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Perspectives of European internists on multimorbidity. A multinational survey

Dear Editor,

The prevalence of multimorbidity (MM) amongst aging patient populations increases across the world. Improvements in socioeconomic conditions and advances in medicine have facilitated an unprecedented increase in human longevity. Patients sequentially accumulate and survive multiple conditions and diseases, without fully shedding them. This has led to the concurrent presence of multiple chronic conditions and diseases in a patient, cumulating along the span of life [1, 2]. MM has become the most prevalent constellation of patients in outpatient- as well as inpatient care especially in internal medicine, where MM patients may account for half or more of inpatients, and up to 80% of emergency patients [3, 4]. Therefore, health-care professionals attending to these patients, eg internists, need to prepare competences and tools to deliver comprehensive, continuous and coordinated care to multimorbid and polypathological patients [5]. Yet, data about the views of European internists concerning the care of multimorbid patients are not available.

For this reason, we have assessed feelings and thoughts of European internists regarding MM by means of a 23-item online self-developed survey. This survey was launched and disseminated through the European Federation of Internal Medicine and all associated national societies during March and April 2021. The target population was, therefore, every internal medicine specialist affiliated to any of the 35 associated national scientific societies. A descriptive and bivariate analysis (comparing responses of those $\leq$45 *vs* those >45 years-old, and those working in basic general vs secondary vs tertiary teaching centers) was performed by means of SPSS v25.

A total of 764 internists (53% women, 45 [35–56] years old) answered the survey. Most of them worked in tertiary teaching- (408, 53%), or secondary hospitals (195, 25.6%). Their usual area of work were in-hospital wards (227, 31%), outpatient departments (50, 7%), or both (306, 41.4%), and they were dedicated mainly either to general internal medicine, or more specific medical areas such as cardiovascular medicine, rheumatology, geriatrics, and palliative care (37.6%; 25%; 19.1% and 16,4%, respectively). Respondents lived mainly in Spain (334, 42%), France (122, 15.4%), Portugal (120, 15.2%), or Italy (60, 7.6%).

Respondents' clinical practice and feelings with respect to MM are detailed in Table 1. Additionally, a full description of all answers, and a stratified analysis according to age and working center of participants are elaborated in Supplementary Tables S1-S6.

Four aspects of this survey deserve to be highlighted. First, the respondents express a widespread feeling about the great impact of patients with severe chronic diseases and elderly on their daily clinical practice. As mentioned above, this perception aligns with the prevalence of these populations in primary care as well as in hospitals [5]. Nonetheless most of the respondents were more familiar with the terms 'comorbidity' and 'polypathological patient' rather than 'MM'. The reason for this may be that the first two expressions have been used for a longer time ('comorbidity' since the 1980s and 'polypathology' since the early 2000s), whereas 'MM' has been introduced more recently (since around 2010) and as a revised MESH term in 2018.

Secondly, the survey reveals that the main challenge in the management of MM was continuity of care, followed by sharing decisions and transitional care after discharge, i.e., coordination and continuity of care. Most of the respondents were familiar with prescription appropriateness, but approximately 30% did not routinely assess patients' concordance with their prescriptions. Comprehensive geriatric assessment and evaluation of depressive disorders were mostly addressed in specific situations and depending on clinical needs. Functional evaluation was performed only in some measure, i.e. with cursory qualitative assessment, by nearly 50% of respondents, and less frequently by means of validated tools. Albeit these perfunctory assessments of function, the most important factor in making clinical decisions was patients' functional and mental status, followed by prognostic stratification (64.7% and 22%, respectively). Importantly, half of the responders conceded that they did not use any tool for prognostication, PROFUND and Charlson-Deyo index being used by only a fifth and tenth of colleagues, respectively. These responses reveal a reality of care for these populations that lacks objective quantification of complex situations. Probably most doctors dealing with such patients rely on gut feelings. The majority of internists, however, seem to appreciate geriatric assessment, screening for depressive disorders, prognostication, or pharmacological interventions (concordance, conciliation, deprescribing…). At the same time these are far from being uniformly implemented. This might be due to professional and working environments that lack in training for these specific competences, clinical inertia, lack of time, saturation, and administrative overload. Furthermore, the sheer multitude of scales and instruments (some more and others less useful) may overwhelm clinicians and let them finally desist from assessing and taking actions on these relevant issues. Hence, academic and professional institutions should channel clinicians to the most useful and practical interventions to the benefit of patients with MM [6–8].

Third, respondents felt that MM was not well or only partially addressed in their Medical School and that no progress had been made since they left Medical School. Very similar answers were given with respect to internal medicine training programs. A vast majority of those surveyed saw a benefit in addressing MM, but worried that many of their colleagues did not concur. These responses demonstrate a coherent picture the respondents draw of their challenges, i.e. that multimorbidity is yet to be given the relevance it deserves from the perspective of their daily practice in current academics and research. This is all the more astonishing as MM has obvious social, health, and economic impacts on our societies [9, 10]. In aiming for better health

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Table 1
Most frequent answers of respondents of a multinational survey among European internists regarding their experiences and feelings about multimorbidity.

