

DESCRIPTION OF 1,108 OLDER PATIENTS REFERRED BY THEIR PHYSICIAN TO THE “GERIATRIC FRAILTY CLINIC (G.F.C) FOR ASSESSMENT OF FRAILTY AND PREVENTION OF DISABILITY” AT THE GERONTOPOLE

N. TAVASSOLI¹, S. GUYONNET^{1,2}, G. ABELLAN VAN KAN^{1,2}, S. SOURDET^{1,2}, T. KRAMS¹, M.-E. SOTO^{1,2}, J. SUBRA³, B. CHICOULAA³, A. GHISOLFI¹, L. BALARDY¹, P. CESTAC^{2,4}, Y. ROLLAND^{1,2}, S. ANDRIEU^{2,5}, F. NOURHASHEMI^{1,2}, S. OUSTRIC^{1,2,3}, M. CESARI^{1,2}, B. VELLAS^{1,2}, AND THE “GERIATRIC FRAILTY CLINIC (G.F.C) FOR ASSESSMENT OF FRAILTY AND PREVENTION OF DISABILITY” TEAM³

1. Gérontopôle de Toulouse, Département de Médecine Interne et Gériatologie Clinique, Centre Hospitalier Universitaire de Toulouse, 170 avenue de Casselardit, 31300 Toulouse, France; 2. INSERM U1027, 37 Avenue Jules Guesde, F-31073 Toulouse, France; 3. University Department of General Medicine, 133 route de Narbonne, 31062 Toulouse Cedex, France 4. Pole Pharmacie, Centre Hospitalier Universitaire de Toulouse, 170 avenue de Casselardit, 31300 Toulouse, France; 5. Département d'Epidémiologie, Economie de la Santé et Santé Publique, Université de Toulouse III, Centre Hospitalier Universitaire de Toulouse, Toulouse, France. Corresponding author: Neda Tavassoli, Gérontopôle de Toulouse, Hôpital Garonne, 224 avenue de Casselardit, 31300 Toulouse, France, Tel.: (33) 5 61 77 64 94 Fax: (33) 5 61 49 64 75 E-mail: tavassoli.n@chu-toulouse.fr

Abstract: *Introduction:* Frailty is considered as an early stage of disability which, differently from disability, is still amenable for preventive interventions and is reversible. In 2011, the “Geriatric Frailty Clinic (G.F.C) for Assessment of Frailty and Prevention of Disability” was created in Toulouse, France, in association with the University Department of General Medicine and the Midi-Pyrénées Regional Health Authority. This structure aims to support the comprehensive and multidisciplinary assessment of frail older persons, to identify the specific causes of frailty and to design a personalized preventive plan of intervention against disability. In the present paper, we describe the G.F.C structure, organization, details of the global evaluation and preventive interventions against disability, and provide the main characteristics of the first 1,108 patients evaluated during the first two years of operation. *Methods:* Persons aged 65 years and older, considered as frail by their physician (general practitioner, geriatrician or specialist) in the Toulouse area, are invited to undergo a multidisciplinary evaluation at the G.F.C. Here, the individual is assessed in order to detect the potential causes for frailty and/or disability. At the end of the comprehensive evaluation, the team members propose to the patient (in agreement with the general practitioner) a Personalized Prevention Plan (PPP) specifically tailored to his/her needs and resources. The G.F.C also provides the patient’s follow-up in close connection with family physicians. *Results:* Mean age of our population was 82.9 ± 6.1 years. Most patients were women ($n=686$, 61.9%). According to the Fried criteria, 423 patients (39.1%) were pre-frail, and 590 (54.5%) frail. Mean ADL (Activities of Daily Living) score was 5.5 ± 1.0 . Consistently, IADL (Instrumental ADL) showed a mean score of 5.6 ± 2.4 . The mean gait speed was 0.78 ± 0.27 and 25.6% (272) of patients had a SPPB (Short Physical Performance Battery) score equal to or higher than 10. Dementia was observed in 14.9% (111) of the G.F.C population according to the CDR scale ($CDR \geq 2$). Eight percent (84) presented an objective state of protein-energy malnutrition with MNA (Mini Nutritional Assessment) score < 17 and 39.5% (414) were at risk of malnutrition ($MNA=17-23.5$). Concerning PPP, for 54.6% (603) of patients, we found at least one medical condition which needed a new intervention and for 32.8% (362) substantial therapeutic changes were recommended. A nutritional intervention was proposed for 61.8% (683) of patients, a physical activity intervention for 56.7% (624) and a social intervention for 25.7% (284). At the time of analysis, a one-year reassessment had been carried out for 139 (26.7%) of patients. *Conclusions:* The G.F.C was developed to move geriatric medicine to frailty, an earlier stage of disability still reversible. Its particularity is that it is intended for a single target population that really needs preventive measures: the frail elderly screened by physicians. The screening undergone by physicians was really effective because 93.6% of the subjects who referred to this structure were frail or pre-frail according to Fried’s classification and needed different medical interventions. The creation of units like the G.F.C, specialized in evaluation, management and prevention of disability in frail population, could be an interesting option to support general practitioners, promote the quality of life of older people and increase life expectancy without disability.

