



Acute care hospital at different levels of intensity: the role of Geriatrician

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Abstract

The traditional model of care is based on “disease-centered” management that requires the organization of the hospital in specialized wards, to which the patient is assigned for the main disease. The growing need to optimize economical and human resources and to promote a global approach to the patient has led to the setting up of the intensity of care model. It is a health system based on a “patient-centered” approach, where the hospital is organized in departments dedicated to patients with homogenous needs of care. In Italy, intensity of care model is currently being tested in the hospital organization, where three levels of intensity are proposed: low, medium and high. The purpose of the following review is to describe the role and importance of the Geriatrician in each of these care settings and to highlight the contradiction of a National Health System which promotes the geriatric approach to all types of patients, but does not invest in the formation and integration of the figure of the Geriatrician in clinical practice, condemning it to marginalization or even extinction.

Keywords Acute care hospital · Level of care intensity · Geriatrician

Introduction

The contemporary medicine has often considered “disease” as the centre of the care process. So, the traditional model of clinical practice is “disease-centred” and characterized by a reductionist division of body in its basic components. In

this model, the patient is considered only for his biological features and “disease” represents an organic lesion which can be objectified and measured using physical and chemical parameters. Thus, the patient becomes a passive subject because he only receives care by healthcare professionals and the environment remains irrelevant in the healthcare process [1]. As regards Italian hospital organization, traditional healthcare model provides that patients with acute conditions access to emergency department where they are assigned a colour code corresponding to the severity of their clinical condition through the triage. Subsequently, patients are managed in a short-stay observation unit (SOU) or an emergency medicine division. When they have been stabilized or when a diagnosis is formulated, patients are addressed to the reference specialist ward. Therefore, hospital is organized in specialist wards (i.e. nephrology, cardiology, pneumology) and the patient is sent to one of them according to the prevalent disease and not for the individual needs of the patient.

On the contrary, “patient-centred” medicine is an healthcare model which focus medical attention on patient’s health needs and outcomes, rather than the doctor’s [2], according to the bio-psycho-social medicine model proposed by

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Engel [3]. Based on the assumption that personal narratives, emotions and subjective perceptions of the patients must be taken into account by healthcare professionals, we have to integrate the concept of “curing” with “caring”. In this scenario, the concept of “disease”, intended as a group of signs and symptoms, should be integrated with “illness”, which includes personal emotions, desires, expectations and social context, and “sickness”, as a social expression of unhealthy [1].

In this perspective, the hospital should be no longer subdivided into departments, but in areas/sectors dedicated to patients with homogeneous needs of care. In this way, it is possible to optimize the use of economic and human resources, to reduce costs and to provide higher quality performances [4]. Thus, to each level of intensity of care corresponds a different grade of complexity, on which are based the needs of the healthcare professionals. For example, nursing requirements are expressed through nursing/hospital patient ratio in relation to the gravity. In this model, the care process provides a multidisciplinary approach which involves different specialists, healthcare professionals and nursing staff, but also relatives and caregivers, to provide a patient-tailored assistance [5].

The role of Geriatrician in emergency department: the “Silver Code”

The number of visits to emergency department (ED) has significantly increased during the past few years, especially for elderly patients (26% more from 1993 to 2003) [6]. The complex management of acute conditions in the elderly derives from their frailty, which is characterized by comorbidity, polypharmacy, disability, and lack of an adequate social support network [7, 8]. Frail older patients are also at high risk for hospital readmissions and adverse health outcomes, such as functional or cognitive decline, adverse drug reactions, or death [9, 10]. Furthermore, another element of complexity is the atypical clinical presentation. In fact, a recent study has showed that on 633 older adults who visit the ED the prevalence of atypical presentation is 28.6% (181 of 633 cases). The three main unusual presentations of diseases are the failure to develop fever with a disease known to cause fever (i.e. tuberculosis, infective endocarditis, lung abscess, pneumonia, urinary tract infection, septic shock, systemic infection, skin and soft tissue infection and acute abdominal condition, e.g. appendicitis), followed by the lack of pain with a disease known to cause pain (i.e. acute coronary syndrome, obstructive uropathy, and acute abdominal condition, e.g. acute appendicitis, liver abscess) and fatigue [11]. In particular, an observational study shows that a higher complexity of acute illness is associated to a more severe grade of frailty and both are independently

