

Implementation of the 4th Joint Societies' Task Force Guidelines on Cardiovascular Disease Prevention in Clinical Practice. Evaluating implementation across 13 European countries. Main report

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CITATION

Mc Gee, Hannah; Morgan, Karen; Burke, Helen (2011): Implementation of the 4th Joint Societies' Task Force Guidelines on Cardiovascular Disease Prevention in Clinical Practice. Evaluating implementation across 13 European countries. Main report. Royal College of Surgeons in Ireland. Report.
<https://doi.org/10.25419/rcsi.10770464.v2>

DOI

[10.25419/rcsi.10770464.v2](https://doi.org/10.25419/rcsi.10770464.v2)

LICENCE

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Implementation of the 4th Joint Societies' Task Force Guidelines on Cardiovascular Disease Prevention in Clinical Practice

*Evaluating implementation across
13 European countries*

February 2011

Report for the Prevention Implementation Committee, European Association of
Cardiovascular Prevention and Rehabilitation

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Introduction

The Guidelines of the 4th Joint Societies Task Force on Cardiovascular Disease Prevention in Clinical Practice (4th JTF)* were issued in 2007, summarising and evaluating available evidence on reducing the incidence of atherosclerotic events arising from coronary heart disease, cerebrovascular disease and peripheral arterial disease. The purpose of the guidelines is to assist physicians in selecting the best strategies for managing cardiovascular disease. They are an important agreed protocol across countries and professionals that have the ultimate aim of improving outcomes from the disease. The value of these guidelines depends on the extent to which they are used by physicians in daily practice. Introducing the guidelines, the 4th JTF authors

Transferring guidelines from paper into practice has proven to be frustrating for the many who endeavour to standardise the management of cardiovascular disease across Europe. The EUROASPIRE I, II and III surveys, which audited the practice of preventive cardiology in patients with coronary heart disease over a decade, illustrated that patients were not being managed to the standards set by the ESC guidelines and that limited attention was given to prevention in patients with established heart disease. Evidence of the need for more effective lifestyle management was compelling: blood pressure management remained stubbornly unchanged, and lipid targets were not achieved in almost half of patients. Other studies report disappointing levels of guideline observance among physicians; they are often unaware of recommendations given in guidelines and, even when they are, many fail to consistently apply them in treating patients.²⁻³ Commonly cited barriers to guideline adherence among physicians include lack of time during consultations, financial constraints and lack of

To address the gap between publication of guidelines and their use in practice, the ESC at a European level organises presentations at conferences for its member national societies and key opinion leaders. It works at a political level to promote the prevention agenda and to directly influence EU health policy, leading, for example, to the EU Commission endorsement of the European Heart Health Charter. However, such efforts must be paralleled by concerted strategies at a national level to realise implementation in the front line. The 4th JTF urged national societies to develop implementation programmes, starting with the translation of

* The 4th Joint Task Force comprised Ian Graham (EACPR), Dan Atar (ESC), Knut Borch-Johnson (EASD/IDF Europe), Gudrun Boysen (EUSI), Gunilla Burrell (ISBM), Renata Cifkova (ESH), Jean Dallongeville, Guy de Backer (ESC), Shah Ebrahim (ESC), Bjorn Gjelsvik (ESGP/FM/Wonca), Christoff Hermann-Lingen (ISBM), Arno W Hoes (ESGP/FM/Wonca), Steve Humphries (ESC), Mike Knapton (EHN), Joep Perk (EACPR), Sylvia G Priori (ESC), Kalevi Pyorala (ESC), Zeljko Reiner (EAS), Luis Ruilope (ESC), Susana Sans-Mendes (ESC), Wilma Scholte Op Reimer (ESC council on CV Nursing), Peter Weissberg (EHN), David Wood (ESC), John Yarnell (EACPR) and Jose Luis Zamorano (ESC/CPG).

guidelines to the local language and their adaptation to the national context. It recommended that the guidelines issued by the 4th JTF be regarded as a framework from which national guidelines would be developed. The recalibration of the SCORE risk assessment charts to reflect mortality and risk factor distributions in individual countries as part of this adaptation was emphasised.

The 4th JTF saw as vital the establishment a multidisciplinary alliance of experts from national professional organisations to oversee the adaptation and to drive implementation. It was necessary that alliances would have the support of national health authorities and work with other sectors such as the medical education and business communities to advance their aims.

Other recommendations included:

- An information and education programme aimed at practising doctors that would include an audit of practices and feedback. The development of supplementary materials to the guidelines, specifically electronic versions for use in hand-held devices, such as PDAs, and of A4 sheet versions of risk algorithms and treatment recommendations.
- A population health approach addressing lifestyle risk factors in general.
- A public information campaign explaining the concept of multiple risk assessment and treatment and intervention thresholds, as well as describing how risk can be reduced.

Current Report: This report was completed on behalf of the Prevention Implementation Committee (PIC) of the European Association of Cardiovascular Prevention and Rehabilitation (EACPR), the prevention and rehabilitation-focused association of the European Society of Cardiology (ESC), to assess where and to what extent these measures have been pursued in different European countries. Acknowledging differing structures, traditions, enablers and constraints across European countries, the study sought to evaluate progress in implementation, focusing on guideline implementation structures, processes and outcomes. It is hoped that the insights gained will provide guidance to the EACPR about how best to achieve gains in promoting implementation, as well as informing the 5th JTF in its current work of updating the guidelines.

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Methods

Country selection

The aim of this project was to benchmark countries in Europe in terms of their progress in implementation of the 4th JTF Guidelines on the Prevention of Cardiovascular Disease in Clinical Practice. Countries were selected to illustrate the variety of enablers and barriers to applying the guidelines in practice and to maximise potential to generalise the findings. The selection criteria were those countries from which most can be learned about the early success or otherwise of rolling out implementation. The countries selected were Estonia, France, Germany, Ireland, Italy, the Netherlands, Norway, Poland, Romania, Russia, Spain, Sweden and the United Kingdom.

Study population

The project was based on in-depth interviews with key personnel in each country. The study population comprised the National Coordinator(s) for CVD Prevention and representatives of the key organisations active in cardiovascular disease prevention at a national level from each of the selected countries. These organisations were identified as the cardiac society, the heart foundation(s), the ministry of health and the health service agency/inspectorate, in countries where such agencies exist. Our aim was to interview at a minimum one national coordinator and one representative from each of the organisations for each country. The interview target was 55: 13 national coordinators, 13 cardiac societies, 12 heart foundations (Poland does not have a heart foundation), 13 ministries of health, and 4 national health service agencies/inspectorates (Ireland, the Netherlands, Poland and the United Kingdom). Some countries have two national coordinators (Germany, Ireland, Italy, the Netherlands, Romania and Norway) and some countries have more than one heart foundation (Italy, the Netherlands, Sweden and the United Kingdom).

Research methods

Participant selection

A list of the names and e-mail addresses of the national coordinators and contacts in the countries was provided by the EACPR, as well as the name of one individual each from a health ministry and from a health service agency. Contact was initially made with the people on this list. Representatives of health ministries and health service agencies/inspectorates (apart from those provided by the EACPR) were identified with the assistance of other study participants.

All were contacted by the research team with a protocol describing the study, alongside a letter of invitation from the president of the EACPR and the chair of its Prevention Implementation Committee (see Appendix A). Non-responders were contacted again after three weeks with a reminder. Arrangements for interview, in person, by telephone or by Skype, were made with contacts who agreed to participate.

On the premise that an interview in English might be a barrier to the participation of some individuals, a short self-completion questionnaire was developed that included the main questions covered in the interview. Those who did not respond to the reminder e-mail were e-mailed a third and final time towards the end of the study. The questionnaire (in English) was also made should they be willing to complete it, or have others complete it,

Interviews

A country profile of 3–4 pages based on available national documentation was prepared in advance of the meetings to guide specific interview questions. This allowed clarification of specific actions in each country to be explored. The country profile included sections on the Charter and 4th JTF guideline implementation; the country profile in CVD prevention as represented in the Euro Consumer Heart Index and EuroHeart Work Package 5 reports (where relevant); information on CVD prevention in primary and second care; and details on national CVD prevention policy and strategies as well as a description of the national health system. While a set of basic questions on progress in implementation and prevention strategy was drawn up, interviews were semi-structured to allow flexibility in following up responses and comments made by participants.

Interviews were mostly face-to-face, with a small number conducted by telephone or Skype. Interviews were conducted in English and were recorded with the permission of the participant. The duration was 18–128 (average 45) minutes.

Analysis

Detailed interview notes were analysed to identify themes and the data were coded accordingly. Data were collated to produce a summary for each country. Summaries were sent to participants, who were requested to review the material and to correct any errors or omissions in the summary.

Results

Response rate

The following is the response from the efforts made to elicit participation in the study. In a number of cases, individual interviewees represented more than one perspective; for example, a national coordinator might speak also on behalf of the national cardiac society. Details of such dual representations are shown in the country summaries.

National coordinators: 19 national coordinators were contacted and 14 of these, from 13 countries, were interviewed – one from each country, apart from Germany, where two national coordinators were interviewed.

Cardiac societies: 31 cardiac society representatives were contacted, resulting in 9 interviews from 9 countries – one each from Estonia, France, Germany, Ireland, Italy, the Netherlands, Poland, Spain and Sweden. An interview with the president of the Russian Society of Cardiologists was set up; however, he was unavoidably not available on the day arranged. The Norwegian Society of Cardiology declined to take part, and there was no response from the cardiac societies of Romania and the United Kingdom.

Heart foundations: 26 heart foundation representatives were contacted, resulting in 11 interviews from 10 countries – one each from France, Germany, Ireland, the Netherlands, Norway, Romania, Russia, Spain, Sweden and the United Kingdom and two from Italy. Poland did not have a heart foundation at the time. Two heart foundations in Sweden declined to take part as they had no role in guideline implementation. There was no response from the Estonian Heart Association.

Health ministries: 24 representatives of health ministries were approached, yielding 6 interviews and 2 completed questionnaires from 8 countries – representatives from Estonia, Ireland, the Netherlands, Norway, Sweden and the United Kingdom were interviewed, while the Polish and Romanian representatives completed a questionnaire. An interview with a representative of the Russian ministry was set up; however, she was not available on the day arranged. Representatives of the Spanish and German ministries referred us to the national cardiac societies. The French ministry contact did not feel competent to talk about guidelines. There was no response from the Italian ministry.

Health service agencies/inspectorates: 3 representatives of health service agencies or inspectorates were contacted and interviewed – from Ireland, the Netherlands and the United Kingdom. It was not possible to contact a representative from Poland.

Detailed summaries integrating the interviews for each country can be found in Appendix B.

Discussion

A diversity of approaches to implementation of the guidelines emerges when the summaries for each country are examined. While implementation strategies include components that are followed consistently across countries, local constraints – health system structure, culture, population health status – have a determining effect on how implementation proceeds and to some extent also define what is possible.

Overall, a positive attitude exists towards the concept of having a uniform set of guidelines in operation across Europe. A need to improve efforts in the prevention and management of cardiovascular disease both at a clinical and a population level was acknowledged, and the guidelines were seen as having an important contribution to this endeavour. It was recognised that guidelines already have been significant in improving physician performance and patient care. Participants were also satisfied with the scope, credibility and evidence base of 4th JTF guidelines. Whatever weaknesses were perceived in guidelines – in the concept, in their development, or in the content – guidelines to advise on practice and on wider application to population health were welcomed both by physicians and organisations working in the area of cardiovascular disease prevention.

Implementation status

Ten of the 13 exemplar countries in this study were using the ESC guidelines on prevention at a national level, although there was considerable variation in the details of implementation. We identified 3 broad approaches: (1) *adoption* as the national guidelines with local adaptation, mainly the adjustment of risk charts to national data (Italy, Poland, Romania, Russia and Spain); (2) *incorporation* into national guidelines along with guidelines from other sources (Estonia, Germany and the Netherlands); (3) *co-existence* with national guidelines developed by the health authorities (Sweden and France). It is worth noting that the Estonian, German and Dutch national guidelines have incorporated the 3rd JTF guidelines because the national guidelines were developed concurrently with the work of the 4th JTF. Lags between ESC and national guidelines are likely to occur as countries set their own timetables for updates according to their needs. A revision of the Dutch guidance incorporating the guidelines of the 4th JTF was in review at the time of writing; Estonia plans to adapt the 5th JTF guidelines as national guidelines when they are released.

The three remaining countries not accounted for here are Ireland, Norway and the United Kingdom. In Ireland the 4th JTF guidelines had been endorsed and were used by many doctors, and the intention now is to adopt the 5th JTF guidelines as the national guidelines. The roll-out of the guidelines in Norway stalled over the issue of recalibrating the SCORE charts to reflect Norwegian mortality data, and plans to implement the guidelines were overtaken by a government initiative to develop national guidelines that were more appropriate to Norwegian needs and conditions. In the United Kingdom, national guidelines had been developed both by the joint efforts of professional societies (the Joint British Societies, which include the British Society of Cardiology) and by national agencies; in that context, there was no imperative to introduce the 4th JTF guidelines.

Multidisciplinary alliances

The 4th JTF recommended as a first step to implementation the formation in each country of a multidisciplinary alliance of experts from national professional societies if such an alliance did not already exist. In those countries where ESC or ESC-based guidelines are the main ones in operation, such coalitions of interest had already been formed in Estonia, the Netherlands and Poland, prompted by the publication of the 3rd JTF guidelines; in Spain, a guidelines alliance has existed since 2000; in Germany, an existing alliance for prevention took responsibility for developing national guidelines; the alliances in Ireland and Russia came together around the 4th JTF guidelines; and the Romanian alliance was formed after the 4th JTF guidelines had been translated and endorsed. The alliance established in the Netherlands limited its task to developing national guidelines, and a much broader platform group had taken up the larger task of improving the care of cardiovascular patients in that country.

These alliances were clearly useful in bringing together different professional societies for the purposes of agreeing a local version, and with that in mind, similar alliances had been established by health authorities in several countries in developing their own national guidelines. The buy-in from professional societies has been important, especially as their participation created a route to influence member health professionals in daily practice. Professional societies participating in these alliances have subsequently played a significant role in dissemination, publishing the guidelines in their journals – publication in the national cardiac society journal was usual – and presenting the guidelines at meetings and conferences. In Romania, for example, a concerted effort was made by the cardiac society to engage with GPs and to promote the use of the risk calculator among them. Evidence of ongoing projects to raise awareness of the guidelines was scant, however, and the success of these efforts in changing habitual practices, especially among GPs, was unknown – many participants believed that ignorance of the guidelines or failure to apply them was common among practitioners.

The absence of multidisciplinary alliances in France, Italy and Sweden was not seen as a barrier to implementation by participants from these countries. In France and Sweden, national guidelines take precedence over the ESC guidelines and in this state of co-existence, it might well be inappropriate for a separate body to seek to promote its guidelines within the same health system.

Health authority support

Effective as these alliances might be, without the participation of health authorities, or at least their active support, alliances lack the necessary authority for the systematic implementation of prevention guidelines throughout national health systems. Strong leadership on cardiovascular disease within the health system can have an enormous positive impact – in 1990, coronary heart disease was the leading cause of death in the UK, but by 2010 it was no longer the main killer. The presence of health authorities or agencies in the implementation of the 4th JTF guidelines was observed at some level in a number of countries. In Spain, the health ministry established and funded the alliance for implementation; in Estonia, the guidelines were approved and are supported by the health insurance fund; and in Ireland, the health ministry is represented on the alliance. In France, Norway, Sweden and the United Kingdom, agencies reporting to the health ministry initiated and oversaw the development of national guidelines, distinct from those issued by the ESC. Health authorities

have the supreme power in implementation when payment of service providers is tied to guideline adherence as in Estonia and the United Kingdom, and in the Netherlands, too, when and if the new payment structure for prevention in primary care is taken up. It was noted, for example, that in the United Kingdom adherence to the NICE guideline was high among GPs because it was tied to remuneration. Among those countries where the ESC guidelines were the main guidelines in use, active health authority support for guideline implementation was not apparent - for instance in Germany, Italy, Poland, Romania or Russia.