Key words: Frailty, disability, pre-disability, elderly, prevention, multidisciplinary assessment.

Introduction

World population continues to increase substantially during the twenty-first century with a growth rate of around 1.1 percent per year (1-3). Another major transformation of this century will be population ageing. In 1999, there were 593 million persons aged 60 years or more in the world,

representing 10 per cent of the world population. By 2050, this figure will triple to nearly 2 billion older persons, representing 22 percent of the world population. The most problematic expression of population ageing is the clinical condition of frailty. Frailty is commonly defined as a geriatric syndrome characterized by the reduction of physiological reserves and

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capacities of an individual needed to adequately face exogenous and endogenous stressors. Such condition exposes the subject to increased risk of negative health-related events, including hospitalization, institutionalization, and disability. In particular, frailty is usually considered as a pre-disability state which, differently from disability, is still amenable for interventions and is reversible (4). Between one quarter and one half of people aged more than 85 years old are estimated to be frail, and these people have a substantially increased risk of falls, disability, long-term care, and death (5, 6). However, up to three-quarters of people older than 85 years may not be frail, and this situation leads to questions about how frailty develops, how it might be prevented, and how it can be detected reliably.

Fried et al. (5) proposed a model combining the evaluation of the following five criteria: sedentariness (inactivity), unintentional weight loss, fatigue, poor muscle strength, and slow gait speed. According to this tool, an older person is considered “frail” if presenting three or more of these defining criteria, “pre-frail” if only one or two criteria are reported.

The identification of a pre-disability state (i.e., frailty) enables to detect older persons at risk of negative events who may still benefit from preventive interventions against disability. The concept of frailty modifies the common geriatric approach as it highlights the importance of prevention, a field that was not developed in the past as only irreversible conditions were presented for geriatric assessment. In fact, the preventive interventions against disability can be based on the comprehensive geriatric assessment (CGA), the “gold standard” intervention adopted in geriatric medicine that includes a global evaluation of the older patient. It is performed by a multidisciplinary team and results in designing a personalized preventive or therapeutic intervention. The CGA is conducted using standardized scales and instruments; therefore, it is possible to evaluate the efficacy of the proposed interventions at length and to follow-up the patient more efficiently.

The cost of dependency in France supported by the government, departments, social security health system and the National Solidarity Fund for Autonomy is nearly € 25 billion according to a recent parliamentary report (7). However, this is only the tip of the iceberg. Thus, in these last years, the French government has defined a new policy for preventing disability in older persons. To address this national (but even wider) public health issue, the geriatric center of Toulouse (i.e., the Gérontopôle of the Toulouse University Hospital, in association with the University Department of General Medicine and the Midi-Pyrénées Regional Health Authority, designed and developed in 2011 the innovative “Geriatric Frailty Clinic (G.F.C) for Assessment of Frailty and Prevention of Disability”. This structure is specifically aimed to support the comprehensive and multidisciplinary assessment of frail older persons. By identifying the specific causes of the increased status of vulnerability, allows the multidisciplinary team is able to design a patient-tailored preventive plan of intervention against disability.

In the present paper, we describe the G.F.C structure, organization, details of the global evaluation and preventive interventions against disability, and provide the main characteristics of the first 1,108 patients evaluated during the first two years of operation. It is an observational activity report of the G.F.C operation.