related to inpatient mortality [12]. Because of these characteristics of frailty, it has been hypothesized that high risk ED older patients could benefit more from admission to acute geriatric unit care than to internal medicine wards. To test this hypothesis was developed and validated the “Silver Code”, a prognostic tool to identify older patients at an increased risk for 1-year mortality regardless the reason for the index hospitalization, probably reflecting patients baseline health conditions. In addition, the same study evaluated potential differences in mortality rates among patients transferred to an acute geriatric unit care compared to those transferred to internal medicine wards. The results of this study showed that higher risk of mortality, characterized by higher scores of the “Silver Code” (≥ 7), were associated with better outcomes when elderly patients were assigned to acute geriatric unit than to internal medicine wards (Fig. 1) [13]. These results underline the importance of geriatric care in the management of elderly patients also during acute conditions. However, the distribution of acute geriatric beds in Regione Campania is alarming: for 1,045,084 people older than 65 years less than 100 acute geriatric beds (Abete, unpublished data).

The role of Geriatrician in hospital by intensity of care

In the US, hospital organization based on intensity of care includes two models: the “Progressive Patient Care”, for all patients, and the “Chronic Care Model”, specific for chronic disease. In the first model, patients are divided accordingly to their complexity in four care units: intensive care, inter-mediated care, minimal care and organized home care. Instead, in Italy, there is no established tradition about hospital organization based on intensity of care [14].

Actually, in Italy, pilot experiments on a reorganization of hospitals are underway in different Regions, among which Regione Toscana, Piemonte, Lombardia and Emilia Romagna. To name just a few, the Local Healthcare Company (LHC) 2 in Lucca in Tuscany, followed by other examples in Tuscany [15]; the hospital of the City of Health and Science of Turin [16]; the S. Gerardo Hospital in Monza [17]; the Hospice Company of Vimercate [18]; the Civil Hospital of Legnano [19]; the Galliera of Genoa [20]; the LHC 3 in Umbria [21].

Therefore, there is not an “Italian model” for hospital organization by intensity of care. Nevertheless, in existing experiences, it is possible to identify three levels of care where patients are allocated homogeneously according to their needs [22, 23]:

- Level 1—high intensity of care: includes intensive therapy and sub-intensive therapy; in the hospital, the

