



REVIEW; NURSING ROLE IN RISK ASSESSMENT AND PREVENTION OF CARDIOVASCULAR DISEASES IN PRIMARY CARE

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Abstract:

CVR assessment, communication, and management are all tasks that nurses perform on a variety of patients under their care. This is a role that is thought to be quite important for rheumatology nursing, particularly in patients who have inflammatory bowel disease (IA). It is necessary to conduct additional research in order to evaluate the effectiveness, cost-effectiveness, and perspective of patients on nurse-led Primary care provides a significant portion of the preventative measures that are taken against cardiovascular disease. The evaluation of the factors that put a person at risk for cardiovascular disease should receive special attention. Advanced practice nurses could potentially take on some of the heavy workload that general practitioners have to deal with when it comes to cardiovascular risk management, as stated in the guideline for cardiovascular risk management.

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Introduction:

When it comes to cardiovascular risk and results, those who live in regional, rural, or remote settings consistently perform worse than their counterparts who live in metropolitan areas. Mortality rates in the widely dispersed and diverse population of Australia rise in proportion to the degree of remoteness.⁴ Regional residents of Australia have a higher risk of passing away from coronary artery disease (44%) or stroke (31%), compared to those who live in major cities. Furthermore, there is an even greater disparity in the likelihood of fatal hypertensive heart disease (90% more likely) and heart failure (70% more likely) events. Those living in regional areas of Australia have been reported to have high amounts [1,2].

High blood pressure, coronary heart disease (which includes myocardial infarction and angina pectoris), heart failure, and stroke are all illnesses that fall under the umbrella of cardiovascular disease (CVD), which is the most prevalent health concern observed in the United States. Nearly 80,700,000 people in the United States are affected by cardiovascular disease, according to the most recent prevalence data from national surveys conducted in 2005. There are 42,700,000 females and 37,900,000 males comprising this population [4].

Additionally, these difficulties have been acknowledged in the regions of Europe, North America, Asia, and South Africa. The fact that there are fewer primary care physicians per population is particularly significant given that regional primary care clinics take on a greater burden of health care than metropolitan clinics do. Despite this, there is a scarcity of specialist cardiac services, and there are only a small number of cardiologists who work in non-metropolitan areas. The Healthy Hearts Beyond City Limits initiative discovered significant levels of risk and a need for more proactive prevention in regional areas [5]. These findings are consistent with the research that was presented earlier.

A significant portion of the money spent on health care is mostly allocated to cardiovascular disease (CVD), which has proven to be of considerable assistance in lowering the death rate associated with CVD. However, the majority of these monies are allocated in a reactive manner, and they are swallowed by the expenditures of hospital care and pharmaceutical therapy. This allocation does not support the proactive identification and prevention of cardiovascular disease. From the point of view

of primary prevention, secondary prevention, and chronic disease management, the implementation of nurse-led management programs has the potential to be cost-effective in achieving positive health outcomes (ranging from lowering risk levels to minimizing recurrent hospital stays and extending survival time). It is essential, however, to rigorously design and evaluate models of care before implementing them on a larger scale [6,7]. This is because health care systems are heterogeneous, their reimbursement mechanisms are different, and the specific requirements of the persons and communities that are being targeted are of utmost importance.

Review:

Factors of risk that might be altered were extremely prominent. The overall percentage of people who were physically inactive was 74%, 67% of them had abdominal obesity, 42% of them had hypertension, and 37% of them had increased levels of low density lipoprotein (LDL) cholesterol. The likelihood of women having hypertension, low high-density lipoprotein (HDL) cholesterol, excessive alcohol intake, or a serious electrocardiogram abnormalities was much lower than the likelihood of men having these conditions. As an alternative, women were considerably more likely to have total cholesterol levels that were higher than average and to engage in less physical activity. There was a trend for women to have a low absolute risk of cardiovascular disease (CVD) and AUSDRISK (with fewer cases than expected at moderate or high risk), whereas males had a propensity to have a moderate and high absolute risk of CVD and AUSDRISK (with smaller numbers of cases at low risk). There were no other gender differences that were statistically significant for any of the risk factors [8].

Heart disease, often known as cardiovascular disease (CVD), is a primary cause of death in many regions of the world. Around 6% of Dutch citizens were diagnosed with cardiovascular disease in 2008, and 40 587 Dutch people were away as a result of cardiovascular disease. As a result, the prevention of morbidity and early death from cardiovascular disease is of utmost importance [2]. At the level of primary care, it is possible to provide a sufficient level of care for a significant portion of both primary and secondary prevention of cardiovascular disease. The assessment of cardiovascular risk factors is something that professionals in the health care industry need to pay particular attention to. Calculations of risk are used to determine an individual's absolute

cardiovascular risk score, and some of the risk factors are included in those calculations. It is important to note that the individual risk serves as the foundation for the development of prevention methods. One of the arguments that has been made is that individuals who are at a high risk of cardiovascular disease will benefit the most from prevention efforts [8].

