathogenetic mechanisms in which the number of patients presenting Rheumatological, Dermatological or Gastroenterological comorbidities, from literature data, oscillates between 25% and 40% (Borenstein, 2017). The establishment of the Multinut clinic responds to the clinical need for shared management for these patients. Immune mediated pathologies are included: Rheumatoid Arthritis (AR), Spondyloarthritis (SPA), Psoriatic Arthritis (PSA), Juvenile Idiopathic Arthritis (AIG), Psoriasis (PSO), Hydroadenitis Suppurativa (HS), Crohn's disease (MC), Ulcerative Colitis (CU), Celiac disease. Immunomediated pathologies, therefore, represent clinical conditions that involve different specialist skills integrated into a complex care path (Therapeutic Diagnostic Path, PDT) that can be summarized in figure 1. Upon arrival, the patient is welcomed by a specialist who assesses the conditions through a General Anamnesis and subsequently, after the Punctual History, directs him to the most suitable specialist, thus generating the typical clinical sharing of the Shared Clinic on IMiDs. The process of referring to the next specialist takes place through the sharing between Rheumatology, Dermatology and Gastroenterology of a specific Clinical Record and an Electronic Agenda which, through the definition of specific time slots previously established, allows the various specialists to make visible to the other involved figures hourly availability for a consultancy visit, tracked by the system. From an organizational point of view, the patient with IMiDs pathology is assisted by a multidisciplinary team in which the skills are present at the same time to stabilize vital functions and quickly reach a diagnosis. The severity of patients' clinical conditions is identified through criteria validated in the literature. The need to share information arises from the fact that the different symptoms that can develop are hidden by the therapy in progress. Furthermore, the patient's continuous multidisciplinary management is not only focused on the treatment prescribed for the single manifestation, but focuses on the prevention of complications and/or comorbidities that can develop in a patient with an altered immune system (Selmi, 2014). The philosophy described is the basis of the operating steps of the shared outpatient clinic on IMiDs.

Discussion
Clinical governance represents the strategy by which healthcare organizations make themselves responsible for the continuous improvement of the quality of services and the achievement-maintenance of high standards of care, stimulating the creation of an environment that favors professional excellence (Hawes, 2016).

Disease and Care Management require the presence of multidisciplinary teams that provide patients with high quality and evidence-based assistance (Jacknin, 2014). Most appropriate approach for patients at this level. This implies proactive management of assistance, following agreed protocols and assistance paths to manage specific pathologies. Staging is in any case an indispensable function for all those public health interventions and the re-functionalization of services that aim to review the functioning of the overall organization of assistance within the system, with regard to:

• appropriateness of the care setting in relation to the specific needs of the patient. In this regard, think of the frequent improper specialist follow-up, a problem highlighted in the specialist studies themselves which, in addition to generating unnecessary costs, determines the progressive de-qualification of the specialist function exposing the patient to a stress deriving from being followed in a setting with characteristics not suited to one's needs.
• appropriateness of the care path in its clinical and organizational aspects. The division of patients into sub-
populations (sub-targets) homogeneous for care needs allows to be able to outline targeted and personalized care paths (Vare, 2016).

The shared outpatient clinic on IMiDs takes into account all the clinical and organizational aspects, paying particular attention to the economic ones. The structured path allows, for example, to avoid duplication of clinical and instrumental investigations, reduce waiting lists, reduce the time required for clinical sharing and the achievement of a diagnosis. The pathway is highly functional to the clinical needs of patients through the optimization of the Clinic, Diagnostics and Follow Up. The process also uses measurement indicators. These indicators are represented by a Customer Satisfaction form that will allow the identification of any Process Critical Points (PCP) in the activated Governance mechanism, directing towards the possible activation of corrective actions which, where not sufficient, will allow the resolution of the criticality through the creation of a completely new phase.