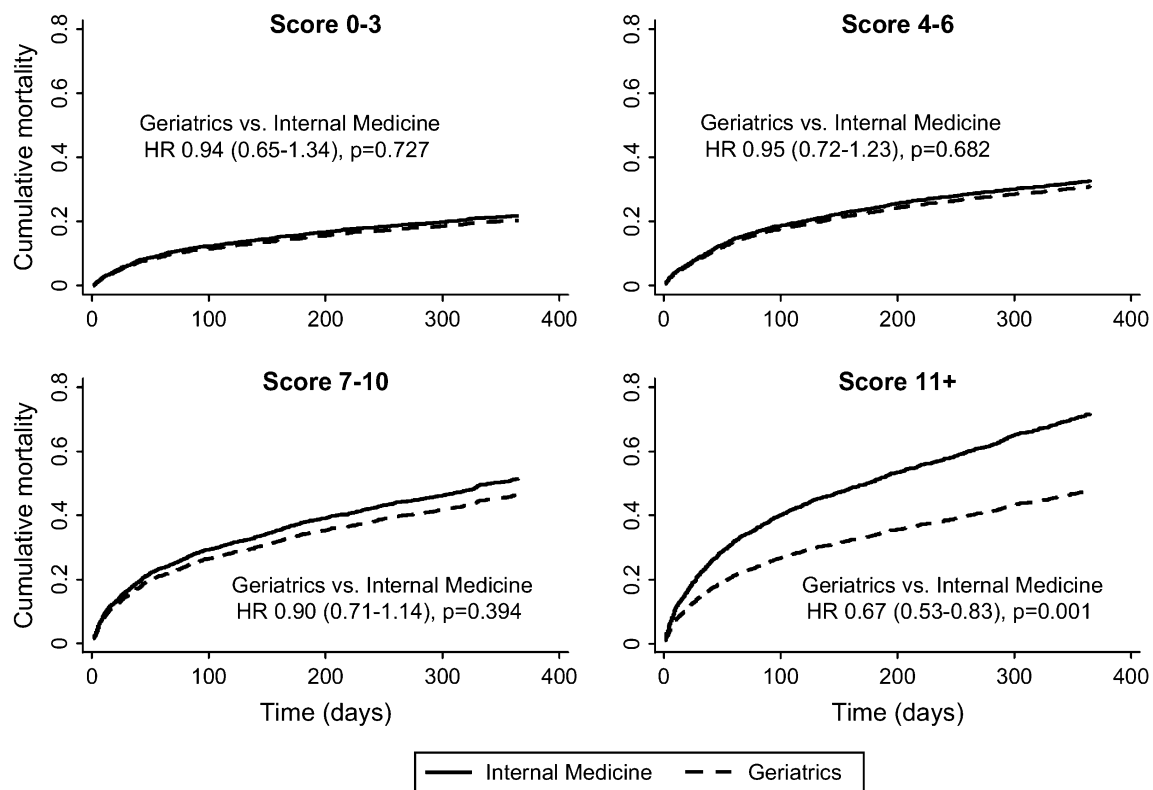


Fig. 1 1-year survival as a function of hospital admission to an acute geriatrics or internal medicine ward, after stratification by risk of death score. Cox regression models, adjusted for age, sex, marital

status, previous admission to a day hospital, previous admission to a regular ward and the corresponding discharge diagnosis, and number of drugs taken. (with permission [13])

patient in danger of life or critical condition is under close medical supervision to avoid complications or acute organ failures. It corresponds to the intensive care of the US “Progressive Patient Care”.

- Level 2—medium intensity of care: organized in functional areas, it includes ordinary and short-term hospitalization; presupposes that patients stay at least one night in the hospital (i.e. week surgery, 1-day surgery); the goal is the clinical state stabilization and the monitoring of vital parameters of patient without continuous observation. It corresponds to the intermediate care of the US “Progressive Patient Care”.
- Level 3—low intensity of care: dedicated to post-acute care, it is similar to the sub-acute care; the patient is provided with unsupervised assistance at the final stage of his way to the territorial services. It corresponds to the minimal and organized home care of the US “Progressive Patient Care” [24].

Now we are going to present some clinical cases to clarify the role of Geriatrician in these settings.

Figure 2 shows the transition from traditional to intensity of care model.

High intensity scenario

A 83-years-old male accesses to ED in critical conditions, presenting severe dyspnoea, diaphoresis, paleness, confusion. His symptoms, physical examination, blood and imaging exams are showed in Table 1. His medical history includes post-ischemic dilative cardiomyopathy complicated by mitral insufficiency and permanent atrial fibrillation; chronic obstructive pulmonary disease (COPD), colon diverticulosis, and previous transient ischemic attack (TIA). The following diagnosis is formulated: acute cardiorespiratory failure for pulmonary oedema and respiratory exacerbation in patient with chronic obstructive pulmonary disease and post-ischemic dilative cardiomyopathy complicated by atrial fibrillation with high ventricular response. The therapy was performed as described in Table 1. After few hours, the patient, despite an initial improvement of his clinical conditions, shows psychomotor agitation. The consulted Geriatrician diagnoses delirium and recommends replacing ceftazidime with meropenem, initiating low-dose haloperidol and rapid nesting from non-invasive ventilator with transfer to a lower intensity division of care.

Fig. 2 Transition from classical colour code to care intensity code (see text for the explanation). *ED* emergency department, *SOU* short-stay observation unit