The enormous workload that general practitioners (GPs) have to deal with in terms of cardiovascular risk management in primary care may be shared by practice nurses, who would be overseen by general practitioners, as stated in the Dutch guideline for cardiovascular risk management.

Studies on the treatment of chronically ill patients have demonstrated that the transfer of tasks from general practitioners to advanced practice nurses is a beneficial method. The findings of a systematic review conducted by Laurant and colleagues in 2004 for the journal *Cochrane* revealed that educated nurses can attain health outcomes that are comparable to those of general practitioners for a variety of conditions. On the other hand, there has not been any research conducted on the efficacy of nurse-delivered cardiovascular risk management in primary care settings [9].

It was believed that a combination of elements that were specific to the intervention, including as a healthier diet and lifestyle, improved medication adherence, education, and the ability to take care of oneself, were essential in producing favorable results in terms of risk factor reduction. The receipt of a computerized written report of risk profiles, educational print material, and brief standard advice relative to recommended guidelines and individualized results served to reinforce the fundamentals of optimal cardiovascular health and may have assisted the participants in becoming aware of the necessity of making improvements in their cardiovascular risk. It is a testament to this that there has been a rise in the number of behaviors that are considered to be crucial in maintaining a healthy lifestyle and adhering to treatment regimens. Encouragement in self-monitoring, telephone and email reinforcement, and mutually agreed-upon health care plans through shared decision making proved to have benefits and potentially enabled participants to achieve their intended objectives for persons who were categorized as having a higher risk at the amber and red levels [10].

All or some of the following lipids were measured as part of the risk assessment performed by nurses: total cholesterol, high-density lipoprotein (HDL) cholesterol, and low-density lipoprotein (LDL) cholesterol, as well as triglycerides. Resting blood

pressure (BP) was measured while the patient was seated in a chair and after a minimum of five minutes of rest. Furthermore, nurses frequently evaluated behavioral risk factors, such as bad food, lack of physical activity, excessive use of alcohol, and smoking. Additionally, they evaluated overweight and obesity, which were measured by body mass index (BMI), and in some instances, they also measured waist circumference [11].

Conclusion

The current results substantiate the participation of practice nurses in the management of cardiovascular risk at the primary care level. Due to the large and growing number of patients needing cardiovascular risk management, this discovery is expected to have significant national implications for the organization of primary care cardiovascular prevention. In order to address the fact that a significant number of patients have not yet reached the desired treatment outcomes, it is necessary to enhance cardiovascular risk management. Further investigation is required to enhance and evaluate the lasting impact of cardiovascular risk management, specifically targeting individuals who do not attend appointments and reducing the rate at which patients discontinue treatment.

References:

1. Dutch Institute for Healthcare Improvement (CBO) and Dutch College of General Practitioners (NHG) *Dutch guideline for cardiovascular risk management*. Utrecht: Dutch Institute for Healthcare Improvement CBO and Dutch College of General Practitioners; 2006.
2. Anderson KM, Wilson PW, Odell PM, Kannel WB. An updated coronary risk profile. A statement for health professionals. *Circulation*. 1991;83(1):356–362.
3. Conroy RM, Pyorala K, Fitzgerald AP, et al. Estimation of ten-year risk of fatal cardiovascular disease in Europe: the SCORE project. *Eur Heart J*. 2003;24(11):987–1003.
4. Assmann G, Cullen P, Schulte H. Simple scoring scheme for calculating the risk of acute coronary events based on the 10-year follow-up of the prospective cardiovascular Munster (PROCAM) study. *Circulation*. 2002;105(3):310–315.
5. Wood D, De Backer G, Faergeman O, et al. Prevention of coronary heart disease in clinical practice. Summary of recommendations of the Second Joint Task Force of European and other

- Societies on Coronary Prevention. *J Hypertens*. 1998;16(10):1407–1414.
6. 10. Van den Berg M, de Bakker D. *Introduction of advanced practice nursing in Dutch primary care [in Dutch]* Utrecht: NIVEL; 2003.
 7. Meulepas MA, Jacobs JE, Lucas AE, et al. The feasibility of a primary care model for the management of COPD. *Prim Care Respir J*. 2006;15(6):337–341.
 8. Van Son L, Crebolder H, van Hoef L, Beusmans G. Supporting the GP [in Dutch] *Huisarts Wet*. 2004;47(1):15–21.
 9. Aubert RE, Herman WH, Waters J, et al. Nurse case management to improve glycemic control in diabetic patients in a health maintenance organization. A randomized, controlled trial. *Ann Intern Med*. 1998;129(8):605–612.
 10. Vaartjes I, Peters RJG, van Dis SJ, Bots M. *Cardiovascular diseases in the Netherlands 2008 [in Dutch]* The Hague: Dutch Heart Foundation; 2008.
 11. De Backer G, Ambrosioni E, Borch-Johnsen K, et al. European guidelines on cardiovascular disease prevention in clinical practice: third joint task force of European and other societies on cardiovascular disease prevention in clinical practice. *Eur J Cardiovasc Prev Rehabil*. 2003;10(4):S1–S10.