Health authorities may support only or mainly those guidelines that they have mandated, so those that develop separate national guidelines promote those guidelines, perhaps to the exclusion of ESC guidelines, as has occurred in Norway and the United Kingdom. Where the ESC guidelines co-exist with national guidelines, it is likely that physicians will adhere to treatment thresholds set in national guidelines when these differ from ESC recommendations because insurers reimburse treatment on the basis of national guideline thresholds. This is the case in France, where the national guidelines have priority and those issued by the ESC are used mainly by cardiologists. Such regulation obliges physicians to follow national guidelines regardless of their judgement - for example, when pharmacological intervention might be appropriate for some patients below the threshold. In Sweden, where national, regional and local guidelines operate alongside the ESC guidelines, it seems that the latter fill a gap as they address more directly an audience of medical professionals. The Swedish cardiovascular prevention guideline is part of an all-encompassing cardiac care guideline, which is targeted chiefly at decision-makers. In this context, while the national guidelines take precedence, the ESC guidelines serve as a useful reference.

Participation of health authorities in the implementation process does not represent an unqualified commitment to cardiovascular disease prevention, and countervailing agendas operate in other quarters at the political level. Study participants noted factors that influenced government, such as ideological beliefs in personal responsibility for lifestyle (the Netherlands); reluctance or perhaps inability to commit funding to support prevention activities (the ending of support for screening services in Ireland, Norway and Romania); an unstated imperative to maintain the revenues accruing from taxes on tobacco and alcohol (France); and the vested interests of the tobacco, agriculture and food industries operating in national parliaments (France and Germany). The difficulties researchers for this study encountered in identifying officials responsible for CVD management and prevention in health ministries, even when assisted by other national participants, and in the low level of participation by those individuals when identified, suggested a substantial lack of focus on prevention of CVD at a political level.

In many countries surveyed, health care was heavily devolved to regional administrations that have responsibility for the realisation of policy in day-to-day health care practice. This added another tier of complication to implementation efforts and demands the multiplication of relationships with local bureaucracies if alliances are to operate at a regional level in these countries. To complicate matters further, in some of these countries, there was no official with specific responsibility for cardiovascular disease management appointed at regional administrative level, so identifying the official with whom to engage became a challenge in itself for an implementation group. It was a major objective of the alliance in Spain to set up

partnerships with regional health ministries, but little other evidence of links being established with regional administrations emerged from our interviews.

Participation from other sectors

In addition to advising that implementation alliances seek the support of health authorities, the 4th JTF advised that they should form relationships outside the health sector with those sectors that have a stake in implementation endeavours, in particular the medical education and business sectors. It was not apparent that such links had been established, apart from in Ireland, where the alliance was planning to involve the medical colleges in the implementation process. Industry, specifically tobacco and food, was overwhelmingly seen as an obstacle to disease prevention endeavours. In addition, criticism was levelled at the influence of the pharmaceutical industry upon the setting of priorities in prevention and guiding them in favour of pharmacological treatment.

Evaluation

An implementation process is likely to remain an exercise in distribution unless the adherence of practitioners to the guidelines in daily practice is assessed. The extent to which practice was evaluated varied in the countries we examined. Evaluation mechanisms were most apparent in countries where guidelines formally underpin practice within the health system or where payment is tied to guideline adherence, as in France, the Netherlands, Estonia, Sweden and the United Kingdom. In these countries, state agencies or insurance funds have a monitoring function. However, this is not without exception - in Norway and Spain, where health ministries had formally supported the national guidelines, monitoring of adherence had not been undertaken.

Agencies of state and insurance funds monitor only national guidelines. Where ESC guidelines coexist with separate national guidelines – France and Sweden – and in countries where ESC-based guidelines are the principal guidelines in use but health authority support for guidelines was more muted – Germany, Ireland, Italy, Poland, Romania and Russia – no evaluation of adherence had been conducted. It seems beyond the resources of implementation alliances or cardiac societies to conduct audits of practitioner behaviour, which suggests that they need support to embark on any such endeavour. Notably, the Estonian Society of Cardiology, together with the National Audit Office, had conducted an audit of GP screening for CVD risk factors and follow-up with hypertensive patients. Where state agencies do not lend that support, there may be a role for the ESC to provide support, as a way to close the loop of issuing guidelines, implementing them in practice, and auditing their implementation.

Reaching practitioners

Building a mechanism to evaluate practitioner adherence might serve to motivate doctors to engage in prevention. Feedback is an important device for changing behaviour and the ability to benchmark their performance against their peers would highlight where physicians need to improve their practices. Several participants expressed dissatisfaction at the emphasis in healthcare on reacting to the acute disease to the detriment of pursuing prevention in daily paths that mould physicians. The attitudes of physicians both in primary and secondary care

may undervalue prevention, and it was acknowledged that the process of changing the professional practices of doctors would be slow. The shift to supporting patients in changing behaviour poses a challenge to doctors familiar with diagnosing disease and prescribing medication, and they may lack of confidence in their ability to be effective in the area of lifestyle change. Are financial incentives the answer to changing physician orientation towards prevention? Mixed feelings were expressed by participants on this question. Some believed that progress was contingent on remuneration of physicians for their prevention practices. Others viewed prevention as the professional responsibility of physicians, where financial incentivisation should not be necessary.

Guideline challenges

The process of implementation may be hampered to some extent by the unwieldy nature of the guidelines, and some participants felt that improving the quality of the document was key to implementation. The more user-friendly the guidelines, the more they would be used. The complaint was made repeatedly in interviews that the guidelines were too long and too dense for practitioners to reference and memorise, and particularly impractical for 10-minute patient consultations. It was also felt that the guidelines were not always clear and that doctors with the types of messages that are meaningful to the general public and that can be conveyed patients during consultations.

Guideline fatigue was a factor cited by many participants as an impediment to physicians embracing the guidelines. This is particularly an experience of general practitioners, who encounter the full range of medical conditions in their work and are expected to be abreast of the guidelines on all. The situation is exacerbated by continuous updating so that no sooner have doctors become familiar with a set of a guidelines that they have to revise their knowledge with a new set. While it was acknowledged that revision of guidelines is unavoidable in the light of new evidence, the necessity of such frequent revisions was questioned. In this deluge of multiple and ever-changing guidelines, doctors feel overwhelmed.

Fatigue is aggravated by conflicts between guidelines issued by different societies and the tendency of different societies to emphasise the particular risk factor that is their concern. The 2009 ESH guidelines on hypertension, and their inconsistency with the prevention guidelines, were mentioned in this context. Particularly irksome were inconsistent guidelines issued by the same organisation. Such conflicts were seen to undermine the credibility of experts and impede acceptance of the guidelines among practitioners. It was felt that conflicting recommendations offered an easy excuse to practitioners to make subjective decisions, and participants felt that one target figure should be set by all for each risk factor.

It was widely suggested that the guidelines needed to give greater priority to the reduction of lifestyle risk factors and to acknowledge that treatment alone will not achieve desired reductions in cardiovascular risk. There was some concern that the emphasis on treatment was a result of the influence of pharmaceutical companies on the decisions made by guideline committees, although it was accepted the tendency to favour approaches that are underpinned by evidence-based research is normal among scientists. Additionally, many participants felt that the guidelines should extend beyond high-risk patients to address

cardiovascular prevention at the population level, and that the ultimate aim must be to maintain and increase cardiovascular health for the majority of people at low risk.

Participants from several countries expressed misgivings about the reliability of the SCORE risk charts. They cited such weaknesses as the inability of the tool to identify total risk in younger individuals with substantial lifestyle and clinical risk factors; the potential to unnecessarily medicalise the care of healthy older people; and the overestimation of risk in low-risk populations. The usefulness of the message derived from risk calculation on a

also seen as a drawback and it was felt that this might be more meaningful to patients.

SCORE has not been adopted in all countries that use the ESC guidelines. The French Society of Cardiology encountered strenuous resistance to the tool from other professional societies and did not continue efforts to promote it. Italy developed its own risk assessment tool within the framework of its national disease prevention plan.

Role of the ESC

The authors of the 4th JTF acknowledged that both the full guidelines and the executive summary were too long for routine use, and it was suggested that national societies develop quick-reference, single-page sheets and electronic versions of the guidelines. In Ireland, a reference sheet is being developed by the national prevention group. While several interviewees proposed that such quick-reference-type formats would be very useful, many suggested that the ESC should produce them. The work involved, as well as the financial costs, no doubt discourage national groups from undertaking such projects. The French Society of Cardiology relied on sponsorship of a pharmaceutical company to publish a French version of the 2008 ESC compendium, while the cost of a French version of the 2010 ESC compendium proved to be prohibitive. Some interviewees proposed that implementation endeavours would be aided by making the pocket version freely available on the ESC website, since they have been in circulation for three years. National groups may need more support and guidance from the ESC if they are to undertake the task of producing accessible versions of the guidelines for their local audiences.

Developing regional versions of SCORE has proven to be another stumbling block to implementation. In Norway, it was reported that SCORE was not progressed because the cardiac society did not receive timely support from the ESC to recalibrate the SCORE charts using Norwegian data. Participants from Russia reported a similar problem. These experiences highlight that while the ESC focuses its efforts on delivery of guidelines, countries clearly struggle with the dissemination requirements that ensue. Furthermore, rightly or wrongly, they expect that the ESC should support regional activities to develop resources such as SCORE. Some rebalancing of the ESC focus may be warranted, so that some of the effort dedicated to improving guidelines might be redirected at getting them into practice.

It is worth considering in this context suggestions made by participants on the adaptation of the guidelines. It was suggested that a basic European version of the guidelines be produced that would facilitate and standardise national adaptations and elaborations. It was also

proposed that a methodology for adapting guidelines be described by the next joint task force to guide national task forces in these endeavours.

Several participants suggested not only more user-friendly and usable guidelines for practitioners, but also that ESC should address prevention at a population level and develop guidelines for the general public. Should the ESC seek to widen its brief? Other participants felt the ESC should maintain a more limited role as provider of the scientific underpinning of national health strategies. And this would seem to have been how the 4th JTF perceived the ESC role, while it acknowledged the need for population health strategies, it indicated that this should be complemented by national and European public health strategies aimed at whole populations in a co-ordinated and comprehensive effort to reduce the enormous burden of CVD that afflicts European populations.

Recommendations

Considerations for the ESC

One of the strongest messages that emerged from feedback was that more is expected of the ESC by those that look to it to take a lead in prevention. In particular, they asked the ESC to produce simpler guidelines that can be used in practice, concrete advice that can be passed on to patients, and guidelines for the population. Clearly there is a need for more material to start with and that of the national societies begin? It is arguable whether the requirements of different countries will vary to such an extent that national societies should play the major role in producing local adaptations. Such work can be demanding of time and money – producing a one-page reference sheet for doctors is probably affordable, but collateral such as user-friendly publications complete with colour and illustrations are higher cost. Once produced, the material must be distributed to its audience. As noted earlier, a first step would be to provide the pocket guidelines for download free of charge once a reasonable period of time has elapsed so that all physicians would at least have access to a usable set of guidelines. It would be useful also for the ESC to consider whether enhanced support for national groups to adapt these guidelines to local needs might meet the requirements of both sides.

The issue is broader than guidelines, however. The ESC must also consider its role in providing further support to countries on implementation as a whole. It is not clear that the resources and the skills required to back up a wide-ranging implementation strategy can easily be accessed at a national level. Several of the elements of the recommended implementation package were not achieved. For example, many countries had not made a start in the evaluation of progress in guideline implementation, promotion of the guidelines had not been an ongoing project, and success at securing the support of health authorities was variable. While the 4th JTF outlined the rational steps that needed to be taken, there was no follow through with national societies and alliances, and merely handing over ideas to others was not proven to be an effective strategy for getting those ideas put into practice. By shifting its focus from producing the best guidelines based on the latest evidence to doing more work with national groups on implementing the guidelines, the ESC might well gain more in terms of improving cardiovascular disease outcomes. A measure such as bringing national coordinators and stakeholder representatives together for the purposes of formulating practical strategies would help in developing the support networks that activists at a national level need. If the ESC supported even small-scale audits, feedback from these might act as a catalyst to health ministries to play a greater role in implementation.

Another matter to reflect on, related to the publication of guidelines for the general public, is whether the ESC ought to widen its brief and concern itself with the prevention of cardiovascular disease at population level. The position of the ESC to date has been to address its message to physicians and leave responsibility for communicating to the public to health authorities and non-government organisations. It may be increasingly hard to resist the pull towards a wider population brief, however. The imperative of disease prevention has gained

currency in health ministries across Europe and, however slowly they may be to take concrete steps in this regard, focussing narrowly on the acute disease may soon be out of step with political mindsets.

Considerations on the guidelines

Different versions of the guidelines are needed to meet the requirements of practitioners in different contexts. While the full version and executive summary remain important documents for those who want access to the scientific basis of recommendations, a demand exists for more flexible formats: a 1-page reference with algorithms for diagnosis and decision-making; computer-based decision support systems; an accessible version that is easy for practitioners to digest. There is also a need to provide physicians with guidance written in the language and including the concepts that they can use with their patients, such as the advice for patients to walk 10,000 steps a day. Providing such material might also encourage physicians to counsel patients in lifestyle change.

The next guidelines task force must decide whether to shift the balance in recommendations towards addressing lifestyle risk factors in addition to pharmacological interventions. This might increase the challenge of guideline adherence among physicians who prefer the traditional role of prescribing medication and who are hesitant to engage in lifestyle counselling, yet there was substantial support for this rebalancing among participants. On a related point, the task force should consider whether to broaden the remit of guidelines beyond high-risk patients to take account of prevention in the population.

A concerted effort must be made to standardise guidelines across scientific societies. A single set of targets for all risk factors would remove one source of frustration for practitioners and remove one source of inconsistency in treatment.

Considerations for stakeholders

Many of the barriers to implementation of the guidelines are structural: the organisation of health systems and the contracts under which practitioners operate serve to impede changes in practice. It is critical for national coordinators to gain the active support of health authorities to overcome these barriers. To this end, national coordinators must make greater efforts to identify the key personnel within ministries that have the power to make a difference and to endeavour to secure their support. They might look for guidance to other organisations that have had success in securing ministry support for tackling other diseases. Such work is demanding, so it is equally critical for cardiac societies to appoint national coordinators who are able and willing to undertake it.

Efforts need to be made to focus physicians more on prevention. Physician training, starting in undergraduate education, emphasises the treatment and curing of disease, and the career paths that most physicians follow subsequently reinforce that orientation. The task of prompting physicians to engage more in prevention and to counsel patients in lifestyle change is considerable. In this context, the merit of linking practitioner payment to prevention must be considered, and whether implementation alliances should press for this in their engagements with health authorities. The concept of working with patients to gain their buy-

in should also be pursued, to agree plans with them on adhering to medication regimes and lifestyle improvement.

Summary Recommendations

1. **In relation to the ESC**, the organisation should consider the following:
 - i. Redefining where to assign responsibilities in the guideline implementation process between the European organisation and the national alliances.
 - ii. Changing the relative emphasis in its activities from the regular updating of guidelines in favour of driving the implementation of these guidelines.
 - iii. Increasing its efforts to work with national alliances, both individually and as a group, in developing implementation strategies.
 - iv. Providing more resource support to national alliances to ensure that key components of guideline implementation, such as auditing practice, are achieved.
 - v. Widening its brief to address cardiovascular prevention at population level.
2. **In relation to the guidelines**, the ESC should consider the following:
 - i. Developing a variety of guideline formats for use by practitioners in different contexts, with emphasis on greater simplicity and flexibility.
 - ii. Providing practitioners with guidance that uses the language and concepts accessible to a public audience that they can communicate to patients.
 - iii. Rebalancing guideline recommendations towards addressing lifestyle risk factors in addition to pharmacological treatment.
 - iv. Broadening the scope of the guidelines beyond high-risk patients to include prevention in the population.
 - v. Standardising guidelines across scientific societies so all recommend the same targets.
3. **National cardiac societies** should appoint national coordinators who have the skill and commitment to undertake a key role in driving implementation.
4. **National coordinators** should work to secure the support of key personnel within health ministries, with the aim of gaining the active involvement of health ministries in guideline implementation.
5. **Implementation alliances** should consider whether to endorse the linking of practitioner payment to prevention actions and whether to recommend this to national health authorities.
6. **Stakeholders as a whole** should consider:
 - i. Focussing physicians more on prevention, starting from training and throughout their careers.
 - ii. Gaining the active participation and commitment of patients in the management of their cardiovascular disease.