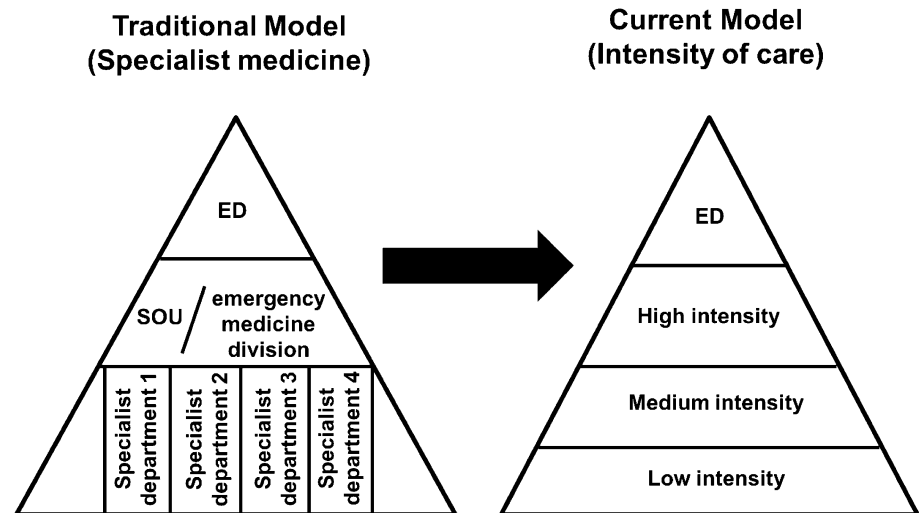


Table 1 High intensity scenario

Male, 83 years old	
Symptoms	Severe dyspnea, diaphoresis, paleness, confusion
Vital signs	BP 180/100 mmHg HR 150 beats/min RR 30 breaths/min
Thoracic examination	Gasps as rising tide
ECG	Atrial fibrillation
Chest X-ray	Bilateral mid-basal pleural effusion with signs of apical interstitial infiltrate
Blood gas analysis	SpO ₂ 82%, pH 7.34, pO ₂ 50 mmHg, pCO ₂ 50 mmHg in Venturi mask at an FiO ₂ 50%
Laboratory tests	Hb 11.30 g%; WBC 12.500 mm ³ (neutrophils 85.5%), fibrinogen 652 mg%, glycemia 320 mg%, INR 3
Therapy	Furosemide 100 mg e.v., nitro-glycerine 5 mg 4 fl in NaCl 0.9% 500 cc e.v. 30 ml/h, amiodarone 150 mg 8 fl in glucose solution 5% 500 cc e.v. 30 ml/h, ceftazidime 1 gr × 3 e.v., levofloxacin 500 mg e.v., enoxaparin 6000 UI fl × 2 s.c. and non-invasive ventilation (NIV)

BP blood pressure, *HR* heart rate, *bpm* beats per minute, *RR* respiratory rate, *ECG* electrocardiogram, *FiO₂* fraction of inspired oxygen, *Hb* haemoglobin, *WBC* white blood cells, *INR* international normalized ratio

Atypical presentation is very common in elderly patients [11]. In particular, data from the “Osservatorio Geriatrico Campano” show a reduced incidence of dyspnoea as clinical presentation in elderly patients with chronic heart failure (Fig. 3) [25]. Moreover, precipitating factors of chronic heart failure are age-related, with a prevalence of infectious diseases and tachyarrhythmias in elderly against coronary attack and cardiac valve dysfunction in younger patients [26–28]. Furthermore, altered mental status (AMS) is common in elderly admitted to EDs with a ratio of 41–60% but the diagnosis is particularly difficult in these patients and it is also associated to higher mortality rates [29]. The results of a recent multi-center prospective study showed that infections (39.5%) and neurological diseases (36.5%) were the most common cause of AMS, followed by metabolic-electrolytic (17.3%), cardiopulmonary (14.8%), and gastrointestinal (5.7%) diseases. Cardiac and pulmonary aetiologies were associated

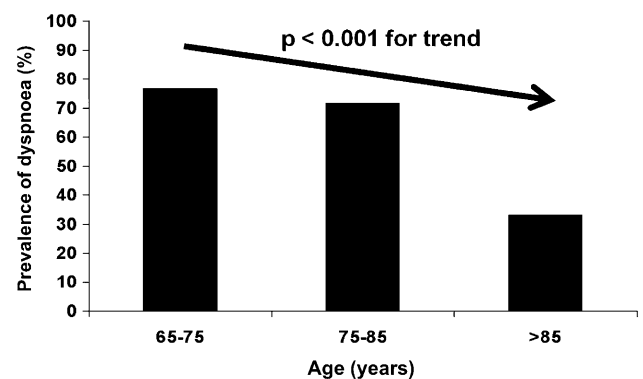


Fig. 3 Incidence of dyspnoea in elderly subjects with chronic heart failure. (with permission [25])

to 35% of AMS as showed by rates of delirium, AMS history, and mortality among etiologic groups.

