

# **GenCAD executive summary**

*December 2017*

**Written by**  
**GenCAD Consortium**

**© European Union, 2017**

For reproduction or use of the artistic material contained therein and identified as being the property of a third-party copyright holder, permission must be sought directly from the copyright holder.

The information and views set out in this report are those of the author (GenCAD consortium) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this report. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use which may be made of the information contained therein.

## Colophon

GenCAD: Service contract **SANCO/2013/C1/008** –

**17.031800/14/698167**

The European union represented by the European Commission, DG Health and Food Safety, Directorate C, Unit C1, Program and knowledge management.

The consortium GenCAD lead by the Charité Universitätsmedizin Berlin (Institute for Gender in Medicine).

### GenCAD Team:

Charité Universitätsmedizin Berlin:

*Vera Regitz-Zagrosek (project coordinator)*

*Nicholas Alexander (project manager)*

*Nauman Tauseef (project assistant)*

Leeds Beckett University:

*Alan White (research coordinator)*

*Amanda Seims (project assistant)*

Andalusian School of Public Health:

*Antonio Daponte (research coordinator)*

*Inmaculada Mateo Rodríguez (project assistant)*

*Julia Bolivar Muñoz (project assistant)*

*Mariola Bernal Solano (project assistant)*

European Public Health Association:

*Floris Barnhoorn (research coordinator)*

Radboud University Medical Centre:

*Angela Maas (research coordinator)*

Berlin School of Public Health:

*Jacqueline Müller-Nordhorn (research coordinator)*

*Christoph Prugger (project assistant)*

The GenCAD network of participants

*No third-party textual or artistic material is included in the publication without the copyright holder's prior consent.*

*The information and views set out in this [report/study/article/publication...] are those of the author(s) and do not necessarily reflect the official opinion of the Commission. The Commission does not guarantee the accuracy of the data included in this study. Neither the Commission nor any person acting on the Commission's behalf may be held responsible for the use, which may be made of the information contained therein.*

## **Executive summary**

The GenCAD project aimed to improve the understanding and awareness of sex and gender differences in chronic diseases, using coronary artery disease as an example to highlight differences between women and men in prevention and treatment of coronary artery disease in European countries. It considered existing knowledge on sex and gender differences in coronary artery disease, and the inclusion of sex and gender related aspects in databases and in policies of Member States. It also conducted a study on the awareness of health care professionals and the general population and used this knowledge to develop factsheets on sex and gender in coronary artery disease to improve knowledge and awareness in Europe. Communicating facts and factsheets at two conferences, in the internet and by other ways of dissemination will help closing the gaps between sex and gender knowledge and translation to the medical practitioners, policy makers and the general public in an exemplary field.

GenCAD contributed to the development of a methodological approach as well as to the improvement of knowledge and awareness in the field of sex and gender related health in the European Member States. Therefore, GenCAD provides an approach that could be transferred to other disciplines and diseases and could be used as a template for future studies in other chronic diseases.

GenCAD first assembled in a state of the art study the existing knowledge on sex and gender differences in coronary artery disease, based on the published literature from all over the world. It searched published literature in the areas of prevention and health promotion, epidemiology, disease mechanisms, clinical symptoms and diagnosis, management, as well as outcomes of coronary artery disease. 878 articles were reviewed in detail. Significant sex and gender differences that need consideration were found in all fields described above. For example, diabetes and smoking have a greater weight as risk factors in women than in men. Other gender-related risk factors include: mental health, socioeconomic status, autoimmune and inflammatory diseases,

and disturbances of sex hormones and of sexual function. More sex and gender related differences were found in diagnosis and disease mechanisms, as well as in treatment and outcomes. The most important differences were assembled in factsheets.

A database analysis in existing European sociodemographic and medical databases aimed to test to which degree European databases are suited to analyse sex and gender differences in coronary artery disease. GenCAD therefore analysed these databases from EU Member States for coronary artery disease morbidity and mortality, connected the data to known risk factors such as smoking, diabetes, hypertension, hyperlipidaemia, alcohol use, and socioeconomic parameters and checked the data for their sensitivity to assess sex and gender differences. It was found, that most databases have a limited sensitivity for these analyses. Reasons may be that they have a rather low cut-off point for age at inclusion, and variables are not always broken down to sex. Sex and gender related covariates, like pregnancy complications, hormonal status, number of children, and sexual function are frequently not included in the databases. Experts agreed that they were willing to study gender-related effects, but not enough data is collected in many studies due to limited resources.