Appendix A: Mailshot Documents

Letter of invitation



Address for correspondence:

Dr Karen Morgan
Department of Psychology
Division of Population Health Sciences
Royal College of Surgeons in Ireland
12, Eustace Street, Dublin 2
Ireland

Dear Colleague,

The European Association for Cardiovascular Prevention and Rehabilitation (EACPR) has commissioned a study to evaluate progress in the implementation of the Fourth Joint ESC/EAS Guidelines on Cardiovascular Disease Prevention in Clinical Practice across Europe. A brief protocol describing the study is attached with this letter. The study will examine the structures and processes that have been established in different European health-care systems to translate the guidelines into clinical practice, with the aim of illustrating the variety of enablers and barriers to guideline implementation. The study will be based on in-depth interviews with key personnel in each of the selected national systems.

Your country has been chosen as one of twelve exemplar countries to participate in the study, and we would very much appreciate your input as you have a key perspective on your

Hannah McGee from the Royal College of Surgeons in Ireland to conduct the study. Interviews will be conducted by Dr Karen Morgan, an experienced health and organisational psychologist, who will arrange a suitable time and location for interview with participants.


Participants will be asked to provide key national documents of relevance to prevention implementation for consideration in advance of the interview.

The purpose of the study is to characterize the collective experience of guideline implementation in Europe, and the research will be conducted in a way that values experiences in each of the participating countries. The findings will recognise differing structures, traditions, enablers and constraints across countries and will not seek to rank countries in terms of progress.

We would be extremely grateful for your support in facilitating this study, the findings of which will strengthen the evidence base for advocacy on the implementation of CVD prevention at European and national levels.

Should you wish to contact Dr Morgan, her contact details are as follows: telephone +353 1 402-2365; e-mail kmorgan@rcsi.ie.

Yours sincerely,



Prof. Pantaleo Giannuzzi
President, EACPR



Prof. Ian Graham
Chair, EACPR Prevention Implementation Committee

Study protocol

Evaluation of the Implementation of the Fourth Joint European Societies' Task Force Guidelines on Cardiovascular Disease Prevention in Clinical Practice

Study Protocol

Background: The Fourth Joint Societies' Task Force (4th JTF) Guidelines on Cardiovascular Disease Prevention in Clinical Practice are an important agreed protocol across countries and professions to improve patient care in line with the best up-to-date evidence. The value of these guidelines depends on how much they are implemented. This project aims to assess where and how much the guidelines have been implemented. The study is planned on behalf of the European Association of Cardiovascular Prevention and Rehabilitation (EACPR). The EACPR is the prevention- and rehabilitation-focused association of the European Society of Cardiology (ESC).

Acknowledging differing structures, traditions, enablers and constraints across European countries, the research will evaluate progress in implementation of the 4th JTF Guidelines in twelve European countries, focusing on guideline implementation structures, processes and outcomes. The twelve 'exemplar' countries will be selected to maximise the usefulness of the findings and subsequent recommendations to the EACPR/ESC.

Research Outline

Study population: Key personnel in selected countries will be identified (e.g., representatives of the national cardiac society and heart foundation; health policy-makers and service providers). Twelve countries will be identified following consultation with the EACPR Board. The aim is not to randomly select countries in a 'representative' manner but rather to select countries from which we can learn most about the early success or otherwise of rolling out implementation.

Research methods: Each selected organisation will be invited to provide a rapporteur to take part in an in-depth interview. The interview team will request copies of key national documents of relevance to prevention implementation in advance of the visit. On average, four key personnel representing different aspects of the national system will be involved in interviews to obtain a multi-faceted perspective. The interview schedule will be a general set of questions on progress towards implementation, using a structured organisational model. A 'five years back, five years forward' approach to considering change will also be used. A country profile based on available national documentation will be prepared in advance of the meetings to guide specific interview questions. This will allow clarification of specific actions in each country to be undertaken with key personnel.

Research outcomes: Research findings will be discussed with those having taken part and with the relevant committee in EACPR – the Prevention Implementation Group – in order to best interpret the findings across countries and to identify the factors most supporting implementation of the Guidelines. Work will be undertaken in early Summer and Autumn of 2010 – with discussion among experts at the ESC Congress in August in Stockholm. The lessons to be taken from implementation activities to date

will be presented to a wide audience, in order to advance patient care, at the European Summit on CVD Prevention to be held at the European Heart House, Nice, on 30 November, 2010.

Team: The project will be led by Professor Hannah McGee, FESC (Royal College of Surgeons in Ireland (RCSI)) and Board of the EACPR and Dr Karen Morgan (RCSI), an organisational psychologist and change management consultant who works in cardiovascular services evaluation.

INVITATION: It is important to have a wide range of countries participating. If your country is selected, we hope you will be able as a key stakeholder to provide relevant documentation and to participate in an interview. We will share the information obtained with participants both as a means of cross-checking interpretations during the study and as a resource to participants after the study.

For any questions, contact details for Dr Morgan are as follows:

Telephone: + 353 1 402-2365

E-mail: kmorgan@rcsi.ie

Appendix B: Country Summaries

Estonia

1. Interviewees

<i>National coordinator</i>	Prof. Margus Viigimaa
<i>Cardiac society</i>	Prof. Margus Viigimaa, Estonian Society of Cardiology
<i>Health ministry</i>	Dr Sirje Vaask, specialist in disease prevention, Estonian Health Insurance Fund

Consultation Gaps

- Heart foundation: Efforts to make contact with a representative of the Estonian Heart Foundation failed.

2. Health system

The Estonian health system is a largely public system, where over two-thirds of funding comes from national health insurance and a further 12% from general taxation. Health care is financed by mandatory social tax contributions (health insurance), other government tax revenues, and out-of-pocket payments. The population coverage by health insurance is quite high. All publicly funded health-care providers are contracted by the Estonian Health Insurance Fund (EHIF). The Ministry of Social Affairs supervises the health system, which comprises numerous actors including various agencies under the ministry, public independent bodies such as the EHIF, private primary care units and mainly publicly owned hospitals, as well as NGOs and professional bodies. The Estonian National Health Plan 2009-2020 brings together the main strategic goals of Estonian health system.¹

3. Cardiovascular risk factors in the population

Smoking: 46% of men and 25% of women aged 16–64 years are current smokers.²

The smoking rate is high in Estonia. It is decreasing among men, but rising among women and young people. Regulation of smoking is strict, and it has been banned in public places including hospitals, restaurants and cafés. Cigarette advertising is also banned. Attitudes towards smoking are changing, and its acceptability is declining.

Fruit/vegetable consumption: 39% of men and 57% of women aged 16–64 years reported consuming the recommended 400g or more of fruit and vegetables daily.³

Fruit and vegetable intake has increased steadily over the past 20 years, although consumption amongst teenagers is falling.

Energy from fat: 36% of energy in the diets of adults (19–64 years) came from fat in 1997 (more recent data is not available).⁴

The proportion of daily energy from fat is a problem. Like other the Nordic countries, foods high in fat, such as pork, comprise a large part of the Estonian diet. However, consumption of saturated fats is decreasing, while the use of olive oil has increased notably as people move towards a more Mediterranean diet.

Physical activity: 14% of both men and women aged 16–64 engage in at least 30 minutes of exercise in leisure time 4 times or more per week a week; 36% of men and 31% of women

Physical activity is low in the population, but there is a social gradient: physical activity has increased among educated people, while disadvantaged groups are more likely to be sedentary. While the number of sports parks and swimming pools is increasing, these are used only by a proportion of the population.

Overweight/obesity: 39% of men and 26% of women aged 16–64 years are overweight (BMI 25–29.9 kg/m²), while an additional 18% of both men and women are obese (BMI ≥30 kg/m²).²

Blood pressure & cholesterol: Current data is not available.

4. Status of the 4th JTF Guidelines

The Estonian cardiovascular prevention guidelines were published in 2006.⁵ They were based mainly on the European guidelines (of the 3rd JTF) but also incorporate material from other guidelines – British, American and Australian – that was considered important in the context of Estonia. In particular, the Estonian guidelines include a chapter on cardiovascular prevention in childhood.

The guidelines have been published as a supplement in the most widely distributed national medical journal, Estonian Physician (*Eesti Arst*). The Estonian Society of Cardiology believed that this was the most effective means of reaching the whole medical community, including general practitioners and medical specialists other than cardiologists. It also generated a certain amount of public interest and discussion in journals. Following publication, the guidelines were presented at the biennial meeting of the Epidemiology and Prevention Working Group of the Society of Cardiology, and at the Scientific Conference of the Estonian Heart Foundation. The guidelines are also available on the websites of the Society of Cardiology and the EHIF.

The pocket version of the 4th JTF guidelines has been translated into Estonian and sent to the most important target groups – general practitioners, cardiologists, and internal medicine specialists – and distributed at meetings of the national neurology and endocrinology societies.

Once the 2006 Estonian guidelines were published, the guideline development group decided not repeat the process again to further update the guidelines, as development had been a

time-consuming and demanding process. Instead, since the national guidelines adhered closely to the ESC guidelines and since the alliance was satisfied with those guidelines, it was decided to use the next ESC guidelines (of the 5th JTF) as national guidelines and to focus on developing a section on implementation to append to them.

Multidisciplinary alliance

A multidisciplinary group comprising key figures from relevant specialities including cardiologists, neurologists, GPs, internal medicine specialists, and paediatricians developed the Estonian guidelines. Each speciality took responsibility for a section. The inclusion of paediatricians to contribute a section on cardiovascular prevention in childhood was a distinctive feature of this guideline development group.

Endorsement and implementation

The EHIF finances the development of the main clinical guidelines and approves them as best practice for service providers. Once developed, the guidelines were discussed and agreed with the Fund, which seeks mainly to ensure that guidelines are evidence-based and can be supported financially by the Fund. Hence the guidelines are an agreed document about how cardiovascular prevention in Estonia should work. It was felt that agreement had been achieved smoothly and creatively, with beneficial cooperation on both sides.

Once the Fund has approved guidelines, service providers are obliged to follow the guidelines according to contract, so that implementation is driven at least in part by the Fund's endorsement and financial support.

A precise plan for implementation is included as a section at the end of the guidelines document. This section outlines the structure in which the guidelines are applied within this structure. It states the criteria for referral of patients from primary care to the cardiovascular prevention units; the information that should accompany a referral; the care that the patient will receive at the unit; and the long-term follow-up provided by the GP.

SCORE

GPs use the SCORE charts and if the risk calculation indicates that a patient is high risk (greater than 5% risk of mortality within 10 years), the patient might be referred to a cardiovascular prevention unit for diagnosis and treatment.

Adherence and audit

While there was no ongoing audit of guideline adherence, the Society of Cardiology together with the National Audit Office are at present performing an audit of how well GPs are following up with hypertension patients and screening for cardiovascular risk factors. The Society of Cardiology has referred high-risk patients to the cardiovascular prevention units. GPs were asked to send all the relevant data on patients over the period of one year. The audit was due to begin by the end of October 2010.

Adherence to the guidelines is to some extent compelled by the EHIF as prevention activities must be based on the guidelines, otherwise the Fund is not obliged to support these activities.

The Fund uses different mechanisms to monitor whether the guidelines are being followed. Its main tool is the clinical audit, which the Fund can order, and the resulting audit report can then be used to guide improvement in applying the guidelines in clinical practice. The Fund may also refer to its own database to examine discrepancies between health-care providers in diagnosis and treatment approaches. At the Fund's request, the service provider contract is examined to evaluate whether services are provided according to the service provider contract. It is accepted that in certain cases deviation from the guideline is necessary, but the Fund requires that the reason for the deviation is documented.

Payment of physicians for prevention

Since 2006, a performance bonus system has been implemented in general practices to incentivise physicians to achieve specified targets in key areas of health care. Points are awarded to GPs for performing specified activities, and those who achieve the required number of points receive a bonus for the year. The system covers the follow-up and monitoring of patients with chronic cardiovascular diseases, including patients with hypertension and diabetes and those who have had a myocardial infarction. The system also rewards physicians for engaging in activities directed at the prevention of cardiovascular disease. By 2008, 80% of GPs were participating in the bonus system.

Screening

Stimulated by the performance bonus system, active screening CVD risk in general practices is in operation in Estonia. Screening is partly opportunistic – any patient visiting a general practice will also have their blood pressure and cholesterol checked and their cardiovascular risk assessed. Practices also invite registered patients to attend for screening. The general public has responded well, but it is acknowledged that screening is not reaching everyone.

In addition, a system of the preventive check-ups up to age 19 is approved by the regulation of Minister of Social Affairs. GPs invite parents to bring their children to clinics for screening so that risk factors may be tackled starting from childhood.

Prevention support services

There is a network of about 20 smoking cessation offices across Estonia that are financed from the national cardiovascular disease prevention strategy. Thus funding comes from the State budget via the National Institute for Health Development, not from the EHIF. Members of the public can request a consultation to talk to a pulmonologist specialising in smoking cessation. The programme has been in operation for several years; however, the number of patients participating remains relatively low.

5. Successes

Improvements in CVD health

While Estonia has one of the highest rates of cardiovascular mortality in Europe, the situation was seen as improving. Health behaviour and nutrition studies indicate that the risk factors are improving, albeit at a gradual pace. Recognition by the government of the need to tackle cardiovascular disease has been key to progress. In addition, the adoption of an intersectoral

approach has focused and improved the organisation of government strategy, and so ministries such as those of agriculture, education and culture (including sports) are working with the Ministry of Social Affairs in developing and implementing cardiovascular prevention strategy. The Ministry established a heart health strategy to run from 2005 to 2020, which has specific targets for reducing cardiovascular risk and mortality and for screening of people at high risk.⁵

The population is increasingly better informed about cardiovascular disease and its prevention. However, there is socioeconomic variation and groups of lower socioeconomic status are less well informed and less oriented towards improving their health.

Estonia has copied strategies used in Finland to tackle cardiovascular disease as the two populations are genetically similar and share similar dietary habits. In Finland, mortality has decreased in the population under 65 years by almost 80% in the past two decades, while in Estonia it has fallen by more than 20%.

Prevention infrastructure

A network of cardiovascular prevention units was established 10 years ago, with one unit in each county. These units care for high-risk patients referred by general practitioners as well as dealing with aspects of secondary prevention.

6. Challenges

Premature mortality

It was noted that the incidence of myocardial infarction among men aged between 30 and 50 years is still high in Estonia, compared with other European countries. The death rate from coronary heart disease in men aged 64 years and younger was 104 per 100,000 in 2005, compared to 33 per 100,000 and 44 per 100,000 in Germany and the United Kingdom respectively in 2004.⁷

The Russian-speaking population

Around a quarter of the Estonian population is Russian-speaking and reaching this community with cardiovascular prevention campaigns is a particular problem. Although health information is published in Russian as well as Estonian, the Russian community is more oriented towards Moscow and St Petersburg, including availing of Russian media, which carries little health promotion. Involving this group in prevention endeavours remains a challenge.

7. Advice for 5th Joint Task Force

Overall, it was felt that the ESC guidelines are a strong set of guidelines.

It was acknowledged that while the guidelines are in danger of becoming too long, they would be enhanced if they included a section on cardiovascular prevention in children.

to all professionals involved in cardiovascular prevention, it was felt that the pocket guidelines should be free on the ESC website. And because the pocket guidelines are useful for GPs, it would be a good idea to find a means by which GPs could be informed by e-mail of the availability of the pocket guidelines online.

More emphasis should be placed on implementation in the guidelines; otherwise they remain theoretical and do not influence or change practice. Intersectoral cooperation in implementation should receive more attention as improving lifestyles occurs in the broader context of society, not just in the health sector.

More evaluation of implementation should be carried out to see whether adherence to guidelines really gives results. It was felt that the ESC should give more help to national societies to develop a methodology for auditing implementation.

The need to do more to motivate primary health care providers to engage in prevention was mentioned, as was the effectiveness of payment as a motivator.