Frequently, patients admitted in high intensity care for acute respiratory failure require NIV treatment, but despite strong evidences documenting NIV benefits, several studies have reported NIV failure rates ranging from 5 to 40%. The possible causes of immediate failure (within min to < 1 h) are a weak cough reflex, excessive secretions, hypercapnic encephalopathy, patient-ventilator asynchrony and psychomotor agitation due to patient intolerance [30]. In particular, elderly patients are at increased risk for the development of psychotic symptoms including agitation and uncooperative behaviour. In this scenario, the role of the Geriatrician becomes crucial because of its greater experience in the detection and management of psychotic behaviours which often worsen the already delicate condition of frail elderly patients [31]. Moreover, among the causes of NIV failure, delirium has been postulated to be an important contributing factor. In a prospective study investigating the rate of delirium in patients with acute respiratory failure treated by NIV and the potential association between delirium and mortality, among the 153 recruited subjects, more than 30% developed delirium and a strong association between delirium and subsequent mortality was found. Possible explanations of this relationship are the agitation, confusion and psychomotor disturbances associated to delirium, which reduce patient compliance (i.e. mask intolerance). These findings may explain why the 30-day survival is 95% in non-delirious group and 78% in the delirious group [32].

Therefore, carefully detection and management of these high-risk patients have a central role in reducing their mortality. For this purpose, in high intensity of care, the Geriatrician plays a decisive role in identifying and managing

the atypical presentation of acute illness in elderly patients with comorbidity and related complications (“frail/complex” patients).

Medium intensity

A female, 93 years old, accesses to ED with acute abdominal pain. Her symptoms, physical examination, blood and imaging exams are showed in Table 2. Her medical history includes: hypertensive cardiomyopathy, hypercholesterolemia, gallstones and bilateral renal cysts. The patient is diagnosed with acute calculus cholecystitis. The therapy was performed as described in Table 2. In addition, surgical intervention is indicated after the resolution of the acute condition. After few days, the general surgeon raises problems about patient surgery due to her old age. To quantify the surgical risk and the clinical frailty, the patient underwent a comprehensive geriatric assessment (CGA) by the consulted Geriatrician. After this evaluation, given the poor functional impairment and the low degree of clinical frailty, the patient underwent laparoscopic cholecystectomy under anaesthesia without complications.

“Ageism” and age discrimination are terms used in the literature to define negative attitudes towards older people. There is no reason for treating any individual badly, especially when they are particularly in need, because in this way we promote discrimination and failing the Hippocratic role of the healthcare professional which is “to cure sometimes, treat often and to comfort always”. To avoid this phenomenon frailty units with well trained staff should be created, where frail older people can be comprehensively assessed and receive timely and targeted care, followed by a supported discharge [33]. In this sense, the CGA is particularly

Table 2 Medium intensity scenario

Female, 93 years old	
Symptoms	Right flank pain, nausea, vomiting, fever
Vital signs	BP 140/85 mmHg HR 90 beats/min RR 21 breaths/min T 38.5 °C
ECG	Sinus rhythm, right bundle branch block, left anterior hemiblock
Abdominal X-ray	No air–fluid levels, no free gas in abdomen
Abdominal ultrasonography	Positive sonographic Murphy sign. Gallbladder wall thickening with a “binary” shape. Pericholecystic fluid. Intra- and extra-hepatic biliary tract not dilated. Lithiasic formation at the level of the cystic duct
Blood gas analysis	Within range
Laboratory tests	WBC 16,500 mm ³ (neutrophils 90.4%), fibrinogen 560 mg%, glycemia 320 mg%, direct bilirubin 2.2 mg%, GGT 52 U/L, ALP 224 U/L, AST 52 U/L, ALT 74 U/L
Therapy	Piperacillin-tazobactam 4.5 g e.v./8 h, metoclopramide 1 fl e.v./8 h, ketorolac 30 mg e.v./8 h, omeprazole 20 mg e.v./1 h

BP blood pressure, HR heart rate, bpm beats per minute, RR respiratory rate, T body temperature, ECG electrocardiogram, WBC white blood cells

useful because it explores the functional, nutritional and socio-economic status, comorbidity and emotional and cognitive functions, providing a global assessment of the elderly patient. The evaluation of the surgical risk together with different prognostic surgical validated tools represents the best approach to this kind of patient. A recent study showed that the use of some simple indices of CGA, together with surgical prognostic indices (the physiological and operative severity score for the enumeration of mortality and morbidity—Possum, the surgical risk score—SRS defined by the National Confidential Enquiry into Patient Outcome of Death, the American Society of Anaesthesiologists—ASA, and the British United Provident Association—BUPA) can provide valuable help in identifying the highest risk patients to develop negative outcomes after surgery. In particular, multivariate analysis showed that higher cognitive function assessed by MMSE is associated with a reduced risk of total mortality, while comorbidity is associated with a higher risk of total morbidity [34].

Therefore, in medium intensity of care, the Geriatrician is frequently involved in the administration of CGA and identification and quantification of clinical frailty because some medical procedures are not performed only for the advanced age of the patients.