Methods

The G.F.C began in October 2011 as a separate activity of the geriatric day hospital unit of the Toulouse Gérontopôle, France. The G.F.C currently accommodates up to five patients per day, five days per week.

Each patient evaluated at the G.F.C must be referred by a physician who had reported signs or symptoms of frailty. Today, this service is paid by the social security health system to the hospital as part of an experimental project. The G.F.C provides the patient’s assessment, treatment, and follow-up in close connection with family physicians.

Identification of the frail elderly person

The first step in preventing disability in older persons is to detect the target population who is in a frailty (pre-disability) state (8). A number of screening tools are currently available to detect frailty in older persons, most of them primarily used in clinical research (9-12, 13). An easy and quick screening instrument for frailty detection entitled “The Gérontopôle Frailty Screening Tool (GFST)” (14), was developed by the Toulouse Gérontopôle team to be used by general practitioners. This tool takes into account data from literature and results from a preliminary survey. It was designed to be administered to persons aged ≥ 65 years with no physical disability and acute clinical disease. It is composed of an initial questionnaire aimed to attract the general practitioner’s attention on very general signs and/or symptoms suggesting the presence of an underlying frailty status. In the second step, the general practitioner expresses his/her own view about the frailty status of the individual (Table 1). In this way, the physician reports his/her subjective perception of the patient’s frailty status including functional, social, cognitive and nutritional factors. The GFST was recently approved by the French National Authority for Health [Haute Autorité de Santé (HAS)] as a national tool for detecting frailty in persons older than 65 years (15).

The GFST and other documents about older persons’ frailty have been largely distributed by the Toulouse Gérontopôle among general practitioners, specialists, other health professionals (pharmacists, nurses...) and the general public living in the Toulouse area. Moreover, several information meetings for health professionals and general public were also organized by the Toulouse Gérontopôle to raise awareness about frailty in older persons and its signs. These information campaigns enabled us to increase the number of patients seen at the G.F.C from 1-2 patients per day in 2011 up to five patients

per day today.

Patients' evaluation modality at the "Geriatric Frailty Clinic (G.F.C) for Assessment of Frailty and Prevention of Disability"

The evaluation of the patient at the G.F.C is primarily conducted by the geriatrician (or a general practitioner specifically trained in geriatrics) and a nurse. Socio-demographic (including living environment), anthropometric, and clinical (medical and surgical history, current treatments and allergies) data are recorded. Moreover, all patients undergo a blood test for standard laboratory assessment (including vitamin D concentrations and other special tests, if required by the patient's clinical conditions) and an electrocardiogram. The following questionnaires/scales are completed during evaluation, in order to get an objective measurement:

- Cognition: Memory Impairment Screen free (MIS) and delayed recall (MIS-D) (16), Mini Mental State (MMSE) (17), Clinical Dementia Rating (CDR) (18);
- Physical function: Fried criteria (5), scales of disability in basic Activities of Daily Living (ADL) (19) and Instrumental ADL (IADL) (20), measures of physical performance (Short Physical Performance Battery, SPPB) (21);
- Nutritional status: Mini Nutritional Assessment (MNA) (22);
- Mood: the Geriatric Depression Scale (GDS) (23);
- Vision and hearing: Parinaud's scale (near vision), Monoyer's scale (distance vision), Amsler grid (detection of age-related macular degeneration, AMD) and if necessary, more accurate detection of AMD and other abnormal vision conditions (such as glaucoma) by retinal camera, and the Hearing Handicap Inventory for the Elderly - Screening (HHIE-S) (24);
- Other evaluations: Initial Standard Continence Screening Form for urinary incontinence (25), Oral Health Assessment Tool (OHAT) (26) and International Prostate Score Symptom (IPSS) which is recently administered for men (27).

Moreover, a last generation dual energy X-ray absorptiometry (DXA) device, an I-DXA for the study of body composition and bone mineral density, is implemented in the daily practice of the G.F.C. According to the results of the screening questionnaires/scales and the geriatrician's clinical visit, additional evaluations may be proposed. For example, according to the patient's needs, a neuro-psychiatrist, an ophthalmologist, a nutritionist, a physical therapist, a dentist, or a social worker can be directly and promptly involved to complete the assessment and prepare the subsequent personalized prevention plan. Following this multidisciplinary evaluation, the patient is classed as normal, pre-frail or frail according to the Fried criteria.