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France

1. Interviewees

<i>National coordinator</i>	Prof. Daniel Thomas
<i>Cardiac society</i>	Prof. Olivier Dubourg, coordinator of the guidelines committee of the French Society of Cardiology
<i>Heart foundation</i>	Prof. Daniel Thomas, former president of the French Federation of Cardiology

Consultation Gaps

- Health ministry: We were unsuccessful in securing the agreement of a representative of the health ministry to participate.

2. Health system

France has a public health system based on compulsory social insurance complemented by elements of tax-based financing and voluntary health insurance. The system is regulated by the state and the statutory health insurance funds. The national health insurance system comprises three schemes: a general scheme covering employees and their families (89% of the population); an agricultural scheme that covers farmers and their families; and a scheme covering self-employed people. The *Haut Conseil de la Santé Publique* (HCSP), which is integrated into the Ministry of Health, has a major role in decision-making in public health policy and programme implementation. ¹

3. Cardiovascular risk factors in the population

Smoking: 36% of men and 28% of women aged 15–85 years are smokers (both daily and occasional). 30% of men and 24% of women are daily smokers.² A decree banning smoking in public places came into force in 2007–08 and is considered to be a success. In September 2010, the HCSP issued an opinion on advancing the fight against tobacco with recommendations on political decisions in this area.³

Fruit/vegetable consumption: 43% of the population consumes at least 400g of fruit or vegetables per day.⁴

Energy from fat: 37% of average daily energy (excluding alcohol) is derived from fat for both men and women.⁴

Physical activity: 64% of men and 63% of women practise at least 30 minutes of physical activity of moderate intensity at least 5 days per week.⁴

Overweight/obesity: 41% of men and 24% of women are overweight (BMI 25–29.2kg/m²); an additional 16% of men and 18% women are obese (BMI ≥ 30kg/m²).⁴

Blood pressure: 34% of men and 29% of women between the ages of 18 and 74 years have hypertension (defined as SBP ≥ 140 mmHg and/or DBP ≥ 90 mmHg).⁴

Cholesterol: 51% of men and 38% of women have dyslipidaemia (defined as total cholesterol ≥ 6.5 mmol/l and/or LDL cholesterol ≥ 4.0 mmol/l and/or HDL cholesterol < 1.0 mmol/l for men and < 1.3 mmol/l for women, or on lipid-lowering drugs).⁴

4. Priorities

The *Programme National Nutrition Santé* (PNNS) (National Nutrition Health Programme), was launched in 2001 with the aim of improving the general health of the population through better nutrition. The first phase ran until 2005 and a second phase (PNNS 2) ran from 2006 to 2010. The programme set 9 nutritional goals, 5 of which were related to diet (fruit and vegetables, calcium and vitamin D, fat intake, carbohydrate and fibre, and alcohol), 1 concerned daily physical activity, and 3 involved nutritional markers (serum cholesterol, BP, and BMI). The PNNS is considered to be an exceptionally well-designed and well-implemented strategy both in France and among international experts. The programme has been extended for a second time, and PNNS 3 will run from 2011 to 2015. Its objectives and strategy will be developed in close collaboration with the obesity strategy, which was launched in 2010.

5. Status of the 4th JTF Guidelines

The guidelines committee of the French Society of Cardiology (FSC) has endorsed the 4th JTF guidelines and translated them as part of its translation of the 2008 ESC Guidelines Compendium. The guidelines committee included members of the FSC, representatives of the *Ordre des Médecins* (French Medical Order), the *Association Française de Cardiologie* (French Association of Cardiology), and a representative of the *Haute Autorité de Santé* (HAS) (National Authority for Health). Publication was sponsored by MSD/Schering-Plough, and the compendium was sent to all cardiologists in France but not to other practitioners. The FSC is committed to endorsing ESC guidelines and avoiding duplication of guidelines already issued by the ESC.

SCORE

SCORE is not promoted by the FSC. Much opposition to its use was expressed by other professional societies when SCORE was initially launched in 2003, and the society decided not to pursue its implementation. An updated risk calculation tool for use in primary care based on a new Framingham model has been developed and a French version has been published.

Other guidelines

National guidelines on cardiovascular prevention have been developed by the HAS, which is an independent public body that reports to government. The national guidelines lead on treatment; physicians are obliged to adhere to the French recommendations because thresholds set in these guidelines are the basis for treatment reimbursements paid by the

health insurance funds. The French guidelines are issued as separate documents covering hypertension, obesity, smoking cessation, and so on. The national guidelines and the ESC guidelines are similar but as they are not issued concurrently, differences between them exist.

The national guidelines are available on the website of the HAS; sending them to doctors individually would not be cost-effective.

Adherence and audit

No evaluation of the use of or adherence to the 4th JTF guidelines has been undertaken.

Adherence to the national guidelines is assessed through the Evaluation of the Professional Practices (EPP), which is part of the continuing professional development that the HPST law of 2009 obliges health professionals to undertake. The objective of EPP is to measure the gap between observed practice and the guidelines, with the aim of improving the quality of care provided to patients. EPP is carried out by doctors individually or in groups by the scientific societies registered with the HAS. EPP contributes 100 of the 250 credits required by the HAS to validate a medical practice.

Screening

While there is no national programme to screen for cardiovascular risk, the general scheme of the national insurance fund (covering 89% of the population) launched a cardiovascular prevention campaign for its members in the summer of 2010. Initially, men aged 35, 40 and 45 years and women aged 45, 50 and 55 years who do not already have a long-term illness have been contacted by post with information on cardiovascular risk and how to reduce it. A second mailing will contact older men (50–65 years) and women (60–75 years) when they are reimbursed for having their cholesterol measured (this does not include members who are already receiving cholesterol treatment) with the same information. The programme will contact in the region of 2,300,000 people each year.

The French Federation of Cardiology worked with the insurance fund to put together the documents that were used in the mail-out to members. Documentation on treatment was also distributed to 30,000 GPs and 5,000 cardiologists. This documentation provided advice on how to deal with each risk factor and included the SCORE charts for use in assessing the cardiovascular risk of participants in the programme.

Doctors are not paid for participating in the programme; the view was expressed that such payment would not be well regarded in France.

Incentivisation

Doctors are not paid for prevention. They have asked for many years that consultations for prevention be paid at a higher rate, as these consultations are of longer duration than other consultations. The HAS is currently studying this request. It is hoped that it will be paid differently.

Support services

Provision of smoking cessation assistance was thought to be insufficient. For a person who has decided to quit smoking, an appointment with a practitioner specialised in tobacco cessation might not be available for some weeks or months. A helpline to assist in smoking cessation is operational, and national insurance will reimburse a patient for nicotine replacement therapy > µ' -i @µi š@; this is not considered to be sufficient for effective treatment.

6. Successes

Salt in bread has been substantially reduced over the past 10 years, despite much resistance from bread-makers. The decrease has not been widely publicised as the public might not respond positively to it.

The ban on smoking in public places has been implemented strictly. Its impact on hospital admissions for myocardial infarction was not as evident as in other countries and was statistically non-significant, probably because a less restrictive law in this area (Evin's Law of 1991) was already in operation, which may have largely protected the population of non-smokers.

7. Challenges

Industry interests

Lack of political will is a substantial barrier to efforts to reduce the prevalence of smoking. It was felt that the government actually supports smoking because of the revenue it gathers from taxing tobacco sales. If the government increases the price of tobacco, it does not raise it so high that smokers give up the habit. Key officials in government are not easily accessible to anti-smoking groups, while figures associated with the tobacco industry are in the parliament and act as advisors to government.

It has also been a struggle to improve public nutrition as the food industry has resisted any curbs on its freedom to operate – for example, reducing the amount of salt in bread, banning the sale of junk food in schools, or banning food advertising aimed at young children. Doubt was expressed over the value of food labelling and whether it has improved °µi -i±> "€ē understanding of what it consumes. For example, labels include an objective statement about the need to have a healthy diet and to be physically active, but people interpret it as an endorsement of the health value of the product.

Physician and patient beliefs

Neither doctors nor the general public regard prevention as a priority as France has the lowest Ÿi š°µ' €°j '€ @š@ŸŸ 2š-œ š@ŸŸj š- j 'Ÿ 'i ±@ -i ~ «œ@ ® š@ -œœŸŸ Œ³ Ÿµ's> j 'Ÿ €Ÿ ' the / @ª œ'-š@ŸŸ« ' ' that despite high intake of saturated fat and red wine, coronary heart disease mortality rates are low. However, the existence of a French paradox was disputed and it was asserted that France reflects the risk gradient of Europe, with high risk in the north and low risk in the south. In Strasbourg and Lille, for example, in the north of France, diets are

rich in saturated fats, and CVD risk is on a par with Germany and Belgium. The point was made that anyone with risk factors in France is at the same risk as people in other countries.

Doctors are also not inclined to tackle smoking in patients. While some GPs are taking greater interest in actively encouraging patients to quit, most assume patients are already aware of the dangers associated with smoking and do not use the tools available to assist patients in overcoming their addiction. Cardiologists were thought to be even less effective than GPs. It was felt that doctors avoid treating smoking as they are often unsure about how best to tackle it. They may also be concerned of the amount of time it will take and the costs involved. If the issue arises with a patient, most doctors send the patient to a specialist on smoking cessation.

The view was expressed that in general cardiologists across Europe have little interest in tobacco. This was evident in the very limited space given at the 2010 ESC congress in Stockholm to tobacco. The congress included just one symposium and one session on tobacco and twenty posters among almost 6,000 communications. The neglect of smoking by cardiologists was attributed in part to the fact that their practice in prevention is very dependent on pharmaceutical-based research, with intensive study and pharmacological solutions for lipids and hypertension, so cardiologists manage these risk factors rigorously.

Guidelines

It was thought that the guidelines are too long for GPs. They manage several conditions and many medications, and it would not be appropriate for them to refer to the many guideline manuals during consultations. Guidelines should be simple and easy-to-hand in the office.

It was also thought that GPs in general did not know the guideline recommendations very well, and that the knowledge of many cardiologists was also incomplete. Hospital doctors were seen to have better opportunities to become familiar with the latest guidelines because they may be involved in education of juniors. A simple form of presentation was seen as useful to assist GPs in getting familiar with guidelines.

Costs of dissemination

The FSC has been unable to disseminate a translation of the 2010 ESC Guidelines Compendium due to the production costs involved. The sponsor of the 2008 edition was a pharmaceutical company. The FSC felt that it was essential to make the 2010 compendium available, but the issue of funding translation and printing was a major hindrance and remains unresolved. It was felt strongly that the ESC should provide more support to cover these costs.

SCORE

The SCORE risk calculator was seen to be difficult to use in practice for several reasons:

- Informing patients of their risk of dying is insensitive and ineffective in assisting to reduce their risk. People do not react well to such information; they go to their doctor to be reassured, not to be made anxious.
- It is not valid for the individual patient; it is valid only as a population estimate.
- In general, it overestimates risk for the French population, while at the same time underestimating risk for certain groups – for example, women under 50 years with

several risk factors. Doctors are aware of these anomalies and would feel dishonest to give patients risk scores if they themselves did not believe the scores.

- It does not work for younger patients with multiple risk factors, and the suggestion of projecting the risk to age 60 is not a persuasive technique.
- It refers only to death and does not include cardiovascular events, so the risk is quite low. The Framingham scale is more useful as it covers both morbidity and mortality.

It was felt that SCORE was at best a useful tool in teaching students to help them visualise the risk in patients.

8. Advice for the 5th Joint Task Force

It was felt that the most important aim with new guidelines was to produce a very simple document for both GPs and specialists.

It was also felt the guidelines must give more weight to smoking cessation and smoking prevention. The first guideline recommendation should concern smoking, noting that it is the risk factor that kills at lower ages, and in order to save the lives of younger people, physicians have to be interested in fighting tobacco and practise smoking cessation. The guidelines must explain precisely how to manage a smoker and outline different methods for approaching smoking cessation.

It was suggested that the ESC should provide more support to national cardiac societies for the translation and printing of guidelines, as these costs mount year by year. In addition, the latest pocket guidelines should be available for free on the ESC website once a certain period of time had elapsed.

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Germany

1. Interviewees

<i>National coordinator</i>	Prof. Helmut Gohlke Prof. Ulrich Keil
<i>Cardiac society</i>	Prof. Helmut Gohlke, chairman of the Task Force on Prevention, German Cardiac Society
<i>Heart foundation</i>	Prof. Helmut Gohlke, board member of the German Heart Foundation

Consultation Gaps

■ Health ministry: The Federal Ministry of Health felt that it would not be appropriate for it to speak on behalf of the country as a whole as competence is heavily devolved. The Ministry referred us to the Germany Cardiac Society.

2. Health system

The German health system is based on social insurance. The great majority of people (close to 90%) are covered by statutory health insurance; the remainder are covered by government schemes (Beihilfe) and/or by private health insurance. Health care is decentralised and insurance funds collect premiums and pay health care providers. The Ministry of Health is responsible for defining the framework of the health insurance system, supervising insurers and the professional associations and providing information. ¹

3. Cardiovascular risk factors in the population

Smoking: 31% of men and 21% of women aged 15 and over are smokers. ²

Fruit/vegetable consumption: Current data is not available. It was noted that fruit and vegetable consumption is on the increase, but a clear social gradient is evident in consumption patterns.

Energy from fat: Current data is not available.

Physical activity: 22% of men and 20% of women aged 18 years and over engage in physical activity at least 5 times a week for at least 30 minutes. ³ Exercise is compulsory in schools; at least 2 hours a week must be allotted.

Overweight/obesity: 43% men and 29% of women aged 18 years and over are overweight (BMI 25-29.2kg/m²); 16% and 16% respectively are obese (BMI ≥ 30 kg/m²). ⁴

Obesity levels are high and rising in children and young people. Large differences are evident between the eastern and the western states, with higher levels in the states of the east, the former GDR. These differences were attributed to differences in diet.

Blood pressure & cholesterol: Current data on the prevalence of raised blood pressure and cholesterol in the population is not available. The German National Health Interview and Examination Survey was last conducted in 1998,⁴ and updated data will not be available until 2012. The 1998 survey indicated high prevalence of hypertension (50% of men and 42% of women), and it was noted that this figure is incompatible with the relatively low stroke mortality.

4. Status of the 4th JTF Guidelines

The German Guideline on Risk-adjusted Prevention of Heart and Circulatory Diseases,⁵ published in 2007 by the German Cardiac Society (DGK), is based on the 3rd JTF guidelines, the 2006 American Heart Association guideline on secondary prevention, and existing DGK guidelines on primary and secondary prevention. A pocket version was also published in booklet form. The German guideline is structured somewhat differently from the ESC guidelines but discrepancies in content are few. The main difference is that the German guideline includes explicit recommendations for policy-makers and medical practitioners on reducing the prevalence of each risk factor.

The guidelines were disseminated through the medical community by the relevant specialist groups, but particularly by the DGK and the German Society for Cardiovascular Prevention and Rehabilitation. Summary versions of the guidelines have been reproduced in national scientific journals.

Multidisciplinary alliance

A task force on prevention developed the German guideline. The task force was established by the DGK to better co-ordinate prevention activities of the different scientific societies in Germany and to improve collaboration between them. The group includes the Hypertension League, the Lipid League, the German Heart Foundation, the DGK and the German Diabetes Society. The work of the task force is ongoing and it meets several times a year to align the activities of the different member organisations.

SCORE

Two risk calculators for cardiovascular disease are used in Germany – SCORE Deutschland and PROCAM. SCORE Deutschland is based on the ESC SCORE risk calculator and calibrated to German mortality data and health statistics as Germany falls in the middle of the high-risk and low-risk European countries. It was one of the first regional adaptations of the ESC SCORE and has been distributed widely in Germany. It has been published in the journal of the German Medical Association, [Deutsches Ärzteblatt](#), which reaches more than 400,000 physicians in Germany.⁶

Doubt was expressed about the quality of the data on which the PROCAM risk chart is based. It was suggested that the dataset for women was much too small to make qualitatively acceptable estimates.