Low intensity

A 78-year-old male, widower, accesses to the ED for an apparently accidental fall. He is led to the hospital after the intervention of the firefighters warned by a neighbour. The patient was found on the ground, awake, with no signs of trauma, unable to rise, confused about time and space and he did not remember what was happened. His physical examination, blood and imaging exams are showed in Table 3. His medical history includes arterial hypertension in pharmacological treatment, prostatic adenocarcinoma treated with radical prostatectomy, moderate chronic kidney disease and hypercholesterolemia. Due to the unclear dynamics of the fall, a cardiologic and neurologic counselling is required, showed in Table 3. Finally, a geriatric counselling is required. During orthostatic blood pressure (BP) measurements, in recumbency position is recorded a BP of 110/75 mmHg, but at the first minute of orthostatism, BP of 75/60 mmHg was recorded, thus a diagnosis of iatrogenic orthostatic syncope was performed. Since the iatrogenic nature of the syncope, the cognitive decline associated with disability and the presence of a precarious socio-environmental state, the Geriatrician plans a “protected” discharge in a nursing home.

Table 3 Low intensity scenario

Male, 78 years old	
Vital signs	BP 110/70 mmHg HR 55 beats/min RR 18 breaths/min
ECG	Sinus tachycardia
Physical exam	Negative
Chest X-ray	VII and VIII left ribs infractions
Abdominal ultrasonography	Negative
Head CT	No haemorrhagic parenchymal lesions. Cortical and subcortical parenchymal atrophy
Cardiologic counselling	Cardiac exam: negative ECG: sinus bradycardia Echocardiography: left ventricular hypertrophy, diastolic dysfunction, EF: 55% Required 24 h ECG Holter
Neurologic counselling	EEG: negative Supraaortic vessels examination: No hemodynamically significant stenosis Mild cognitive deficit Required control head CT
Geriatric counselling	CGA Pharmacological therapy Ramipril 5 mg 1 cp Dexazosin 4 mg 1 cp Bisoprolol-Idroclorotiazide 5–12.5 mg 1 cp Acetylsalicylic acid 100 mg 1 cp Atorvastatin 20 mg 1 cp la sera BADL 4/6 (lost functions), IADL 8/8 (lost functions) MMSE 19/30

BP blood pressure, HR heart rate, bpm beats per minute, RR respiratory rate, ECG electrocardiogram, EF ejection fraction, EEG electroencephalogram, CT computed tomography, CGA comprehensive geriatric assessment, BADL and IADL basic and instrumental activity of daily living, MMSE mini-mental state examination

Falls are a leading cause of injury and death among older adults and a significant public health issue [35]. There are syncopal and non-syncopal causes of fall in older people. The main causes of syncopal falls in older adults are: (1) orthostatic hypotension, (2) carotid sinus syndrome, (3) various forms of neutrally mediated syncope and (4) cardiac arrhythmias. Causes of non-syncopal falls include (1) disorders without any impairment of consciousness (catalepsy, drop attacks, psychogenic pseudo-syncope, transient ischaemic attacks/TIA of carotid origin) and (2) disorders with any impairment of consciousness (metabolic disorders as hypoglycaemia, hypoxia, hyperventilation with hypocapnia, Epilepsy, intoxications, vertebro-basilar TIA) [36].

The Prevention of Falls Network Europe (ProFANE) group defined a fall as “an unexpected event in which the participant comes to rest on the ground, floor, or lower level.” [37]. Fall risk factors are often divided in intrinsic and extrinsic. Intrinsic risk factors for falls can be divided in: demographic (age, gender, race), systemic (gait and balance, strength, vision and cognition) and symptoms/diseases (dizziness/vertigo, cardiovascular disease, dementia, depression). Extrinsic risk factors for falls include drugs (psychotropic medications, such as benzodiazepines, diabetes medications, non-steroidal anti-inflammatory drugs, cardiovascular medications such as digoxin, type 1a anti-arrhythmic and diuretics, antiepileptics), home environment (poor lighting or objects around the home) and footwear (slippers, walking barefoot, socks increase the risk of falls compared to walking with athletic or canvas shoes) [38].

