

## Chronic disease in the ethnic minority and migrant groups: time for a paradigm shift in Europe

Pietro Amedeo Modesti<sup>1</sup>  · Francesco Perticone<sup>2</sup> · Gianfranco Parati<sup>3,4</sup> · Enrico Agabiti Rosei<sup>5</sup> · Domenico Prisco<sup>1</sup>

Received: 15 March 2016 / Accepted: 19 March 2016 / Published online: 28 March 2016  
© SIMI 2016

In this issue of the Journal, a series of articles belonging to the Topical Collection “Focus on healthcare and non-communicable disease in migrants” addresses the health of a stably growing proportion of subjects in the European (EU) countries. In 1990, just over 2 % of the population living in Italy was born elsewhere, [1] and a physician had few opportunities to meet a person belonging to an ethnic minority in the hospital ward or outpatient clinic. Over the past few decades, this scenario has changed dramatically. The fall of the iron curtain in 1989 opened migration flows from central and eastern EU countries mainly towards Germany, Turkey, and Finland. Meanwhile, growing flows from the countries of the south created a new “migration frontier” along the northern shores of the Mediterranean. Italy, Greece, Spain, and Portugal, traditionally countries of emigration, became countries of net immigration [1]. As a result in 2015, an estimated 76 million international long-term migrants, defined by the UN as a “person who moves to a country other than that of his or her usual residence for

a period of at least a year” [2], lived in the WHO European region, 8.5 million more than in 2005 [1, 3]. The possibility of meeting these new patients in the hospital ward or outpatient clinic is now high. Notwithstanding these relevant changes, scientific and cultural training of health workers on the health needs of minority groups is still limited and probably skewed [4]. The infectious disease specialists have traditionally been considered experts in the field of migration medicine, because it was thought that the large majority of the diseases affecting migrants had to be infectious or tropical (“exotic”) in nature. However, when we face people born in low-income countries who permanently live and work in Europe, we have to consider that this paradigm is probably shifted [5].

In several European countries, the prevalence of hypertension, diabetes, chronic kidney disease, obesity, and metabolic syndrome is found to be higher in most minority groups than in the native population [6]. Both subjects originating from sub-Saharan Africa [7] and South Asia [8] are found to have higher risk of stroke [9, 10] and end-stage renal failure [9, 11] than native Europeans. South Asians living in Europe also have elevated risk of coronary heart disease [9, 12, 13]. Understanding the reasons behind the excess cardiovascular (CV) risks is also crucial for addressing ethnic inequalities in health, because the ageing of migrant populations carries the risk of overburdening the majority of the healthcare systems in the European Union that offer free of charge access to emergency medical care [14]. In the present economic context, the European Union is paying great attention to improving data collection for migrant health and to support the implementation of specific prevention policies aimed at limiting the future burden of cardiovascular and renal disease, and the consequent load for health systems. Therefore in 2012, during the scientific meeting of London, the Council of the

✉ Pietro Amedeo Modesti  
pa.modesti@unifi.it

<sup>1</sup> Department of Experimental and Clinical Medicine, University of Florence, Largo Brambilla 3, 50134 Florence, Italy

<sup>2</sup> Department of Medical and Surgical Sciences, University Magna Græcia of Catanzaro, Campus Universitario di Germaneto, Catanzaro, Italy

<sup>3</sup> Department of Cardiovascular, Neural and Metabolic Sciences, San Luca Hospital, Istituto Auxologico Italiano IRCCS, Milan, Italy

<sup>4</sup> Department of Health Sciences, University of Milan Bicocca, Milan, Italy

<sup>5</sup> Department of Clinical and Experimental Sciences, University of Brescia, Azienda Spedali Civili, Brescia, Italy