Adherence and audit

It was felt that the guidelines are adhered to in secondary prevention. However, no audit of guideline adherence on a national scale has been or is likely to be conducted. A representative audit would be a major endeavour and would require substantial funding. It was felt, however, that an audit should be conducted and, as it constitutes research into medical care, that it should be funded by the State. It was noted with some disapproval that research of this nature, such as EUROASPIRE, is typically funded by the pharmaceutical industry.

It was suggested that findings from a study of guideline knowledge and perception of guidelines among physicians in the Münster region⁷ reflects the situation throughout Germany that while physicians support the use of guidelines, many do not apply them in practice.

A paper on risk factor changes in the Münster region based on the EUROASPIRE surveys from 1995, 2000 and 2006 is being prepared for publication in 2011. This audit over 11 years has been undertaken in the context of a paper on the surveys published in the Lancet in 2009⁸. The envisaged paper concentrates on the Münster region alone and will be much more detailed.

Incentivisation

Reimbursement of doctors for engaging in prevention activities is limited. Physicians treating hypertension and hyperlipidaemia are reimbursed by insurance companies. They are also paid for secondary prevention. Smoking cessation treatment is only reimbursed, however, if the patient has COPD. In general, health insurance companies regard prevention as an individual responsibility and do not pay for it.

Screening

At blood pressure, cholesterol, smoking status and so on should be checked, no structured screening programme for CVD has been implemented. Screening is opportunistic and not quality assured. There is also a lack of clarity over whether the patient pays for medications if diagnosed with raised blood pressure or cholesterol.

5. Successes

Cardiac rehabilitation

Cardiac rehabilitation is strongly supported in Germany, and the entitlement to rehabilitation after a cardiovascular event has been legislated for. At one time residential rehabilitation was more or less mandatory for a patient after myocardial infarction; this requirement has been relaxed somewhat and ambulatory rehabilitation is gaining momentum. Some patients would rather avoid rehabilitation, however, because they are afraid of their job security if they are too long on sick leave.

Nutrition

Life expectancy in eastern Germany, the former GDR, rose by 3.2 years within 7 years of reunification. This increase has been attributed to improvements in diet, especially increased consumption of fruit and vegetables.⁸

6. Challenges

Political indifference

The federal government has not played a role in developing or supporting the implementation of the guidelines and has not shown an interest in them. Scepticism was expressed about the role of the federal government for prevention and the early detection of disease, it has not moved to realise this agenda in practice. It is felt that services in these areas could be much better structured than they are at present. The federal government has not played a role in developing or supporting the implementation of the guidelines and has not shown an interest in them. Scepticism was expressed about the role of the federal government for prevention and the early detection of disease, it has not moved to realise this agenda in practice. It is felt that services in these areas could be much better structured than they are at present.

Competence for health strategies lies mainly with the ministries of health of the governments of the 16 federal Länder (states). These ministries of health have set goals (more or less clearly) to reduce cardiovascular mortality, although doubt was expressed about the degree to which the respective administrators were endeavouring to achieve these goals.

Disillusion was expressed with the response of politicians to efforts by doctors and representative bodies to tackle risk factors such as smoking. It was felt that politicians do not really care about health and that they yield too readily to lobbying from business, for example in relation to smoking restrictions in bars and restaurant.

Smoking

While each of the federal states has implemented legislation restricting smoking in public places, the bans are not outright, except in Bavaria. There is evidence, however, that the public would support more stringent measures against smoking. In 2008, the government of Bavaria rolled back legislation that banned smoking in all public places, but (much to the surprise of politicians) the ban was reinstated following a referendum of the people in 2010. This was seen as an indication that the public is increasingly embracing the anti-smoking message. Similar referendums are planned in other states if politicians show themselves to be reluctant to change the law.

The view was expressed that government is primarily interested in the taxes from tobacco consumption as it does not bear the cost that falls to the insurance companies. It was also said that the tobacco lobby was strong and that there were connections between political parties and the tobacco companies. A smoking ban could have been implemented by the federal government as a law to protect workers, but the minister delegated the responsibility to the states.

Inconsistency of approach

It was noted that despite cooperation between the different scientific societies, there are differences of emphasis among them. For example, some societies will concentrate on the

single risk factor that is the focus of their society instead of the multifactorial risk evaluation approach advanced by the German Cardiac Society.

7. Advice for the 5th Joint Task Force

Satisfaction with the current German guidelines was expressed. The difficulty of keeping guidelines short and usable, while still comprehensive was acknowledged. Even pocket guidelines have a tendency to enlarge.

It was suggested that the ESC guidelines might follow the example of the German guidelines and include a recommendation written for the politicians and policy-makers that describes the measures that need to be taken to reduce the risk associated with each risk factor.

It was recommended that a stand-alone PC-based version of the regional SCORE Deutschland charts should be made available so that the software can be given to physicians to load onto their computers. This would mean that doctors would not be dependent on being able to go online.

It was felt that the accessibility of HeartScore on the ESC website needs to be improved; at present, it takes considerable effort and clicking through to reach it.

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Ireland

1. Interviewees

<i>National coordinator</i>	Dr Siobhan Jennings
<i>Cardiac society</i>	Dr Declan Sugrue, president, Irish Cardiac Society
<i>Heart foundation</i>	Ms Bridget Caffrey-Armstrong, project manager for guideline implementation, Irish Heart Foundation
<i>Health ministry</i>	Dr John Devlin, deputy chief medical officer, Department of Health and Children
<i>Health service agency</i>	Dr Siobhan Jennings, consultant in public health medicine, Health Service Executive

2. Health system

The Department of Health and Children (DoHC) is responsible for health policy, while the Health Service Executive (HSE) delivers health services. The health service is predominantly tax-funded, with approximately three-quarters of health spending coming from public sources. All residents are eligible for hospital services, > ± ° «^a μ ° «⁻ j⁻ 3 «[«] Y[·] S[·] © j⁻ Y[«] S[·] OS[·] Y[·] (one-third of the population) receive both hospital and primary care services free of charge. Qualification for a medical card is largely related to (lower) income and (higher) age. Private health insurance plays an important role in the Irish health system. Individuals contribute to health insurance to be guaranteed more immediate access to some hospital interventions, with about half of the population opting to invest in such care. Approximately one quarter of the population has neither a medical card nor health insurance.¹

3. Cardiovascular risk factors in the population

Smoking: 31% of men and 27% of women aged 18 years and over are current smokers.²

Fruit/vegetable consumption: The mean number of servings of fruit and vegetables consumed daily is 7, equating to 560g; the level recommended by the WHO is 400g.²

Energy from fat: 36% of total energy comes from fat; the recommended maximum is 35%.²

Physical activity: 55% of the population report being physically active, which was defined as taking part in exercise or sport 2-3 times per week for at least 20 minutes or engaging in more general activities, such as walking, 4-5 times per week for at least 30 minutes per day.²

Overweight/obesity: 39% of adults aged 18 years and over are classified as overweight (BMI 25-29.2kg/m² 3 «[¥] j⁻ S[·] Q[·] OS[·] Y[·] S[·] «[·] j⁻ j⁻ ! L⁻ S[·] E[·] ©²).²

Blood pressure: 60% of adults aged 45 years and older have raised blood pressure

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Cholesterol: 82% of the population aged 45 years and over have raised cholesterol (total

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4. Priorities

Smoking reduction is the main priority related to cardiovascular disease prevention for the DoHC, and it aims to release a new anti-tobacco strategy that focuses on pricing and interventions at the end of 2010. Alcohol misuse (along with substance abuse) is a second priority area.

National guidelines on physical activity have been published³, and there is recognition of the need for an intersectoral approach to such strategies. For example, the physical activity strategy must involve the Department of Transport and the development of transport policy that promotes walking and cycling.

It is acknowledged that more work must be done on obesity. The National Taskforce on Obesity issued recommendations in 2005 aimed at tackling the obesity epidemic,³ and it is hoped that a national nutrition strategy, which is due to be published, will help to make progress on reducing levels of obesity. Salt intake is also a concern. A target to reduce intake by 16% over 4 years has been set in the national cardiovascular health policy⁴. In support of this target, the HSE procures low-salt bread for use in its institutions.

5. Status of the 4th JTF Guidelines

At present, the use of cardiovascular prevention guidelines is quite fragmented in Ireland. While many doctors use the ESC guidelines and the SCORE charts (including HeartSCORE), ± j « ¢ ° ¢ j { « ¥ ° " ¢ ¥ ¢ " « ¢ ¥ ° " guidelines, particularly the hypertension guidelines, is not uncommon. The American Heart Association guidelines are also used to a lesser extent, mainly among doctors and consultants who have trained or worked in the United States.

Multidisciplinary alliance

The National Coordinator for CVD Prevention was appointed in 2005 by the Irish Cardiac Society. In 2008 the Irish Heart Foundation (IHF) established a Council of Prevention, with the aim of taking action to have the 4th JTF Guidelines endorsed by the key stakeholders in cardiovascular disease prevention. The executive of the Council comprises the chair, the National Coordinators for Ireland and Northern Ireland, the chair of the Cardiovascular Health Policy Group, the guidelines implementation coordinator, and representatives of the IHF, the Stroke Council, the HSE, and the Irish Council of General Practitioners (ICGP). The Council as a whole embraces stakeholder groups including schools, the different councils operating within the IHF (such as the Blood Pressure Council) and professional societies such as the Irish Endocrine Society and the Irish Nephrology Society.

Endorsement and implementation

The Irish Cardiac Society has endorsed the guidelines. As doctors have a statutory responsibility for continuous professional development, the Society regards it as the

professional duty of cardiologists to adhere to the guidelines issued by the ESC. The Society does not see itself as having a role in the wider implementation of the guidelines across the medical community as it is a small organisation with a limited remit and without the necessary funds for such an endeavour.

The Irish College of General Practitioners (ICGP) has also endorsed the guidelines and has promoted use of the guidelines by different means: the publication of articles in its journal, *Forum*; publication of the SCORE charts in its diary and yearbook; and at its 4th Annual Summer School 2010 where HeartSCORE was presented to attendees.

The national cardiovascular health policy, Changing Cardiovascular Health⁴, a 10-year plan which was launched in 2010, recommended that the guidelines be adopted. It also recommended that a care protocol for primary care based on the guidelines should be developed and that protocols on best practice in cardiovascular clinical care should be agreed. In addition, a national committee will be established to oversee formal implementation of these, as well as many other guidelines in practice.

While the 4th JTF guidelines have been adopted officially, the IHF Council on Prevention has decided to defer a project of actively promoting national uptake of the guidelines by practitioners until the 5th JTF Guidelines are available. A symposium was held in November 2010 to bring together relevant stakeholder organisations to examine how the implementation of the guidelines might proceed and to identify any problems groups might have with using the guidelines.

Distribution of the guidelines

While the Irish Cardiac Society has not formally disseminated the guidelines to its members, it is confident that cardiologists are very well aware of them. Members have received the guidelines through the European Heart Journal, and guidelines are also discussed at the ESC annual meeting and at other conferences that members attend.

The guidelines have not been disseminated by the IHF Council on Prevention to the rest of the medical community as it does not wish to pre-empt the process of endorsement. In addition, the Council feels that the guidelines are not presented in a way that is practical for application in consultations. The Council aims to adapt the ESC guidelines to a version that is more user-friendly, for instance, for use in general practice consultations – ideally, one page that includes an algorithm and the SCORE charts. It is considering using a format similar to that used by the Irish Cancer Control Programme to guide general practitioners on the diagnosis and referral of breast cancer. The CCP with the ICGP has produced a double-sided, laminated A4 page with an algorithm for diagnosis on one side and a referral page on the other side. A copy has been sent to every GP and the initiative has received positive feedback.

SCORE

At present there are no plans to develop an Irish version of SCORE. There is some concern with the implications of using the SCORE cut-off for high risk (5% risk of death from cardiovascular disease death in the subsequent 10 years). Doubt over the evidence base for the cut-off point was expressed, as well as concern that it would be used automatically by general

practitioners as a starting point for medication where other treatment approaches might be more appropriate. The IHF Council on Prevention in early discussions considered conducting a health economics appraisal to evaluate appropriate thresholds for initiation of pharmacological treatment.

Adherence and audit

While there was general agreement that it is important to audit adherence to guidelines and that it was feasible to do so, no system to do so has been established. There was no sense of how much clinicians might adhere to the guidelines. It was noted that guidelines are not rules and that practising clinicians will do what they think is best for an individual patient. The point was also made that there is a certain amount of audit fatigue among clinicians, and the importance of carrying out scientifically sound and valid audits was emphasised.

The IHF Council on Prevention plans to conduct a baseline survey of GPs to assess the extent to which they are documenting risk factors, using a risk factor assessment tool and following up with patients identified as high risk.

Once the guidelines are mandated as the national guidelines by the DoHC, another agency, the Health Information and Quality Authority (HIQA), becomes responsible for evaluating their implementation at different levels (primary care, hospitals and other institutions) in the public health system. Whether HIQA is responsible for auditing the private system is uncertain.

6. Successes

Benefits of guidelines

The benefit of having guidelines and their contribution to improved quality of care for patients across a broad range of conditions is recognised. Guidelines are seen to be necessary in order to make sense of data and to apply the knowledge gained from evidence in practice.

Progress in cardiovascular health

- Premature mortality from cardiovascular disease has reduced markedly over the past decade. The pace of change in the decline of coronary heart disease mortality was found to have increased steeply from 1998.⁶
- HeartWatch, a pilot programme for secondary prevention in primary care, was started in 2000. It introduced the concept of structured care for secondary prevention into general practices and although demonstrated to be successful, was not extended for financial reasons.
- Cardiac rehabilitation services, with trained coordinators, are available in every cardiac centre. However, the extensive service development seen between 1998 and 2005 (the period of the first cardiovascular strategy⁷) has slowed, with many services unable to provide programmes to all relevant cardiac groups (e.g. heart failure and peripheral arterial disease patients).

- Rapid progress has been made in stroke care, albeit from a very low base; the number of stroke units has increased from 1 in 2006 to 16 at present.
- HeartBeat, an initiative to improve acute myocardial infarction care and reduce mortality in Irish hospitals, has resulted in over 90% of patients in 9 pilot hospitals receiving seven of eight key components of care, including secondary preventive medication/stroke therapy on discharge.
- The introduction of the concept of Primary Care Trusts (PCTs) is helping to change the way medical professionals think about their practice and the populations they serve.

7. Challenges

Guideline fatigue, overload and inconsistency

There is guideline fatigue amongst practitioners; most deal with multiple conditions and they feel overwhelmed with the number of guidelines they must follow. The constant updating of guidelines is exasperating, although it is difficult to see how this might be avoided because the scientific evidence that underpins the guidelines inevitably changes. The lack of consensus between guidelines from the various learned societies is also frustrating.

The 4th JTF guidelines were not thought to be user-friendly for working within patient consultations because of their complexity, consultation within a physician-patient encounter was seen to disrupt the interpersonal communication.

Lack of ownership

To some extent physicians feel a lack of ownership of the guidelines. However, it is accepted that this is hard to avoid as Ireland is a small country relative to Europe. It was acknowledged that the ESC tries to involve members in its work and that most clinicians wish to concentrate on treating patients rather than on committee work.

Focus on prevention in Ireland

A prevention focus is lacking in Irish health care at present; it is still focussed very much towards reacting to ill health. The DOHC is conscious that prevention needs to be integral to primary care. A major step that is needed is to write a new general practitioner employment contract that would enable the development of prevention in primary care. The DoHC has initiated that process but envisages that budgetary constraints in the current economic climate are going to pose difficulties to the endeavour. The DoHC is considering adopting an approach similar to that taken in England, i.e., setting targets around specific risk factors.

Ireland is seen as performing moderately well in relation to prevention. It is felt that one of the challenges in cardiovascular disease prevention is that it is not firmly enough embedded at the front line among hospital cardiologists. In addition, it is felt that a divide exists between cardiologists and CVD prevention groups. To give prevention greater credibility, ownership of some aspects of prevention must be given to the clinicians. Consultant cardiologists whose formation and whose research track record is in part in prevention were seen as necessary.

However, the lack of clarity within the Irish health service over subspecialty needs and who decides on those needs is likely to prove a barrier to effecting such appointments.