Among the syncopal causes of falls, orthostatic hypotension is one of the leading causes in the elderly and can be easily recognized by physical examination. However, its prevalence is difficult to assess, because the relation between hypotension and a syncopal episode is sometimes difficult to establish and syncope may have a multifactorial aetiology. A study assessed the prevalence of syncope due to orthostatic hypotension in the ED and described the clinical characteristics of these patients: patients with orthostatic hypotension were significantly older had more comorbid conditions, and the number of prescribed hypotensive medications was higher (≥ 2) [39]. Recently, the Syncope and Dementia (SYD) study, a prospective, observational, multicentre study conducted to define the aetiology of syncope and unexplained falls in elderly adults with dementia, showed that the most frequent cause of syncope and dementia in this elderly population was orthostatic hypotension ($\approx 50\%$) [33]. Hypertension is one of the most frequent comorbidity in geriatric population and it is frequently associated to cognitive decline [40]. Elderly patients with hypertension and cognitive decline show a progressive reduction of blood pressure values, probably related to a “vascular dysautonomy”, in turn related to chronic cerebral hypoperfusion [40, 41].

Therefore, frail elderly people may have the necessity to be managed through an integrated network of services. Elderly patients should undergo a CGA by the Geriatric Evaluation Unit, consisting of various healthcare professionals, such as general practitioners (GPs), professional nurses, social workers and Geriatricians. Through the CGA, it is possible to establish elderly patients’ needs of care and then address them to the service that best suits their needs. Hospital facilities are destined to major acute diseases which require diagnostic interventions of a certain technological complexity or particularly complex therapies. Territorial services include integrated home care, hospital at home care, daytime care centres and healthcare homes. All these services are born to ensure the patients continuity of care at the moment of discharge (Fig. 4). Therefore, in low intensity of care, the Geriatrician is involved in ensuring continuity of care by directing the patient to the structure of the geriatric services network most appropriate to his case. Despite the importance of these structures, the percentage of nursing homes and integrated home cares is poor in Italy, especially in Regione Campania (Abete, unpublished data). Given the increase of the elderly population, it is evident that the integrated network of geriatric territorial services is inadequate to meet the needs of this complex and demanding population. There are several difficulties in creating a geriatric services network. First of all, a change of culture is required, at both clinical and management levels, to avoid problems and a lack of shared vision in the long-term sustainability of integration services. Many health systems have pre-existing divisions in financing, management structure, and care provision, which preclude the implementation of integrated care. Regulation is exerted over specific providers such as hospitals and community health services, while in an integrated care, model regulation must shift to be exerted on services across a continuum of care or a care package. Integrated network services require carefully developed partnerships, finance structures, and information technology platforms to provide adequately protected support and funding [42].

Potential advantages/disadvantages between intensity of care model and traditional model

The potential advantages and disadvantages between intensity of care model and traditional model are shown in Table 4. In particular, the “intensity of care” model is characterized by improvement of assistance and care, which is “patient-centred”, optimization of human and economic resources and enhancement of collaboration between different specialists. However, the main disadvantage is the

Fig. 4 An example of integrated network of geriatric territorial services

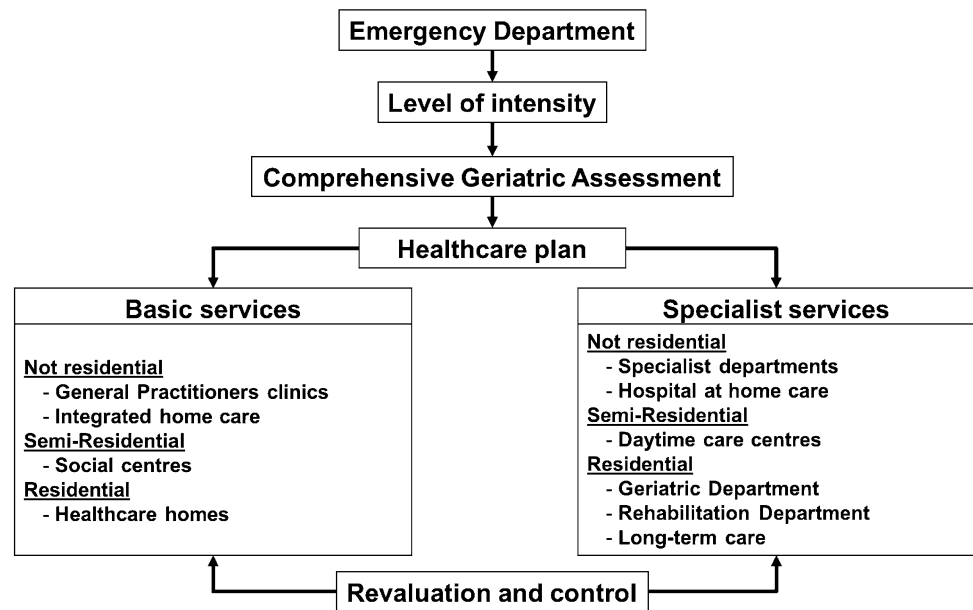


Table 4 Advantages and disadvantages of “intensity of care” model and “traditional model”