SURVEY QUESTION [N;%]	Total [*N* = 764]	Age ≤ 45 y [*N* = 392]	Age > 45 y [*N* = 372]
% of patients with severe chronic conditions in your daily clinical practice ?			
More than 50%	461; 60.5	235; 61.8	213; 59.0
31–50%	184; 24.2	91; 24.0	87; 24.1
Most frequent age range of patients in your daily clinical practice?			
76–85 yrs old	422; 55.4	229; 60.3	183; 50.7**
66–75 yrs old	206; 27.0	88; 23.2	113; 31.3*
Which term are you most familiarized with?			
A patient with co-morbidities	259; 33.9	164; 43.0	88; 24.3^
A polypathological patient	200; 26.2	101; 26.5	93; 25.7
Most common difficulties in managing patients with MM?			
Continuity of care and relations with Primary Care	495; 64.8	250; 65.6	232; 64.1
Shared decisions	465; 60.9	234; 61.4	218; 60.2
Transitional care after discharges and avoiding re-admissions	386; 50.5	189; 49.6	183; 50.6
Are you familiarized with appropriateness of prescription?			
Yes	564; 74.1	280; 73.7	269; 74.7
Do you assess patients' prescriptions adherence?			
Yes, by comparing electronic prescription to drugs collected by patient	363; 47.5	190; 49.9	161; 44.5
No	216; 28.3	100; 26.3	111; 30.7
Do you perform comprehensive geriatric assessment?			
Only on focused areas depending of clinical needs	268; 35.2	136; 35.8	127; 35.2
Always	263; 34.5	117; 30.8	134; 37.1
Do you assess routinely for basic activities of daily living			
Qualitatively and by clinical questions	369; 48.4	196; 51.6	163; 45.0
Yes, by means of Barthel index	248; 32.5	106; 27.9	134; 37.0**
Do you actively assess for depressive disorders?			
Only on focused areas depending of clinical needs	303; 39.8	154; 40.4	142; 39.6
Yes	222; 29.2	89; 23.4	125; 34.8^
Most important factors in making clinical decision?			
Functional and mental basal status	494; 64.7	260; 68.2	223; 61.8
Prognostic stratification	168; 22.0	76; 20.0	85; 23.6
Regular assessment of death risk?			
Sometimes	345; 45.5	167; 44.0	168; 46.9
Yes	214; 28.2	94; 24.2	114; 31.8*
What tool do you use for death risk assessment			
No tool	395; 51.8	208; 54.6	180; 49.9
PROFUND index	169; 22.1	78; 20.5	85; 23.5
MM was well addressed as you were medical student?			
No	504; 66.1	224; 58.8	265; 73.4
Nowadays MM is well addressed in undergraduate medical education?			
No	288; 37.8	150; 39.5	177; 35.3
Is MM well addressed nowadays in Internal Med. training programs?			
Only partially and from an organ-specific point of view	355; 46.6	176; 46.2	171; 47.6
Are your colleagues interested in MM investigation?			
Only a few	453; 59.4	227; 59.7	210; 58.2
Are you interested in MM investigation?			
Yes	660; 86.8	326; 85.8	315; 87.7

N: number; MM: multimorbidity.
* $p < .05$.
** $p < 0.01$.
^ $p < .001$.

outcomes of our patients with MM, Internists should prominently lead necessary changes to place MM at the forefront of clinical research and medical training policies.

And finally, the predominant nationalities of respondents were from southwest European countries (Spain, Portugal, Italy and France) with respect to those from the rest of the federation. This fact could reflect different realities in national healthcare systems or internal medicine clinical practice among countries, but also a varying degree of involvement of affiliated societies, or even a varying awareness of European internists regarding European Federation of Internal Medicine activities.

This study may have some limitations. Firstly, it is a homemade survey whose content had not been previously validated. There is currently no validated survey on this subject, and for the purpose of this study we did not consider a prior analysis of consistency or a pilot test to be necessary, as the target population was very homogeneous and with a very similar cultural level. And second, there could be a selection bias as internists with more professional activity related to multimorbidity may have felt more encouraged to answer, than those with a clinical practice remote from this population; however, among respondent there were more colleagues dedicated to cardiovascular medicine or rheumatology, than those dedicated to geriatrics or palliative care.

In conclusion, responding European internists, perceived most of their patients to suffer from multiple relevant and severe interacting chronic conditions. They were most familiar with the terms 'comorbidities' and 'polypathological patient' rather than with 'multimorbidity'. This survey has furthermore outlined the internists' coherent perception of noteworthy deficits in comprehensive geriatric-, pharmacological-, and prognostic assessment. Also, internists felt that MM is insufficiently addressed in Medical School as well as in postgraduate Internal Medicine training programs, and, to conclude on a somewhat more optimistic note: A majority of participants declared interest in MM research.

Authorship

All authors have contributed substantially to the work, approve the content and form of the present manuscript, and represent all EFIM MMWG Members.

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Competing interest

All authors declare, that they have no financial relationships with any organizations that might have an interest in the submitted work in the previous three years, and they declare no other relationships or activities that could appear to have influenced the submitted work.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.ejim.2022.02.008.

Appendix

European Federation of Internal Medicine Multimorbidity Working Group (EFIM MMWG)

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