Smoking cessation support

The provision of smoking cessation assistance is patchy. A study of services found that while services were available in all of the four HSE administrative areas, their reach was insufficient to provide an appropriate level of service to the target 5% of smokers per year. Some regions were particularly under-served and some counties had minimal or no access to service.⁸

Monitoring outcomes

Outcomes of care, such as 30-day AMI and ischaemic stroke case fatality rates, are not well monitored. Improved structures are required to audit hypertension, atrial fibrillation and hypercholesterolaemia.

8. Advice for the 5th Joint Task Force

The next version of the guidelines has to be simple, practical, and user-friendly so that they are easy to apply in practice. At the same time, it was acknowledged that a lot of cardiovascular care and management is not simple and that some guidelines users want to have all the evidence in one source and the guidelines provide that.

Concern was raised about potential for bias in guideline committees, as decisions on some guidelines can have significant financial consequences for third parties. The problem arises less in relation to prevention guidelines, but there still is potential, for example, for pharmacological companies to influence guidelines to their benefit.

It was suggested that guidelines should be developed in a format that is accessible and comprehensible to the general public – for example, a web-based, interactive tool that would give members of the public concrete feedback on their performance in reducing risk. It was proposed that a standard template might be developed by the ESC, which countries could modify to their specific needs. It was felt that patients and the public need to be encouraged to more aware of their risk and to take greater responsibility for reducing it.

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Italy

1. Interviewees

<i>National coordinator</i>	Dr Simona Giampaoli, director of research at the National Centre of Epidemiology, Surveillance and Health Promotion, Istituto Superiore di Sanità.
<i>Cardiac society</i>	Dr Giuseppe Di Pasquale, president of the Italian Federation of Cardiology
<i>Heart foundation</i>	Dr Lidia Rota, president of the Italian Association against Thrombosis and Cardiovascular Diseases (ALT) Dr Andrea Peracino, vice-president of the Italian Heart Association

Consultation Gaps

- Health ministry: No response to interview requests was received from the ministry.

2. Health system

The Italian health service (*Servizio Sanitario Nazionale (SSN)*). The national level is responsible for setting the general objectives and fundamental principles of the national health care system. The State has defined a basic package of health services that the SSN is required to provide uniformly in all regions. Regional governments, through the regional health departments, are responsible for ensuring the delivery of this benefits package through a network of population-based health management organisations (*azienda sanitaria locale (ASLs)*) and public and private accredited hospitals. The SSN provides universal coverage free of charge at the point of service. Health care is mainly financed by central and regional taxes.¹

3. Cardiovascular risk factors in the population

Smoking: 23% of men and 20% of women aged 35-79 years are current smokers. Legislation banning smoking in public places was adopted in 2005.²

Fruit/vegetable consumption: The median intake of fruit and vegetables among a sample of participants aged 20-70 years in the EPIC study was 500g per day.³

Energy from fat: No data available.

Physical activity: 34% of men and 45% of women aged 35-79 years do not engage in any physical activity in their leisure time.²

Overweight/obesity: 48% of men and 34% of women aged 35-79 years are classified as overweight (BMI 25-29.2kg/m²), while 25% of men and 27% of women are obese (BMI ≥30kg/m²).²

Blood pressure: 55% of men and 42% of women aged 35-39 years have hypertension (defined as SBP ≥ 140 mmHg or DBP ≥ 90 mmHg or being treated for hypertension).²

Cholesterol: 46% of men and 52% of women aged 35-79 years have hypercholesterolaemia (defined as total cholesterol ≥ 200 mg/dl or being treated for hypercholesterolaemia).²

The major cardiovascular risks in Italy are obesity and smoking. Control of hypertension and cholesterol levels has improved significantly in the past 10 to 20 years. While smoking restrictions have been successful among adults, they have not had an impact on smoking among children and young people.

4. Priorities

National prevention plan

A National Prevention Plan 2009–2012 is in place, in which one area of action is the prevention of cardiovascular disease (including diabetes and obesity). The plan emphasises the identification of the high-risk population and the use of technology in diagnosis. It gives greater attention to the secondary prevention and the recurrence of events than to primary prevention. One of the aims of the plan is to maintain the low-risk population at low risk during life and to increase the proportion of the population at low risk. A second is to identify and address people at high risk or with metabolic syndrome.

Since June 2010 regions have been producing their own regional strategies for the implementation of the national prevention plan based on guidance from the ministry of health. However, this process will take time as existing projects cannot be overhauled quickly. As regions are autonomous, each region can take its own approach and develop its own projects to implement the plan.

The Gaining Health (*Guadagnare Salute*) programme has as its main objective to prevent and change harmful behaviours that are the main risk factors for common non-communicable diseases. Four areas in which to concentrate endeavours have been identified: the promotion of healthy eating; tobacco control; combating the abuse of alcohol; and the promotion of physical activity.

5. Status of the 4th JTF Guidelines

In 2008 the Italian Federation of Cardiology translated the executive summary of the 4th JTF guidelines and published it in the *Italian Journal of Cardiology*. An editorial commentary by national cardiovascular experts including recommendations was published alongside the translation.⁴ The main adaptation of the guidelines to the Italian context was the adoption of a specific Italian risk estimation tool (the *SCORE* risk score) to estimate the risk of myocardial infarction, heart failure, prevention and so on, and not to produce additional Italian guidelines in cardiology. The federation has approximately 10,000 members who have received the translation of the guidelines through the journal. The guidelines are available on

the Italian Association for Cardiovascular Rehabilitation and Prevention (IACPR).

Different approaches have been taken in different regions to disseminating the guidelines. For instance, some regions, such as Emilia-Romagna and Lombardy, have a prevention committee that operates a number of initiatives for specialists and GPs, including the implementation of the Italian risk chart. In relation to that, a number of educational meetings have been held where the ESC guidelines have been presented. There is likely to be variation in approach across regions, however, as each is autonomous and some regions have not established a similar organisation to that of Emilia-Romagna.

Multidisciplinary alliance

While the Italian version of the guidelines was produced in close consultation with the various cardiovascular societies, no alliance for the implementation of the guidelines has been established. Implementation occurs through the endeavours of the professional societies and the ASLs and alongside the implementation of the Italian risk chart through *Progetto CUORE* (described below).

Other guidelines

The Italian national guidelines on stroke treatment and prevention have been developed by SPREAD (Stroke Prevention and Educational Awareness Diffusion), an interdisciplinary group of 36 professional societies and 2 patient groups in Italy. These guidelines incorporate the ESC guidelines. It was felt that this multidisciplinary group is an effective means of implementing guidelines in relation to stroke. Equivalent national guidelines for other cardiovascular diseases have not been developed in this way.

Risk assessment

Cardiovascular risk assessment was recommended in the National Prevention Plan 2005-2009 as the first step to implement preventive actions at individual level. A means of assessing risk in the Italian population was developed by the Istituto Superiore di Sanità (ISS) as part of the *Progetto CUORE*, a major project to monitor the epidemiology of cardiovascular disease and to undertake its prevention in Italy. The CUORE score is based on data from longitudinal studies carried out on population groups followed up over time. Two tools for the estimation of global absolute cardiovascular risk have been developed: cardiovascular risk charts and individual scores. The two instruments differ in how risk factors are used, the number of factors considered and the way in which risk is expressed. Doctors can download the software to calculate individual scores from the *Progetto CUORE* website. The CUORE score predicts 10-year risk of fatal and non-fatal coronary and cerebrovascular events; in terms of its prediction of fatal events, it is very similar to the risk assessment of SCORE for low-risk European countries.⁵

Within the framework of the National Prevention Plan, a national training programme on risk assessment for GPs was launched and the programme was offered to the regions. The training programme is organised in 5 packages: 2 residential packages, one on the use of the global absolute cardiovascular risk chart and the other on risk communication, promotion of healthy life styles and pharmacological treatment; 1 self-training package, on risk assessment of

patients and collection of data (risk factors and risk scores) by GPs; and 2 workshops for the discussion of the data collected. The training programme is CME credited.

Adherence and audit

Guideline adherence across the country is not monitored directly and doing so would be difficult because of the regionalised nature of the Italian health system. It is felt that in general

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Screening: *Progetto CUORE*

Cardiovascular prevention by the state is conducted in large part through the *Progetto CUORE*, which is an element of the National Prevention Plan of the *Centro Nazionale per la Prevenzione e il Controllo delle Malattie* (CCM) and coordinated by the ISS. Initiated in 1998, it comprises four elements:

- large-scale longitudinal studies of risk factors in the population with follow-up on fatal and non-fatal cardiovascular events
- training of GPs in cardiovascular risk assessment and use of the risk charts
- the establishment of a registry of coronary and cerebrovascular events
- participation in the European Health Examination Survey (EHES) of risk factors in the population.

One of the research lines of the project is the Cardiovascular Risk Observatory (CRO), which monitors the use of risk assessment in clinical practice. The data collected will be used to assess effectiveness of risk assessment application in clinical practice and may be used as a tool for decision support at both national and local level.

The project includes a screening component at primary care level involving the voluntary participation of GPs. GPs are encouraged to collect data on risk factors and 10-year cardiovascular risk in patients aged 35–79 years. This is seen as a first step in implementing primary prevention at the individual level in clinical practice. Screening has been implemented in different regions. The basis for selecting patients for screening varies—in some regions, a day is allocated to measuring risk, in others it is opportunistic when a patient attends for an unrelated reason, in some cases GPs will measure risk only if a patient has a prescription for statins.

The risk assessment software supports GPs in prevention activities, enabling them, for example, to identify patients at high risk of cardiovascular disease. GPs may also manipulate the data to identify patients at low risk of cardiovascular disease, for example, by setting a threshold for the number of risk factors. The ability to set up a data archive and monitor cardiovascular risk trends of patients over time assists GPs to self-audit their performance in cardiovascular disease management.

In some regions, such as Sicily, Basilicata and Molise, GPs participating in the programme are paid, not for measuring risk, but for sending in the data to the CRO. The project administrators try to avoid the suggestion that GPs are paid to measure risk because they feel this should be regarded by GPs as part of their work. In addition, the cost of statins is

reimbursed where there is no indication of family history when the 10-year risk assessment is $\geq 20\%$, based on the ISS charts.

The activities of the project are not distributed uniformly throughout the country. The registries have been established in just a few regions, while the longitudinal studies derive samples from all regions. GP training and participation is variable across regions.

Prevention services

Smoking cessation services are widely available in Italy. A guide to services published in 2007 listed 362 centres, over half of which were located in the north of the country.⁶ A survey of these services found that 22% were free to patients, the rest requiring some payment depending on the region and its health regulations.⁷ People can be referred through their doctor or they may access a service directly without referral. Doubt was expressed, however, over the extent to which smoking cessation support was offered in cardiac rehabilitation.

6. Successes

Risk factor control

Data gathered from the CRO suggests that risk can be reduced and maintained at a low level in the population and that counselling may be well received by patients. While results are limited as the CRO is in the early stages of collecting data, they suggest an improvement in the control of hypertension and hypercholesterolaemia.⁸

7. Challenges

Communication with the public

It was felt that more focus on communicating with the public on prevention and especially lifestyle is needed. The efforts of the many people working diligently on prevention at a high level largely fail to trickle down to the ordinary person. The problems of smoking and obesity have been discussed repeatedly in the media, but this has not motivated people to change their lifestyle behaviours. It was felt that the message that people need to take responsibility for their health is not well received by the public and that people prefer to delegate to a doctor and be given a pill.

The difficulty of reaching a population of 56 million and the costs involved was noted, as was the need to find a more effective means of conveying the prevention message so that the public responds – perhaps through television or the Web. For example, ALT developed a project about staying healthy in the workplace, which was implemented in two companies.

The response level was good. This represented a new approach to gaining public attention.

Physician attitudes

It was felt that implementation of guidelines will be impeded if individual practitioners are left to decide for themselves on the use of the risk charts and the guidelines, as health practitioners typically do not regard prevention as a priority. The point was made that Italian

medical training does little to orient future physicians towards prevention. Practitioners regard prevention as less challenging than treatment and hold the view that the role of a real doctor is to take care of sick people. It will be a long-term project to change physician perceptions, but it was thought that a start should be made.

In addition, at present several health projects are running – for example, on diabetes, influenza vaccination, osteoarthritis and osteoporosis – and it is testing for GPs to keep abreast of all. In this context, they will only engage in risk assessment when they are convinced of its usefulness. The *Progetto CUORE* administrators emphasise that prevention concerns not just CVD but all chronic disease.

Follow-up

A big problem that the risk assessment programme has encountered is achieving active participation of patients in follow-up. Once a patient has been identified as being at risk, a GP needs to check their risk factors at regular intervals. The programme aims to ensure that the patient returns.

Pace of progress

One of the challenges that the *Progetto CUORE* has encountered is the slow progress in training GPs. It started in 2005 and around 3500 out of 42,000 doctors have been trained to date. The slow progress is attributed to the elapse of relatively little time between the introduction of the programme and the agreement by GPs to participate in the surveillance system.

Funding

It was felt that despite the cardiovascular prevention being listed as a priority for health policy that it was not being funded by government at population level.

Real-world context

While guidelines were thought to be important, the degree to which they can be applied in a real-world context of a hospital ward or an emergency room was questioned. It was felt that guidelines are developed and discussed in an intellectual realm that is isolated from the world in which health practitioners practice. The contingencies of the real world make it difficult to apply the guidelines systematically, and guidelines can never achieve their goals as a result.

In addition, it was mentioned there are methodological problems with measuring clinical risk factors in patients. The example of cholesterol was given, the measurement of which uses an imperfect marker and, as a consequence, raised cholesterol is missed in a substantial number of young people.

It was noted too that patient adherence – with medication regimes, for example – has been found to be wanting, which undermines the intentions of guidelines. It was suggested that patients should sign an agreement when starting treatment to cooperate fully and comply with the requirements of the treatment.

Continuity of care

The transition of patients with cardiovascular disease from hospital to GP care was thought to be poorly supported. Problems exist around the transfer of information to the GP or family. There is no electronic patient record, and the clinical record is sometimes incomplete when the patient is discharged because the hospital is still waiting on examination results, reports from pathology, x-ray, and so on. The consultant typically prepares a very short summary of the patient's case. Multi-disciplinary conferences with consultant, GP and patient are rare, and many patients leave hospital without knowing the next steps in their treatment.

8. Advice for the 5th Joint Task Force

One view held that the current guidelines are satisfactory, and the main problem was to achieve adherence to the recommendations among both physicians and patients. Another view held that the guidelines are too long and too difficult to follow, for GPs in particular. A version developed for the specific needs of GPs was suggested, one that would provide the type of information that would convince them of the value of prevention – for example, that reducing weight by 10kg reduces mercury by 5-10mm, following the DASH diet reduces it by 8-15mm, and reducing alcohol consumption leads to a reduction of 2-4mm of mercury. This is the type of information that many GPs have not been given. It was also suggested that guidelines for the public, describing the basic points in everyday language, should be developed.

It was generally felt that the public needs to be better informed on their risk of cardiovascular disease and that all the risk factors need to be addressed. The young population in particular needs to be targeted in relation to overweight and smoking. Although obesity levels are relatively low in comparison with other European countries, they are increasing and especially amongst people under 20 years of age.

It was felt that the guidelines should include a section dedicated to population-based recommendations in order to maintain people at low risk during their lives. The guidelines focus on high-risk patients, but they should also address prevention ever before people enter that category, while they are still healthy. It was also felt that lifestyle change needed to be stressed more strongly and that without this, concentrating on treatment will not have the desired results. Many heart patients feel that their problem is solved once they leave hospital, but that is not the case – they need to change their lifestyle to avoid future events.

There was a proposal that the composition of the guideline development committee should be more open and that committee members who have been in their positions for quite a long time should be replaced by younger members. It is important to bring in younger people who are familiar with the practical, day-to-day aspects of working according to the guidelines. If guideline implementation has not been successful, responsibility for implementation should pass to a new generation.