To obtain an overview on gender in EU health policies, a policy analysis examined the current political climate of existing policies on gender and coronary artery disease by contacting governmental healthcare departments, national medical and public health societies, funding agencies and active researchers. Overall, 273 policies and guidelines were identified across the 28 EU Member States that made specific reference to gender, either as part of their national gender equality legislation or in relation to cardiovascular disease, but few specific recommendations were found. Thus, the overall conclusions from this analysis are that for all EU Member States there is a policy environment that ensures gender equality and sex discrimination is prohibited; and that there is a growing body of recommendations from leading health organisations supporting more gender sensitive and gender aware

health care. At the level of detailed policy documents and guidelines guiding practice for cardiovascular disease however, there is a high reliance on the European Society of Cardiology guidelines, making their role in ensuring gender sensitive care very important.

To assess the need for information on sex and gender differences in cardiovascular disease, an awareness study was undertaken with two surveys - one for the general public and another for healthcare professionals. The general public awareness study in 6 EU languages in selected sample countries revealed continuing important deficits in knowledge and awareness on gender aspects in risk factors, disease manifestations, needs for action and information on disease outcomes. The survey in health care professionals in all European countries also showed important deficits in knowledge on sex and gender specific disease manifestations, diagnostic and therapeutic approaches. More gender sensitive information campaigns for physicians and the general public are necessary and the internet emerges as leading medium.

Based on the sex and gender differences identified in the bibliographic study, factsheets were developed for both health care professionals and the general public, integrating feedback from consortium partners and GenCAD extended networks. They were validated with groups of experts for general agreement and finalized in discussions with DG Health and Food Safety.

To communicate and discuss findings, two conferences were organized at 1<sup>st</sup> March 2017 and 11<sup>th</sup> October 2017 in Brussels. Two representatives from policy makers, medical communities or patient representatives from all Member States were included, as well as a number of experts.

For dissemination of the project results in a sustainable manner, we have developed a homepage hosted by DG Health and Food Safety where the main results are published. The main site is in English, additional materials like factsheets, and executive project summary are available in all EU official languages. Furthermore, the factsheets and project results have and will be

announced and communicated at homepages of the partners and different medical societies, Association of Schools of Public Health in the European Region, European Heart Net, Standing Committee of European Doctors, International Society for Gender Medicine, German Society for Gender-related Medicine, Italian Society of Gender Health and Medicine, The Austrian Society of Gender-Specific Medicine, Canadian Institutes of Health Research, The Pharmaceutical Group of the European Union, and Centre for Cardiovascular Research, Charité Berlin (Table 10). They have also been presented and discussed at major European congresses: EUPHA 2015, International Society for Gender Medicine 2015, Organization for the Study of Sex Differences 2016, European Congress for Internal Medicine 2017, EUPHA 2017, Europeans student conference 2017 and 2018, Organization for the Study of Sex Differences 2017, World Health summit 2017 and 2018, Europrevent 2018, International Society for Gender Medicine 2019; Gender summit 2017 and 2018, and will be presented at many others.

We also communicated the project in lay media during the project period, and will continue after the project period. All partners contributed to reach their specific target audiences, such as healthcare professionals, general public, users associated to health and wellness, patient safety and preventive healthcare. Furthermore, we used social media platforms, e.g. Facebook, Twitter and YouTube to reach our target audiences. Target audiences included healthcare, health and wellness personnel, health organizations and non-governmental organisations. Altogether more than 150,000 people were reached.

## **Abbreviations**

|       |  |
|-------|--|
| EACPR | European Association of Cardiovascular Prevention and Rehabilitation |
| ECG   | Electrocardiogram  |
| ESC   | European Society of Cardiology                                       |
| EU    | European Union   |
| EUPHA | European Union Public Health Association                             |
| GIM   | Gender in Medicine Institute - Charité Universitaetsmedizin Berlin   |
| UN    | United Nations   |
| WHO   | World Health Organisation  |
| WP    | Work package   |