The IMiDs clinic allows you to respond to the following Key Issues:

- Better diagnostic framework and better treatment management;
- Effectiveness Based Medicine;
- Control of health expenditure;
- Prescribing appropriateness;
- Risk stratification;
- Monitoring logs;
- Research opportunities;
- Shared protocols;
- Integrated therapies;
- Targeted follow-up;
- Ensure the provision of services closest to the citizen;
- Activate models and priority paths in accessing services;
- Develop real integration with health prevention and promotion initiatives;
- Combine the assistance that can be provided at the population level with the ability to direct the individual care project and specific subgroups of patients, optimizing independence, specificity and individual involvement in care (Capelli, 2016).

Healthcare costs are rising worldwide, due to the combined effect of increasing population age, innovative technologies, errors in prescribing drugs and the increase in the cost of drugs. The increase in polytherapies, especially in the elderly, pushes health systems to find solutions in the management and promotion of control measures.

Pharmacists play a fundamental role (Yasunaga, 2016) not only in the reduction of costs related to drug therapies but above all in the cost / benefit evaluation of drug therapies (Dalton, 2017; De Rijdt, 2008). The reduction of inappropriate prescriptions (Pronovost, 2003) not only allows to reduce the costs due to drug therapy but above all to reduce possible adverse effects (ADEs) (Kucukarslan, 2003), which often contribute to the prolongation and increase of hospital admissions (Schumock, 2003). Numerous publications demonstrate how the inclusion of the pharmacist in the various care settings (Wickens, 2013; Polidori, 2017) determines a positive effect on the hospital budget (Yasunaga, 2016; Olson, 2005; Lada, 2007). Cost-saving interventions the reconciliation of drug therapy, abandoning unnecessary therapies, the switch to less expensive but equally effective therapies (McMullin, 1999). In this context, the figure of the pharmacist, moreover, would allow to reduce all costs due to the occurrence of ADEs (Kaboli, 2006; Lombardi, 2018) that otherwise could occur in the absence of any intervention, thus contributing, not only to the safety of drug therapies but also to the reduction of direct costs and related indirect (Chen, 2017; Chinthammit, 2012; Kopp, 2007).

Conclusions

However, further studies will have to be carried out to assess the real economic impact related to the introduction of the department pharmacist in a multi-unit outpatient clinic such as the one envisaged, as well as the use of the drug by analyzing real life data. The creation of a single MultiUnit PDT represents an optimization of the individual PDTs in the Rheumatology, Dermatology and Gastroenterology area. This
reorganization within the AOU "Mater Domini" of Catanzaro will allow the achievement of two specific targets:

✓ Appropriateness of the care setting in relation to the specific needs of the patient;
✓ Appropriateness of the care path in its clinical and organizational aspects.

The division of patients into homogeneous sub-populations for care needs allows, in fact, to be able to outline targeted and personalized care paths. The time required for clinical sharing and the achievement of a diagnosis is reduced, etc. The path created responds to the clinical needs of the type of patient IMiDs, optimizing the clinic, diagnostics, follow-up and the process, with a view to greater cost-effectiveness. In order to be possible and have the desired effects, all changes need to be supported by a high level of professional participation. Active participation is needed for the redesign of services in terms of redefining patient care paths, reformulating roles and professional skills (Ravn-Nielsen, 2018). The health systems have expressed their interest in involvement and professional participation with intensity and determination, developing with particular elaborative and analytical attention the theme of what is now defined with the term "Clinical Engagement".

Uniforming health behaviours towards chronic systemic diseases, through the creation of a shared outpatient clinic that allows the integrated management of patients by specialist branches, not only reduces the costs related to care but above all optimal patient management or:

- Promotion of best practice;
- Increase in information to citizens;
- Timeliness in welfare responses;
- Standardization of care;
- Assurance of care pathways for the most common and disabling chronic diseases.

Disease and Care Management requires the presence of multidisciplinary teams that provide patients with high quality and evidence-based assistance, more appropriate at this level.

Figure 1. Shared Outpatient Path for IMiDs pathologies (PCP - Process Critical Points)
References