Preventive interventions proposed against disability

At the end of the multidisciplinary evaluation, the G.F.C geriatrician summarizes the results of all the assessments performed and then contacts the patient's general practitioner to jointly prepare a Personalized Prevention Plan (PPP) for the patient. The geriatrician gives detailed explanations about the PPP to the patient and his/her formal or informal caregiver. On the same day, a written copy is handed over to the patient and another copy is sent to his/her general practitioner within the same week.

The PPP proposed by the G.F.C is specifically designed and adapted to each patient's resources and needs according to the results of the multidisciplinary assessment. The comprehensive evaluation of frailty leads to the identification of potential risk factors for negative health-related events in different domains: physical activities, nutrition, cognition, mood, vision and hearing, urinary incontinence, oral care and social relations. In particular, the possible causes for the increased vulnerability may consist of undiagnosed diseases or risk factors (at least partially linked to the aging process). When an unknown disease is detected, the patient is directed towards the specialist's evaluation for further investigation and/or a specific treatment is proposed. Differently, if a risk factor is found, it is discussed with the patient and his/her caregiver to make them aware about its possible consequences. Such education of the patient is an important part of the PPP. It includes behavioral and therapeutic suggestions to correct the specific risk factors, according to the clinical priorities given by the physician.

For example, if a risk of malnutrition is detected by the MNA at the preliminary assessment (i.e., frailty in the nutritional domain) or on the basis of the objective data collected during the preliminary visit, a nutritionist may provide the patient with specific recommendations to improve his/her dietary intake. Similarly, in case of issues related to the physical domain of the patient (e.g., sedentariness), a physical therapist can simply suggest specific exercises or a neighboring fitness center to increase the physical activity level of the patient. In the same way, a person with a lack of social life may find specific support and information to reduce these barriers that originally impact his/her frailty status. In this context, it is observed that the close relationships established between the G.F.C with the administrative and healthcare authorities create multiple alternatives in order to offer preventive protocols against disability.

Patients' follow-up

To make sure that the proposed recommendations are respected and to determine their efficacy, a follow-up is organized for all the patients undergoing the G.F.C assessment, in close relationship with patient's general practitioner. First, on the same day of the evaluation, the geriatrician contacts the general practitioner to explain briefly the results of the multidisciplinary assessment, the proposed PPP and discuss possible therapeutic changes. The general practitioner will also

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receive a detailed letter with all the results of the G.F.C evaluation and the patient’s PPP. Moreover, to try to increase the patient’s adherence to the intervention and facilitate follow-up process, the patient is strongly recommended making an appointment with his/her own general practitioner within the following 15 days.

One month after the G.F.C evaluation, a nurse calls the patient to verify the implementation of the recommendations and discuss about potential problems. The aim of this first phone contact is to boost the patient towards the improvement of his/her health status by adopting healthier lifestyle habits. At three months from the initial evaluation, a nurse carries out a second phone evaluation. If the physical function of the patient is deteriorated compared to the baseline evaluation, specific actions are taken and the general practitioner is contacted again to discuss the case. Throughout the follow-up, the general practitioner will be continually implicated as primary referent for the patient’s health status.

One year after the first evaluation, a reassessment at the G.F.C is offered routinely to all patients except those who have been integrated into the Toulouse Gérontopôle standard geriatric network, are deceased or those who have become dependent.

Statistical methods

Distributions of Gaussian variables were represented by the mean and standard deviation (SD) (mean ± SD). Categorical

variables were expressed as counts and percent frequencies. Analyses were performed using STATA® software package (StataCorp LP, College station, TX, USA), version 11.

Results

Patients’ characteristics

The description of the main characteristics of the 1,108 patients recruited during the two first years of activity of the G.F.C, are reported in Tables 2 and 3. Mean age of our population was 82.9 ± 6.1 years. Most patients were women (n=686, 61.9%). More than two thirds of patients (n=767, 69.4%) received any kind of regular human help. Only 190 patients (17.2%) received old age allowance. Comorbidities were assessed in a subsample of 560 patients: 87% of this population (487) had at least one comorbidity with a mean number of 4.8 per person. Vascular comorbidities were the most frequent (61.6%). About 38% of patients had a history of fall in the last 3 months. Regarding Fried criteria, 358 patients had a recent unintentional weight loss (32.6%), 353 felt exhaustion (32.6%), 722 presented a decreased muscle strength (66.6%), 547 (51.4%) presented a slow gait speed and 665 (60.7%) were sedentary. According to the Fried definition of frailty, 423 patients (39.1%) were pre-frail, and 590 (54.5%) frail.