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The Netherlands

1. Interviewees

<i>National coordinator</i>	Dr Roderik Kraaijenhagen
<i>Cardiac society</i>	Dr Roderik Kraaijenhagen, president of the committee of cardiovascular prevention and cardiac rehabilitation, Netherlands Society of Cardiology
<i>Heart foundation</i>	Dr Anne-Margreet Strijbis, project manager, Knowledge & Innovation Department, Netherlands Heart Foundation
<i>Health ministry</i>	Professor Marc Berg, lead advisor to the Ministry of Health on the reform of the funding structure for cardiovascular disease prevention and management
<i>Health service agency</i>	Dr Irene Hellemans, senior inspector for health care, Health Care Inspectorate

2. Health system

The health system in the Netherlands is funded by health insurance on three levels, each governed by different bodies. Standard medical care (primary care, hospitals and clinics) is financed from compulsory private insurance. Long-term, disease-related care is covered by compulsory social insurance funded by an income-related tax. Forms of care regarded as less necessary, such as dental care or hearing aids, are funded by voluntary supplementary health insurance. Public health is organised at the municipal or district level, with supervision and monitoring at the regional and national levels by the Health Care Inspectorate (IGZ). Reform over the last decade has transferred responsibility for purchasing care from government to insurers and increased competition between health care providers.¹

3. Cardiovascular risk factors in the population

Smoking: 31% of men and 23% of women aged 12 years and over are current smokers.² A target of 20% was set in 2013. While a ban on smoking in public places has been implemented, owners of restaurants and bars are finding loopholes to circumvent the ban. The ministry of health is now re-examining the ban and looking at the possibility of using ventilators. Arguments around personal freedom are being raised and even the new government is questioning the extent of the smoking ban.

Fruit/vegetable consumption: Mean daily fruit and vegetable consumption for men is 305g and for women is 327g.³

Energy from fat: 37% for men and 37% for women aged 20 years and older.⁴

Physical activity: 56% of men and 55% of women aged 12 years and older meet the standard for healthy exercise (under-18 years – a minimum of one hour moderately intense physical activity daily; 18 years and over – at least 30 minutes of moderately intense activity at least five days a week).²

Overweight/obesity: 41% of men and 30% of women aged 20 and older are classified as overweight (BMI 25-29.2kg/m²), while 11% of men and 12% of women are classified as obese (BMI ≥ 30 kg/m²).²

Blood pressure: 27% of men and 22% of women aged 20-70 years have high blood pressure (systolic blood pressure ≥ 160 mmHg or diastolic blood pressure ≥ 95 mmHg, or people 60 years and older without diabetes mellitus, familial hypercholesterolemia or heart disease).⁵

Cholesterol: 12% of men and 11% of women aged 20-70 years and over have high cholesterol (total cholesterol ≥ 6.5 mmol/L or LDL cholesterol ≥ 4.1 mmol/L, or on cholesterol-lowering medication).⁵ Cholesterol control in secondary prevention is well managed, as reflected in the EUROASPIRE results.

4. Status of the 4th JTF Guidelines

The principal set of guidelines for cardiovascular prevention in use in the Netherlands is a national guideline, the Dutch Multidisciplinary Guideline on Cardiovascular Risk Management 2006.⁶ It was developed to replace various Dutch guidelines that provided differing guidance on CVD prevention and was intended for use by all health care professionals who deal with atherosclerotic disease including cardiologists, GPs, internists, neurologists, vascular surgeons, vascular specialists, allied health professionals (such as dietitians, physiotherapists, specialist nurses in hospitals), and support staff in GP practices. The guideline is aimed at patients who are at increased risk or potential increased risk of CVD, but the screening of risk factors in the general population is outside its scope.

The Dutch guideline incorporates and observes the guidance of the ESC 3rd JTF Guidelines, but there are differences in some thresholds for pharmacological treatment to take account of specific characteristics of the Dutch context. While medical specialists also refer directly to the ESC guidelines to some extent, the Dutch guideline takes precedence when it comes to treatment, especially as a new payment structure for doctors engaging in cardiovascular prevention is linked to adherence to Dutch guideline. An update of the Dutch guidelines incorporating the 4th JTF guidelines is currently in development.

SCORE

The SCORE charts were recalibrated by the guideline development group using Dutch mortality data. A revision of the SCORE charts using the latest epidemiological data is planned to accompany the updated guidelines. Some dissatisfaction with the SCORE charts was expressed, in particular the influence of age, which has the consequence that younger people whose lifestyle behaviours are poor are not considered to be at risk and do not warrant attention, while people over 65 years who live healthily are nevertheless considered to be at risk, which leads to the medicalisation of old age. It is also a weakness that they focus on mortality; calculating risk of morbidity might be more meaningful to patients.

Multidisciplinary alliance

The Dutch guideline was developed by a multidisciplinary group assembled by the Dutch Institute for Healthcare Improvement (CBO) and comprised representatives of the different specialities that deal with cardiovascular disease, epidemiologists and the Netherlands Heart Foundation. For the 2010 update, the multidisciplinary group has been broadened to include cardiovascular nurses and patients, reflecting the increasing role of these two groups in cardiovascular disease care in the Netherlands.

In particular, patient organisations want to participate in the decision-making, to shift the guidelines away from scientific issues in treatment or diagnosis towards guidelines that are patient oriented. Hence the balance in the multidisciplinary alliance has changed; patients are making decisions alongside cardiovascular experts and not merely being consulted in the process.

Implementation

While responsibility for implementation rests ultimately with the different health professional groups, a number of initiatives in Dutch health care are driving implementation forward.

A key force behind implementation is national platform, Platform Vitale Vaten (Vital Vessels), comprising 28 interest groups including patients' representatives, health care professionals, health care insurers, policymakers and scientific organisations. The aim of this alliance is to apply pressure to improve care for people at high risk of or with established cardiovascular disease. To this end, the alliance has developed a health care standard for cardiovascular risk management, which is effectively an implementation model for the guidelines. It uses the World Health Organization chronic care model as a framework to describe how to apply the multidisciplinary guideline in delivering optimal care for patients. The care standard focuses on primary prevention, emphasises the need for partnership between patient and health care providers, and supports the patient in self-management to reduce lifestyle risk factors. In addition, protocols are being agreed on a regional basis to translate the multidisciplinary guideline and the care standard into actual practice.

It was noted that most power to implement the guidelines rests with the government, the health professionals operating in the field, and the insurance companies. In this context, a new payment structure for cardiovascular disease management that is aligned with the multidisciplinary guideline and the care model is likely to have a significant effect. Under this payment structure, introduced in January 2010, prevention programmes can be covered by health insurance companies. This was not the case previously when insurance paid for treatment only when disease had developed. Under the new system, patients at high risk covered by health insurance. The contract with the insurer will require practices to adhere to the multidisciplinary guideline and to publish quality and efficiency indicators. In realigning the payment structure, there was a determination to shift cardiovascular care into a primary care setting and to shift payment so that it no longer follows the provider but the patient.

Implementation of the cardiovascular prevention programmes and the payment structure that accompanies them is just beginning and uptake has been slow so far; similar programmes for

diabetes and COPD have been taken up much more quickly. It was acknowledged that it will take time, effort and imagination to implement such programmes. Professionals and patients have to get used to the idea and insurance companies have to start actively promoting them.

To facilitate new modes of financing healthcare, the government is stimulating a shift to multidisciplinary team practices that cover all the competences that are needed at primary care level to manage chronic disease. GPs are being encouraged to come together to set up practices that include specialised nurses, physiotherapists where necessary, and dieticians, which can treat high-risk patients in the one setting. The aim ultimately is to have the increasing numbers of patients with chronic illness and multi-morbidity catered for in primary care.

Adherence and audit

Evaluating adherence to the cardiovascular risk management guideline and the care standard occurs on different fronts. At present, it is not known exactly how many cardiologists, internal medicine specialists, general practitioners and so on, are using the guidelines but it is starting to be evaluated. A questionnaire has been developed and sent to professionals to gather the data.

The Health Care Inspectorate (IGZ) plays a major role in monitoring and improving adherence. At present, it is conducting an overview to evaluate how well prevention measures are implemented in all types of care. The IGZ first reviewed the literature to establish the factors that most contribute to health and identified smoking cessation first, exercise next and then weight management. On that basis, the IGZ has sent out a questionnaire to hospitals on how well smoking cessation programmes are implemented in myocardial infarction patients. In addition, the IGZ will visit some hospitals and rehabilitation clinics to investigate adherence to the guidelines and to address any lapses.

Another force behind adherence are the insurance companies. Under the prevention programmes, insurers require programme providers to monitor a set of process and outcome indicators and to provide this data to the insurers through a database. This data enables the insurer to evaluate if care is being provided as it should be. The ICT underpinning the system is well organised and doctors can track their own results and compare them with those of doctors.

Adherence to guidelines is likely to be improved by the development and use of decision support systems for cardiovascular risk management and prevention that are based on the guidelines. While these are not yet implemented widely, it is expected that once financial supports for their use are provided, they will become commonplace. It is envisaged that eventually standard care of patients will be provided by a nurse practitioner or physician assistant, who will be supported by decision support systems based on the guideline. The more complex patients will be treated by a doctor, where more deviations will occur because of the treatment challenges posed by the disease in those patients.

Screening

No national CVD screening programme is running at present in the Netherlands, but studies to evaluate the benefit of a programme are being conducted. If the findings indicate that it

would be effective for prevention as well as cost-effective, a programme may be established in the next year or two.

The programme that is being developed intends to take a stepped approach to screening. A patient will begin by completing a questionnaire to establish their risk profile. If the patient reaches a particular cut-off value calculated from the questionnaire, an integrated risk profile based on SCORE and the multidisciplinary guideline will be made. If the patient reaches cut-off value for indicated prevention, treatment will be provided by the insurance company.

The difficulty of reaching disadvantaged groups with screening programmes was acknowledged and that ways to do so would have to be found for the programme to be a success.

Prevention support services

At present everybody has the right to consult a dietician 5 times for advice on diet, but very few people avail of it. Plans are being made to provide intervention services such as smoking cessation and physical activity support to high-risk patients. Under these plans patients would be reimbursed for services they use. The goal in the long run is to individualise prevention lifestyle behaviour. Free provision of such services to people was seen as being essential to ensure uptake. Working out funding for such programmes is a problem and it is not certain that these plans will be realised in the short term.

5. Successes

Cardiac rehabilitation

Cardiac rehabilitation services are of a high standard. Greater numbers are being referred to beyond physical rehabilitation to include information programmes and support for psychosocial problems. While the Society of Cardiology is very active in rehabilitation, it was felt that not all cardiologists recognise the importance of rehabilitation and that the clinical intervention is their main concern.

Chronic care

A lot of work is being done on organising care in chronic disease in the Netherlands at present, and the reorganisation of diabetic care provides a template for the improved care of patients with cardiovascular disease. Much of the care of diabetes patients has moved from the hospitals to primary care and has been integrated well. Much effort is being applied to systematically monitor the quality of their care and the expertise that is hired for different patient needs. Once practices have established diabetic programmes, it ought to assist them in expanding to incorporate cardiovascular risk programmes.

6. Challenges

Role of cardiologists

It was noted that one consequence of focussing cardiovascular care in the primary care sector has been an attenuation of the role of the cardiologist, and it was suggested that fewer cardiologists would be needed in the Netherlands in the future. A similar project to move care of heart failure patients into a community setting was opposed strongly by cardiologists who were concerned over losing control of their patients; less opposition was expressed in relation to prevention as they acknowledge that prevention is mainly a primary care responsibility.

Quality of care

A potential problem with multidisciplinary programmes based in primary care clinics is that the clinics may not have the expertise to cater for patients with multi-morbidity; the expertise for such care is still based in hospitals. The view was also expressed that many cardiovascular patients already in primary care do not receive the care that they should get, raising the question of whether the further shift towards primary care will improve quality of care.

Payment structure

It was acknowledged that a downside of the new payment structure for prevention is that it has to be managed properly if it is to avoid incentivising practitioners to expand treatment beyond the actual needs of the patient, which would increase health care costs in the long run. But it was felt that it is necessary to pay doctors to systematically engage in prevention because of the demands it places on them to educate and counsel patients who do not feel sick and are little oriented to change their lifestyles.

Integrated care

Integration of services for secondary prevention between GPs and hospitals is poor and communication between the two is lacking. This situation has been exacerbated by the new payment system.

Health insurance providers

There are implicit disincentives for insurance companies investing in prevention in the current system. For example, if an insurance company pays for preventive treatments for a patient, competitor companies will benefit from those treatments if the patient moves insurer, as they are free to do. In addition, the role of insurance companies will always be limited as they are tied to their individual clients and more can be achieved in prevention at a collective level, which is the responsibility of government.

Policy and strategy

It was planned that a new heart health strategy would be launched in 2010, but it appeared to have been postponed as the government has changed in the meantime.

There is no target for the reduction of cardiovascular disease in the population; however, there are targets for changeable risk factors and policy to change the prevalence of these risk factors, with the aim of reducing the chronic disease burden.

Some scepticism was expressed about the targets for risk factors set in the national policy on health and prevention, *Opting for a Healthy Life*. While the policy document reflects good intentions, it was felt that the policy-makers have no concrete means of achieving them. So although goals have been written into policy, there is no further reference to them in official prevention discourse.

In addition to the strategies set by the ministry of health, there are very active Dutch platforms working on risk factor reduction in the areas of obesity, smoking and diabetes. These platforms have been most successful when they have focussed on secondary prevention, where the condition is present. Their activities on secondary prevention have been received well and advanced with considerable momentum. The area of primary prevention has been pursued much less by these platforms. Other organisations are also active in risk factor reduction, for example the National Institute of Sport and Physical Activity (NISB) is working to improve physical activity levels in the population.

The view was expressed, however, that the activities of these organisations do not have a structural impact on the health system that would gear it emphatically towards prevention and that responsibility for a shift of focus lies with the government and its determination to compel such a shift.

7. Advice for the 5th Joint Task Force

It was felt that 5th JTF should produce a basic European guideline that facilitates standardised regional adaptations, which would enable the comparison of adaptations made by different countries. At present, there is no standardised approach to adaptation, no tool or documentary protocol, so it is difficult to track the adaptations made by different countries. For example, it would be useful to be able to easily discover variations in treatment threshold values across countries.

The necessity of renewing the guidelines as often as is done at present was questioned, and it was suggested that they will become too thick to be readable. It was felt that they should be updated only when new evidence emerges and then should just focus on the changes. The guidelines should also be more explicit about outcomes and the goals of treatment, and identify explicitly which type of patient should always be treated.

It was suggested that a single ICT system for monitoring patients and supporting implementation should be distributed for free so that everyone was using the same system, a system that could be accessed both by professionals and patients. Several software programmes that do the same thing are being used at present, which wastes both time and money.

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Norway

1. Interviewees

<i>National coordinator</i>	Dr Tor Ole Klemsdal
<i>Heart foundation</i>	Mrs Carina Söderblom Alm, head of the cardiovascular section, Norwegian Health Association
<i>Health ministry</i>	Prof. Ole Frithjof Norheim, Leader of the guidelines group

Consultation Gaps

■ Cardiac society: The cardiac society declined to participate.

2. Health system

The Norwegian health care system is organised on three levels – national, regional and local. The Ministry of Health and Care Services at national level has overall responsibility for the system, determining health policy and allocating funds. Five regional health authorities have responsibility for specialist health care, while at the local level, 431 municipalities have responsibility for primary health care.

Health care is publicly provided and funded mainly through taxes. The municipalities have the right to levy proportional income taxes on their populations, while the regional health authorities receive transfers from the central government.¹

3. Cardiovascular risk factors in the population

Smoking: 20% of women and 21% of men aged 16 to 74 years are daily smokers, while a further 9% of each sex smoke occasionally.²

Fruit/vegetable consumption: The average daily intake of fruit, vegetables and potatoes is 130 g.³

Energy from fat: Saturated fat represents 14% of daily energy intake.

Physical activity: 22 % of women and 18 % of men aged 20–85 years meet the standard of more than 30 minutes exercise each day.⁴

Overweight/obesity: 26 % of women and 43% of men are overweight (BMI 25–29.9 kg/m²), while an additional 8% of women and 11% of men are obese (BMI ≥30 kg/m²).²

Blood pressure: The latest data on raised blood pressure was available only for some regions and for 40–45 year olds only; among men, it ranged from a low of 20% in Finnmark to a high of 26% in Hedmark; among women, it ranged from a low of 9% in Finnmark to a high of 13% in Troms.⁵

Cholesterol: 76% of men and 64% of women aged 40–45 years have cholesterol equal to or above the recommended level of 5 mmol/l.⁶

4. Priorities

Smoking has re-emerged a high priority. Norway had been particularly successful in reducing smoking up to the turn of the century, and as a result, concern over its prevalence had waned. The country has been less successful in the past decade in tackling smoking, so policy-makers are turning their attention to the issue once more. Stricter regulations, on the sale of tobacco for instance, are being considered.