European Society of Hypertension (ESH) accepted the proposal for the creation of a new working group (WG) on “CV Risk in Low Resource Settings”. The group was composed of members who identified the missions to increase the diagnosis, treatment and control of risk factors in low-income countries and in minority groups living in Europe, to validate the algorithm for CV risk assessment, develop low-cost instruments for screening purposes, and explore possible pharmacological and non-pharmacological prevention strategies to be implemented in low-resource settings [15]. The Italian Society of Internal Medicine, the oldest Scientific Society in Italy, has within itself the message of inclusion and proximity to the pathologies of the most vulnerable sections of society. In addition, the national changes in the socioeconomic conditions derived from migratory fluxes will negatively impact the burden of chronic diseases, raising new scenarios of no-longer sustainable health costs. Thus, the Italian Society of Internal Medicine strongly encourages a close cooperation between scientific societies and governments. Therefore, to create this topical collection, we assembled a group of world-renowned members of the ESH WG with complementary expertise in hypertension, diabetes, and cardiovascular and kidney diseases to review available information on chronic disease in the ethnic minority and migrant groups, to focus the attention of researchers on what has been done, especially in the collection of sound data from different European countries, and on what remains to be done. Judging from the important accepted papers that we attracted from all over the world, we surmise that they are both topical and timely, and that they are likely to have a significant impact on the field of treatment and prevention of chronic disease in minority groups. In particular, four main aspects are covered for a better understanding of (1) detection and control of risk factors in the low- and middle-income countries and their current health needs [16]; (2) the epidemiology of the two most prevalent chronic diseases, hypertension and diabetes, in the ethnic minority and migrant groups living in Europe, and differences between migrants and local-born populations to identify potential drivers predisposing ethnic minorities to CV disease [17–20]; (3) available data on the most appropriate strategies for treatment recognition and prevention of at-risk sub-populations [21, 22] to tailor health services according to needs; and finally, (4) the perspective of specific interventions in low- and middle-income countries especially focused on kidney disease [23].

In conclusion, a shift towards non-communicable diseases is being observed in minority groups living in Europe, as a result of many concomitant factors. European countries need to be prepared by the implementation of (1) scientific and cultural training of health workers, (2)

collection of sound data (3), and development of culturally adapted preventive health policies. It is now time to move the issue of the health of ethnic minorities higher up on the agenda of Europe.

#### Compliance with ethical standards

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

**Statement of human and animal rights** This article does not contain any studies with human participants or animals performed by any of the authors.

**Informed consent** None.

#### References

- Rechel B, Mladovsky P, Ingleby D, Mackenbach JP, McKee M (2013) Migration and health in an increasingly diverse Europe. *Lancet* 381(9873):1235–1245. doi:10.1016/S0140-6736(12)62086-8
- United Nations Department of Economic and Social Affairs. International migration. <http://unstats.un.org/unsd/demographic/sconcerns/migration/migrmethods.htm>. Accessed 23 Mar 2016
- International Organization for Migration. World Migration Report (2015) Migrants and cities: new partnerships to manage mobility. International Organization for Migration, Geneva, p 2015
- Modesti PA (2015) Ethnicity new challenge for cardiovascular prevention in Europe. *Hypertension* 66(3):464–465. doi:10.1161/Hypertensionaha.115.05777
- Castelli F, Tomasoni LR, El Hamad I (2014) Migration and chronic noncommunicable diseases: is the paradigm shifting? *J Cardiovasc Med (Hagerstown)* 15(9):693–695. doi:10.2459/JCM.0000000000000096
- Modesti PA, Reboldi G, Cappuccio FP, Agyemang C, Remuzzi G, Rapi S, Perruolo E, Parati G, Settings ESHWGoCRiLR (2016) Panethnic differences in blood pressure in Europe: a systematic review and meta-analysis. *PLoS One* 11(1):e0147601. doi:10.1371/journal.pone.0147601
- Opie LH, Seedat YK (2005) Hypertension in sub-saharan African populations. *Circulation* 112(23):3562–3568. doi:10.1161/circulationaha.105.539569
- Gupta M, Singh N, Verma S (2006) South Asians and cardiovascular risk—What clinicians should know. *Circulation* 113(25):E924–E929. doi:10.1161/Circulationaha.105.583815
- Harding S, Rosato M, Teyhan A (2008) Trends for coronary heart disease and stroke mortality among migrants in England and Wales, 1979–2003: slow declines notable for some groups. *Heart* 94(4):463–470. doi:10.1136/hrt.2007.122044
- Gunarathne A, Patel JV, Gammon B, Gill PS, Hughes EA, Lip GY (2009) Ischemic stroke in South Asians: a review of the epidemiology, pathophysiology, and ethnicity-related clinical features. *Stroke* 40(6):e415–e423. doi:10.1161/STROKEAHA.108.535724
- Lambie M, Richards N, Smith S (2008) Ethnicity, age and incidence rates for renal replacement therapy (RRT) in Birmingham, UK: 1990–2004. *Nephrol Dial Transpl* 23(12):3983–3987. doi:10.1093/ndt/gfn366
- McKeigue PM, Miller GJ, Marmot MG (1989) Coronary heart disease in South Asians overseas: a review. *J Clin Epidemiol* 42(7):597–609