Concerning the functional status, the mean gait speed was 0.78 ± 0.27 and only 25.6% (272) of patients had a SPPB score equal to or higher than 10. Concerning autonomy, mean ADL

Table 1
 The Gérontopôle Frailty Screening Tool (GFST) for the detection of frail older patients



Patients aged 65 years and older without both functional disability (Activities of Daily Living score ≥ 5/6) and current acute disease

	YES	NO	DON'T KNOW
Does your patient live alone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has your patient involuntarily lost weight in the last 3 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has your patient been more fatigued in the last 3 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has your patient experienced increased mobility difficulties in the last 3 months?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Has your patient complained of memory problems?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does your patient present slow gait speed (i.e., >4 seconds to walk 4 meters)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If you have answered YES to one or more of these questions:			
Do you think your patient is frail?		<input type="checkbox"/> YES	<input type="checkbox"/> NO
If YES, is your patient willing to be assessed for his/her frailty status at the Frailty Clinic?		<input type="checkbox"/> YES	<input type="checkbox"/> NO

Table 2
Baseline socio-demographic characteristics of the G.F.C population (n=1,108)

Characteristic	G.F.C population (n=1,108) Mean ± SD or n (%)
Age (y), n=1,108	82.9±6.1
Gender (female), n=1,108	20 (69.0)
BMI (kg/m ²), n=698	25.9±5.1
Living home alone, n=1,083	460 (42.5)
Mean number of comorbidities/person	4.8±3.0
Comorbidities (all types), n=560	487 (87.0)
Heart diseases	149 (26.6)
Vascular diseases	345 (61.6)
Endocrine or metabolic disorders	145 (25.9)
Chronic lung diseases	88 (15.7)
Neurological diseases	86 (15.4)
Psychiatric disorders	96 (17.1)
Renal, urological or genital disorders	142 (25.4)
Gastrointestinal or liver diseases	135 (24.1)
Osteo-articular diseases	227 (40.5)
ORL or ophthalmology disorders	130 (23.2)
Cancer or malignant blood diseases/AIDS	165 (29.5)
Fall history in last 3 months, n=285	108 (37.9)
Having any kind of human help, n=1,105	767 (69.4)
Home maid	575 (52.0)
Old age allowance	190 (17.2)

BMI, body mass index; G.F.C, Geriatric Frailty Clinic; ORL, oto-rhino-laryngologist

score was 5.5 ± 1.0 . Consistently, IADL showed a mean score of 5.6 ± 2.4 .

Mean MMSE score was 24.6 ± 4.9 . Dementia was observed in 14.9% (111) of the G.F.C population according to the CDR scale (CDR ≥ 1), whereas subjects with mild cognitive impairment (CDR= 0.5) were 51.1% (531). GDS score was assessed in a subsample of 424 patients. Mean GDS score was 4.8 ± 3.1 with 36.6% (155) of patients presenting depressive symptoms (GDS>5).

A number of patients presented vision problems with 82.4% (840) having abnormal distance vision, 22.3% (232) abnormal near vision and 16.7% (177) having abnormal findings at the Amsler grid. More than 31% of patients (330) had a significant hearing impairment. Mean urinary incontinence score was 1.7 ± 1.4 . Urinary disorders causing discomfort for everyday life were present in 76.8% of patients.

It is noteworthy that 8.0% (84) of the G.F.C population presented an objective state of protein-energy malnutrition (MNA<17), 39.5% (414) were at risk of malnutrition (MNA=17-23.5) and 85.1% (906) had a vitamin D deficiency (vitamin D concentration < 30 ng/ml).

Preventive interventions proposed against disability

With regards to PPP, 54.6% (603) of patients had at least one medical condition which needed a new immediate

intervention. A total of 2,475 different types of interventions were proposed to the G.F.C patients with a mean number of 2.2 ± 1.3 per patient. For 48.3% (532) of the population, an appointment with a specialist (dentist, ophthalmologist, urologist or oto-rhino-laryngologist) was recommended and for 32.8% (362) some therapeutic changes were suggested. A nutritional recommendation was done for 61.8% (683) of patients and a physical activity recommendation for 56.7% (624). A social intervention was suggested to 25.7% (284) of the population (Table 4).