Intensity of care model	Traditional care model
Advantages	
Improvement of care and assistance	More sophisticated specialized knowledge and operating techniques
Improvement in patient care and comfort	Constant attention to improving the cost/benefit ratio
Optimization of human and economic resources	Easier management because patients are admitted in specialist ward according to their main pathology
Improvement of collaboration between different specialists	Division of tasks for specializations and hierarchical levels
Disadvantages	
Need for economic and human resources for the reorganization of hospital facilities	Assistance and care disease-centered
Possible conflicts among different healthcare professionals	The healthcare professional worker is the only active part of the care process
Difficulty in accepting the new organizational model	Exclusion of the patient and his caregivers from treatment choices

cultural difficulty in accepting this new type of organization, which requires high economic and human resources.

In addition, to address the complex needs of frail hospitalized older persons, two different approaches have been postulated. The first is the “CGA team model”, in which frail older patients are hospitalized on a non-geriatric ward—based on the patient’s main medical reason for admission—and evaluated by a multidisciplinary team referred to as the inpatient geriatric consultation team (IGCT) which recommend a plan of treatment. However, a meta-analysis about the impact of geriatric consultation teams on clinical outcome in acute hospitals, including 20 studies evaluating 4,546 participants, observed only a beneficial effect on mortality at 6 and 8 months post-hospital discharge, without an effect on functional status, length of stay and readmission rate [43]. The alternative approach is the geriatric co-management, which is characterized by the shared

responsibility and decision making between a physician (e.g. surgeon) and a Geriatrician, who provides complementary medical care in the prevention and management of geriatric-oriented problems [44]. Co-management interventions have previously been evaluated in systematic reviews focusing on orthogeriatric care showing a significant reduction of in-hospital and long-term mortality and length of stay [45]. A recent meta-analysis about the effectiveness of in-hospital geriatric co-management, including 20 studies and 3,590 patients, showed low-quality evidence of a reduced length of stay and a reduced number of patients with complications, and very low-quality evidence of better functional status as a result of geriatric co-management [44].

Theoretically, the CGA team model fits better with the “traditional model” of care, because the elderly patient is admitted to a specialist ward and the Geriatrician is contacted only in case of need to guide the therapeutic choices.

In contrast, in “intensity of care” model, the geriatric co-management system seems to be the most suitable: different specialists, including the Geriatrician, working together to choose the best therapeutic approach aimed at satisfying the needs of care of the whole patient and not only according to his/her basic specific pathology.

Conclusions and future perspectives

The intensity of care model is based on a clinical approach centred on the person and his needs of care and not only on his pathologies. The transition to this health system from the traditional one offers a greater human and economic resources optimization.

Geriatrician is the professional figure that best suits this model of care, since the complexity and frailty of elderly patients always requires a multidisciplinary approach to patient care. In high intensity of care, the Geriatrician plays a key role in identifying the atypical presentation of acute illness in elderly patients with comorbidity and the prevention and management of related complications. In medium intensity of care, it is involved in the administration of CGA and identification and quantification of clinical frailty, to improve the management of hospitalized frail elderly patients, while in low intensity of care the Geriatrician provides continuity of care through the activation of the territorial network of services more appropriate to the patient needs.

The emerging demand, by the National Health System, of a multidisciplinary approach to patient care, typical of Geriatricians, leads to what Tinetti calls “geriatric paradox”: the increasing interest in small “g” geriatrics (the geriatric multidimensional approach to patients care) in contrast with the few interest in big “G” Geriatrics (the training and support of the field of Geriatrics or the expertise of Geriatricians) [46]. The greater risk is the “theft” of the geriatric approach to the patient and the consequent “extinction” of the figure of the Geriatrician. The only way to allow integration, rather than exclusion, of geriatrics in clinical practice is letting the world know, clearly and positively, who we are and what we do.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Statement of human and animal rights All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed consent Informed consent was obtained from all individual participants included in the study.

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