13. Forouhi NG, Sattar N, Tillin T, McKeigue PM, Chaturvedi N (2006) Do known risk factors explain the higher coronary heart disease mortality in South Asian compared with European men? Prospective follow-up of the Southall and Brent studies, UK. *Diabetologia* 49(11):2580–2588
14. Karanikolos M, Mladovsky P, Cylus J, Thomson S, Basu S, Stuckler D, Mackenbach JP, McKee M (2013) Financial crisis, austerity, and health in Europe. *Lancet* 381(9874):1323–1331. doi:[10.1016/s0140-6736\(13\)60102-6](https://doi.org/10.1016/s0140-6736(13)60102-6)
15. Modesti PA, Agostoni P, Agyemang C, Basu S, Benetos A, Cappuccio FP, Ceriello A, Del Prato S, Kalyesubula R, O'Brien E, Kilama MO, Perlini S, Picano E, Reboldi G, Remuzzi G, Stuckler D, Twagirumukiza M, Van Bortel LM, Watfa G, Zhao D, Parati G (2014) Cardiovascular risk assessment in low-resource settings: a consensus document of the European Society of Hypertension Working Group on hypertension and cardiovascular risk in low resource settings. *J Hypertens* 32(5):951–960. doi:[10.1097/Hjh.000000000000125](https://doi.org/10.1097/Hjh.000000000000125)
16. Cappuccio F and Miller MA (2016) Cardiovascular disease and hypertension in sub-Saharan Africa: burden, risk and interventions. *Intern Emerg Med*. doi:[10.1007/s11739-016-1423-9](https://doi.org/10.1007/s11739-016-1423-9)
17. Bijker R and Agyemang C (2015) The influence of early-life conditions on cardiovascular disease later in life among ethnic minority populations: a systematic review. *Intern Emerg Med*. doi:[10.1007/s11739-015-1272-y](https://doi.org/10.1007/s11739-015-1272-y)
18. Gong Z and Zhao D (2015) Cardiovascular diseases and risk factors among Chinese immigrants. *Intern Emerg Med*. doi:[10.1007/s11739-015-1305-6](https://doi.org/10.1007/s11739-015-1305-6)
19. Meeks KA, Freitas-Da-Silva D, Adeyemo A, Beune EJ, Modesti PA, Stronks K, Zafarmand MH, Agyemang C (2015) Disparities in type 2 diabetes prevalence among ethnic minority groups resident in Europe: a systematic review and meta-analysis. *Intern Emerg Med*. doi:[10.1007/s11739-015-1302-9](https://doi.org/10.1007/s11739-015-1302-9)
20. Testa R, Bonfigli AR, Genovese S, Ceriello A (2015) Focus on migrants with type 2 diabetes mellitus in European Countries. *Intern Emerg Med*. doi:[10.1007/s11739-015-1350-1](https://doi.org/10.1007/s11739-015-1350-1)
21. Modesti PA, Galanti G, Cala P, Calabrese M (2015) Lifestyle interventions in preventing new type 2 diabetes in Asian populations. *Intern Emerg Med*. doi:[10.1007/s11739-015-1325-2](https://doi.org/10.1007/s11739-015-1325-2)
22. Brewster LM, van Montfrans GA, Oehlers GP, Seedat YK (2016) Systematic review: antihypertensive drug therapy in patients of African and South Asian ethnicity. *Intern Emerg Med*. doi:[10.1007/s11739-016-1422-x](https://doi.org/10.1007/s11739-016-1422-x)
23. Perico N and Remuzzi G (2016) Prevention programs for chronic kidney disease in low-income countries. *Intern Emerg Med*. doi:[10.1007/s11739-016-1425-7](https://doi.org/10.1007/s11739-016-1425-7)