Patients' follow-up

At the time of analysis, 46.9% (520) of patients had undergone their first evaluation since one year. All of these patients were contacted by a specifically trained nurse to organize a reassessment at one year at the G.F.C, except those who have been integrated in the Toulouse Gérontopôle standard geriatric network (n=131, 25.2%), were deceased (n=21, 4.0%), and those who became disabled (n=41, 7.9%). A reassessment was carried out for 139 (26.7%) of patients. Twenty five patients (4.8%) were unreachable, moved or were hospitalized and 163 (31.4%) were stable at home, well monitored by their general practitioner or refused to return to the G.F.C.

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Table 3
Baseline characteristics of the G.F.C population (n=1,108)

Characteristic	G.F.C population (n=1,108) Mean ± SD or n (%)
Frailty status, n=1,082	
Not frail	69 (6.4)
Pre-frail (1-2 criteria)	423 (39.1)
Frail (≥3 criteria)	590 (54.5)
Frailty criteria, n=1,082	2.6±1.4
Involuntary recent weight loss, n=1,098	358 (32.6)
Feeling of exhaustion, n=1,083	353 (32.6)
Slow gait speed, n=1,065	547 (51.4)
Decreased muscle strength, n=1,084	722 (66.6)
Sedentariness, n=1,096	665 (60.7)
MMSE score (/30), n=1,071	24.6±4.9
CDR score (/3), n=1,039	
CDR=0	353 (34.0)
CDR=0.5	531 (51.1)
CDR=1	111 (10.7)
CDR≥2	44 (4.2)
MIS score (/8), n=1,038	6.6±1.9
MIS-D score (/8), n=1,036	6.0±2.3
ADL score (/6), n=1,102	5.5±1.0
IADL score (/8), n=1,094	5.6±2.4
SPPB score (/12), n=1,063	7.3±2.9
Good performance (SPPB=10-12),	272 (25.6)
Medium performance (SPPB=7-9),	388 (36.5)
Poor performance (SPPB=0-6),	403 (37.9)
Gait speed (m/s), n=1,065	0.78±0.27
Wrist strength (kg), n=1,083	20.6±8.2
MNA score (/30), n=1,048	23.2±4.1
Good nutritional status (MNA>23.5)	550 (52.5)
Risk of malnutrition (MNA=17-23.5)	414 (39.5)
Malnourished (MNA<17)	84 (8.0)
Vitamin D concentration (ng/ml), n=1,065	18.1±11.3
≤ 10 ng/ml	343 (32.2)
11-29 ng/ml	563 (52.9)
≥ 30 ng/ml	159 (14.9)
GDS score (/15), n=424	4.8±3.1
Presence of depressive symptoms (GDS>5)	155 (36.6)
Abnormal distance vision, n=1,019	840 (82.4)
Abnormal near vision, n=1,039	232 (22.3)
Abnormal Amsler grid, n=1,060	177 (16.7)
HHIE-S score (/40), n=1,055	9.5±9.8
Significant hearing impairment (HHIE-S>21)	330 (31.3)
Urinary incontinence score (/6), n=280	1.7±1.4
Urinary disorders causing discomfort for everyday life (score≥1)	215 (76.8)
OHAT score (/16), n=271	2.8±2.4
The mouth not considered healthy (OHAT>4)	44 (16.2)

ADL, Activities of Daily Living [0 = Low (patient very dependent), 6 = High (patient independent)]; CDR, Clinical Dementia Rating (0= no dementia, 0.5= very mild dementia, 1= mild dementia, 2= moderate dementia, 3= severe dementia); GDS, Geriatric Depression Scale; G.F.C, Geriatric Frailty Clinic; HHIE-S, Hearing Handicap Inventory for the Elderly - Screening; IADL, Instrumental Activities of Daily Living [0 = Low (patient very dependent), 8 = High (patient independent)]; MIS, Memory Impairment Screen free; MIS-D, Memory Impairment Screen delayed recall; MNA, Mini Nutritional Assessment; MMSE, Mini Mental State; OHAT, Oral Health Assessment Tool; SD, standard deviation; SPPB, Short Physical Performance Battery.

Table 4
 Preventive interventions (n=2,475) proposed to the G.F.C patients

Intervention	G.F.C population n=1,108
Presence of at least one medical condition that needed a new intervention, n (%), n=1,104	603 (54.6)
Preventive interventions proposed to patients, Mean ± SD, n=1,108	2.2±1.3
Recommendation of a specialist in or out of G.F.C (dentist, ophthalmologist, oto-rhino-laryngologist, urologist), n (%), n=1,101	532 (48.3)
Recommendation of therapeutic changes, n (%), n=1,102	362 (32.8)
Nutritional recommendation, n (%), n=1,105	683 (61.8)
Physical activity recommendation, n (%), n=1,101	624 (56.7)
Recommendation of social intervention, n (%), n=1,106	284 (25.7)

G.F.C, Geriatric Frailty Clinic

Discussion

The only way to prevent/delay disabling conditions is through the implementation of early actions in persons presenting an increased risk profile (e.g., frail older persons) (28). To prevent disability in this population, the frail older persons need to be identified in the general population and specifically evaluated in close collaboration between general practitioners and ad-hoc geriatric infrastructures.

The G.F.C was created to evaluate the causes of frailty and prevent disability in frail older population. This structure created and developed in Toulouse, France, identifies the causes of frailty, recommends non pharmacological and therapeutic interventions, and interacts with the general practitioners in order to optimize the management of the frail older patients. From October 2011 to December 9, 2013, 1,108 patients underwent a primary assessment and 139 a one-year reassessment in the G.F.C. Our data show that 93.6% of the subjects referred to this structure were frail or pre-frail according to Fried's classification (5). It highlights the ability of the Gérontopôle Frailty Screening Tool (GFST) to adequately screen frail or pre-frail subjects in the general population and reconfirms the results of our previous surveys (13, 14). Since the creation of the G.F.C in 2011 and the publication of the main characteristics of the first patients evaluated (13, 14), the French National Authority for Health [Haute Autorité de Santé (HAS)] has decided to recommend the use of the GFST as a national tool for detecting frailty in persons aged ≥ 65 years in France (15).

The concept of outpatient geriatric assessment centers, which offer comprehensive, multidisciplinary assessments and treatment plans for elderly patients, started in the 1980s in the USA and some European countries (29-32). However, these structures are open to all seniors, regardless of their status: healthy, frail or dependent. The particularity of the G.F.C is that it is intended for a single target population, i.e. the frail elderly screened by their physicians. In fact, the frail elderly

population is a group that really needs preventive measures. The majority of patients referred to the G.F.C were relevant for a geriatric day hospital: 54.6% of them had at least one medical condition which needed a new immediate intervention. These patients were still able to perform basic activities of daily living, they were not yet severely dependent, but it is important to note that their mean IADL score was 5.6. This means that they have already lost their performance in almost 3 of their instrumental activities of daily living. These older adults are usually not anymore able to use public transportation or to go shopping. The majority of these frail older persons had poor vision, audition, memory, mobility functions. They are at the early stage of dependency. For these reasons, it is important to acknowledge that the G.F.C does no primary prevention, but secondary prevention in frail older people at an early stage of dependency. Moreover, the G.F.C appropriately premises for further trials on sarcopenia, prodromal Alzheimer disease, cognitive frailty, macular degeneration and new technologies evaluation and development.

The creation of structures specialized in evaluation, management and prevention of disability in frail population could be an interesting option to support general practitioners, promote the quality of life of older people and increase life expectancy without disability. This became the new policy of the French government that decided to develop other G.F.Cs at the national level. However, as G.F.Cs are necessarily linked to hospital centers, these structures may be combined with other kinds of nearby geriatric devices accessible to everyone for less complicated cases (i.e. pre-frail population). For example, long geriatric consultation made by trained general practitioners or mobile geriatric teams with access to patients' homes. In this case, G.F.Cs could be specialized in the management of more complex situations.

The identification and management of frail elderly are clinical priorities nowadays that can no longer wait. Geriatricians and general practitioners should be made more responsible in measuring frailty in older persons, raising

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awareness about the burdens of age-related and disabling conditions among their patients and promoting primary preventive actions in the community (in collaboration with public healthcare authorities).

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