Diet and exercise are also priorities. A four-year action plan to increase physical activity in the population was launched in 2005. It aims to promote physical activity across different social sectors – schools, work, transport, local environment and leisure. A similar intersectoral approach has also been adopted for the action plan on improving nutrition, launched in 2008.

5. Status of the 4th JTF Guidelines

Neither the 3rd nor the 4th JTF guidelines have been endorsed, published or implemented in Norway as key elements were found to be unsuitable for application. When the 3rd JTF guidelines were issued, the national coordinators could not recommend that the Norwegian Society of Cardiology endorse them, for two main reasons: risk was overestimated by a factor of almost two and the thresholds for pharmacological therapy were inappropriate in the Norwegian context. A paper by Getz,⁷ published in the BMJ, demonstrated that if the guidelines were to be followed, over half the population of Norway would be considered to be at increased risk and recommended for pharmacological treatment.

When the 4th JTF guidelines were issued, the Society of Cardiology was prepared to endorse the guidelines if the risk charts could be recalibrated by the ESC with new Norwegian mortality data, as had been done for other countries. The society also sought to discuss with ESC the issue of relative risk and how the guidelines might be modified to take account of the influence of age on the recommendations. However, delays occurred in this process of engagement with the ESC, and meanwhile work initiated by the government to develop national guidelines had gathered momentum. This produced guidelines with new risk recommendations that took age into consideration, setting different thresholds for pharmacological treatment of 1% absolute mortality for ages between 40 and 50 years, 5% between 50 and 60 years, and 10% for those above 60. This remains the key difference between the Norwegian guidelines and the ESC guidelines.

National guidelines

The Norwegian Guidelines for the Prevention of Cardiovascular Disease⁸, were published in May 2009. The development of these guidelines was a government initiative, the aim of which was to create national guidelines agreed with the support of all relevant professional associations, patient organisations and

health management. Prior to the development of the national guidelines, separate and inconsistent guidelines were issued by the association of general practitioners and the Society of Cardiology, with GPs favouring higher thresholds than the organ specialists.

The development process was overseen by the Health Directorate, which assembled a working group comprising specialists in cardiology, general practice, epidemiology and health economics, and representatives of patient organisations. Towards the end of the process, a draft of the guidelines was sent to other organisations and professional groups for comment.

The Health Directorate and other organisations arranged several implementation conferences throughout the country to present and disseminate the guidelines. GPs were seen as the biggest and most important target group, and a series of courses specially directed at them with the involvement of members of the guideline working group were run. A short version of the guidelines has been published in the journal of the Norwegian Medical Association and sent by post to every practitioner in Norway, ensuring that all physicians received a copy. The full and short versions of the guidelines are also available on the Health Directorate website.

The target group for the guidelines is all physicians and other health care professionals who provide primary prevention of cardiovascular disease, whether the treatment is started in primary care or by specialists in other health care services.

Small revisions of the online version of the guidelines has taken place and a formal revision was recommended to take place within 3 years of their publication.

The guidelines were broadly welcomed in the medical community and are well regarded. The opinion was expressed that they are accessible, useful and have raised awareness of cardiovascular prevention in the whole community.

Adherence and audit

Little is known of adherence to the national guidelines. The guidelines development group did discuss the need to monitor adherence, but there has been no formal assessment of this.

Screening

Screening programmes for cardiovascular disease operated throughout the country at a county level for several years. The same organisational structure that was set up for screening for tuberculosis was used in the 1950s and 60s to measure blood pressure and cholesterol, and Norwegians aged 40 years attended when invited. However, participation rates fell and the costs of the programmes were questioned. In the last 10 or 15 years, only some counties have continued with these programmes. Screening is conducted usually by teams based in the local university.

Incentivisation

Some initiatives to pay general practitioners to engage in prevention have been undertaken. A programme called Green Prescription was launched in 2003, under which general practitioners were reimbursed for giving patients advice on lifestyle changes to improve their diet and exercise levels, for example. The programme required that GPs should not prescribe any drug during these consultations. The scheme was not successful. Patients were unenthusiastic as

there was no financial incentive for them to participate, and many doctors thought it unfair to exclude those who needed both medication and lifestyle advice.

Another programme pays GPs a small fee twice a year to advise patients on smoking cessation, but again this was not felt to be a successful initiative.

6. Challenges

Risk estimation

Issues surrounding risk estimation in the European guidelines have been the main barrier to the acceptance of the guidelines in Norway, in particular the estimation of risk in younger people. The 2003 guidelines proposed that to evaluate risk in a younger person, the physician should extrapolate to their age to 20 years later. However, it was found that that approach would result in 80 to 90% of Norwegian men over 60 qualifying for pharmacological treatment. While the 4th JTF guidelines provided a relative risk chart instead of extrapolating, it was felt that the guidelines were vague over whether this chart or the absolute risk chart should be used.

The problem with total risk estimation is that age and sex have such a strong influence that a wide pharmacological approach will almost inevitably be recommended for men over 60 years, while almost no women under 50 years will have drugs recommended, regardless of risk factor profile.

7. Advice for the 5th Joint Task Force

The guidelines were commended for the recommendations they contain on lifestyle, but it was felt important to set an acceptable threshold for pharmacological treatment, one that is not too high or too low. The 4th JTF guidelines provided a relative risk chart instead of extrapolating, it was felt that the guidelines were vague over whether this chart or the absolute risk chart should be used. The Norwegian guidelines development group had struggled with the questions for four years.

In addition, it was felt that the guidelines needed to make a better estimation of risk, taking account of age and sex, so that younger people with several risk factors are recommended for treatment.

It was also suggested that more attention should be given to implementation. Successful implementation takes time and requires preparation and good resources to be put in place.

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Poland

1. Interviewees

<i>National coordinator</i>	Prof. Piotr Jankowski
<i>Cardiac society</i>	Prof. Piotr Jankowski, chairman of the Working Group on Intervention and Prevention of the Polish Cardiac Society
<i>Health ministry</i>	Ms Anna Kaminska, director, Department of Health Policy, Ministry of Health

Consultation Gaps

■ Health service agency: No representative was identified.

2. Health system

The Polish health system is funded mainly through a compulsory health insurance scheme, the National Health Fund. Citizens who are not insured by their employers or who are self-employed can purchase voluntary health insurance. The Ministry of Health is responsible for national health policy, major capital investments, standardisation of services, the improvement of quality control and medical education. Territorial self-government administrations are responsible for the budgeting, planning, organisation and supervision of health care at a regional level. The health system is oriented towards primary care services, and general practitioners (GPs) serve as gatekeepers. Hospitals are publicly owned but self-governing and self-financing administrative units.¹

3. Cardiovascular risk factors in the population

Smoking: 37% of men and 23% of women aged >15 years were smokers in 2006.²

Fruit/vegetable consumption: Poland meets the recommendation of consuming at least 400 g of fruits and vegetables per day.³

Energy from fat: Fats were the source of 37% of daily dietary energy in the case of men and 35% in women aged 20-74 years according to the WOBASZ survey (2003-2005).⁴

Physical activity: 40% of men and 28% of women aged 20-74 years were overweight (in 2003-2005); 21% of men and 20% of women in the same age group were obese.⁶

Overweight/obesity: 39% of men and 24% of women aged 20-64 years were overweight in 2002; 18% of men and 11% of women in the same age group were obese.²

Blood pressure: The WOBASZ survey found arterial hypertension in 42% of men and 33% of women aged 20-74 years, while the WOBASZ Senior survey of participants over 74 years of age found that 74% of men and 86% of women had hypertension.⁷

Cholesterol: 67% of men and 64% of women aged 20-74 years had hypercholesterolemia (total cholesterol ≥ 6.5 mmol/L) [10].

4. Priorities

The smoking rate in Poland is high. While the number of male smokers has declined since the 1990s, the numbers of young women smokers has not been reduced. A new law restricting smoking in public places came into force in November 2010. The law, however, fell short of the goals of anti-tobacco activists. It outlaws smoking in hospitals, on beaches and on public transport, but larger bars, cafés and restaurants, if they meet certain criteria, can designate a room for smokers. There are no specific targets for smoking reduction, the aim is to reduce it as much as possible.

Hypertension is very prevalent in Poland and the Polish Hypertension Society has lobbied strongly for tackling it to be top of prevention agenda. The most frequent main risk factor in Poland is hypercholesterolemia.

5. Status of the 4th JTF Guidelines

The executive summary of the 4th Joint Task Force guidelines has been translated and published, without changes, as an appendix in the journal of the Polish Cardiac Society, *Kardiologia Polska*, which all members of the society receive. It was also published on the website of the Polish Cardiac Society.

In addition, an alliance of medical societies, the Polish Forum for Prevention, develops recommendations on different aspects of cardiovascular prevention based on the 4th JTF guidelines, which take account of the Polish context and of other relevant evidence. An example of this is the Polish Guidelines for the Management of Atherosclerotic Cardiovascular Disease [11]. A number of papers based on the guidelines have been published in journals of other specialisms, such as general practice, hypertension and internal medicine.

Some societies develop their own guidelines. For instance, Polish Society of Hypertension together with the College of Family Physicians in Poland developed guidelines on hypertension management based on ESH/ESC guidelines.

Multidisciplinary alliance

The Polish Forum for Prevention (PFP) was established in 2005 by the Polish Cardiac Society and other societies, which had been spurred by the publication of the 3rd JTF guidelines to create an alliance of experts from various national societies in the field of cardiovascular disease. The alliance includes the Polish Cardiac Society, the Polish Paediatric Society, the Polish Society of Neurology, the College of Family Physicians in Poland, the Polish Diabetes Society, the Polish Society of Hypertension, the Polish Society on Atherosclerosis Research and the Polish Society of Internal Medicine. This alliance aims to influence cardiovascular prevention at different levels of Polish society to have an impact at government level through

health policy but also to develop knowledge of prevention among physicians, nurses and other health care professionals. The PFP also targets information at the general public. The PFP has developed websites, books and booklets to disseminate information to students, physicians and the general public.

Adherence and audit

Cardiologists are familiar with the guidelines, but it is harder to gauge the extent to which GPs fully engage with them. It was felt that GPs are likely to focus most on the main goals for cholesterol and blood pressure levels, but they may not engage with other aspects of the guidelines.

No national audit of adherence to the guidelines or of prevention practices among physicians has been conducted or is planned. Information on adherence is available from EUROASPIRE surveys and studies led by Prof. Andrzej Jankowski, Assoc. Prof. P. Jankowski, and Assoc. Prof. A. Windak.

Screening

The WOBASZ survey, the most important nation-wide survey was conducted in 2003-2005. At present, attempts are under way to repeat the WOBASZ survey.

Incentivisation

GPs can be paid a small amount by the National Health Fund to treat patients for smoking cessation. To participate GPs must have completed an approved course on smoking cessation, which is paid for by the government. They can then sign a contract with the national health fund to provide smoking cessation services to patients. Many GPs have signed up to this programme, but there has been no audit of its effectiveness.

6. Successes

Fruit and vegetable consumption

A media campaign addressing lifestyle that was run under the POLKARD programme focussed strongly on making proper food choices.

Outcomes

Cardiovascular disease mortality is decreasing but at a slower rate than in the 1990s. Treatment of myocardial infarction is among the best in Europe. The mortality after myocardial infarction is quite low in Poland. This is not the case with stroke, however, and this difference was attributed to neurologists having a different approach to treatment.

Cardiovascular strategy

The POLKARD is a national cardiovascular disease prevention and treatment programme that has run from 2003 with the aim of reducing cardiovascular morbidity and mortality by one third. The programme is an action plan for the prevention, diagnosis and treatment of cardiovascular diseases, availability of equipment, healthcare standards and monitoring the changes that occur in Poland.

7. Challenges

Prevention

It is felt that policy-makers in the ministry of health are more interested in treatment than prevention. While Poland is performing better in the area of prevention than previously, it is still below par compared with other European countries. Progress is gradual; for instance, salt intake appears to have fallen from around 15g to 12g over the past few years. A lot of work remains to be done to control the cardiovascular risk at the population level, however.

Another challenge is that the role of the GP in cardiovascular disease management is not yet fully developed. People with cardiovascular disease prefer to be treated by a cardiologist.

8. Advice for the 5th Joint Task Force

It was felt that having different European guidelines with different recommendations may cause confusion. Every effort should be made to have the same guidelines and the same main goals across European societies.

It was not felt that the ESC has a role in communicating with the patient or members of the public. This is a role for local societies – the Polish Cardiology Society and other local bodies.

Special chapters on management of risk factors in subjects with CVD would increase value of ESC guidelines and increase their usefulness.

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Romania

1. Interviewees

<i>National coordinator</i>	Prof. Dan Gaita
<i>Cardiac society</i>	Prof. Dan Gaita, president of the Working Group on Preventive Cardiology, Romanian Society of Cardiology
<i>Heart foundation</i>	Prof. Dan Gaita, president, Romanian Heart Foundation
<i>Health ministry</i>	Prof. Cristian Vladescu, former president of Romanian Health Insurance Fund and current head of the National Public Health School and Medical Management

2. Health system

The Romanian health system is based on a decentralised social health insurance model. Health insurance is mandatory and linked to employment, with both employers and employees paying insurance contributions. District health insurance funds are in charge of collecting insurance premiums and paying service providers within their districts. Their activities are regulated by the National Health Insurance House. The Ministry of Health is responsible for developing and implementing health policy and programs, dealing with public health, and coordinating the national health system. ¹

3. Cardiovascular risk factors in the population

Smoking: 22% of people aged 18–85 years are current smokers.²

Fruit/vegetable consumption: No data was available.

Energy from fat: No data was available.

Physical activity: 43% of the population engage in physical activity outside of sport regularly or with some regularity, while 27% never do so.³

Overweight/obesity: 26% of the population aged 18–85 years has been classified as obese (BMI ≥ 30 kg/m²).²

Blood pressure: 50% of men and 41% of women aged 18 years and over have hypertension (systolic blood pressure ≥ 140 mmHg).³

Cholesterol: 31% of the population aged 18–85 years has raised cholesterol (defined as those on lipid-lowering medication or with total cholesterol > 200 mg/dl).²

4. Status of the 4th JTF Guidelines

The Working Group on Preventive Cardiology of the Romanian Society of Cardiology is responsible for the ESC prevention guidelines in Romania. The group translated the executive summary of the guidelines and published it in the national cardiology journal *Revista Română de Cardiologie*. The guidelines were sent out to doctors by the Ministry of Health.

(The working group) has a good relationship with the national society of GPs. It aims to engage GPs with prevention, and to this end invites them to congresses and organises courses on reducing cardiovascular risk in patients. Its members endeavour to implement the guidelines their clinics, but are far as yet from achieving the targets.

The working group has a good relationship with the national society of GPs. It aims to engage GPs with prevention, and to this end invites them to congresses and organises courses on reducing cardiovascular risk in patients.

SCORE

The SCORE risk calculator for high-risk countries has been translated into Romanian. The working group regards the SCORE charts as a key instrument for prevention and has attempted to distribute the charts to all GPs.

Adherence and audit

The group has no means to measure the effectiveness of its activities, so the extent to which doctors adhere to the guidelines is unknown at present.

Screening

A national cardiovascular screening programme was planned in 2009, whereby GPs would be offered a small income to select patients without existing diabetes and cardiovascular disease and to measure their risk using SCORE. The aim was to screen more than 100,000 people; for many of those screened, it would have been the first time they had received information from a doctor about prevention and lifestyle changes. Although the programme was originally planned, it was cancelled.

Incentivisation

Doctors are not reimbursed for engaging in cardiovascular prevention activities.

Successes

Prevention initiatives

Despite limited support for prevention from the State, individuals and organisations are active in the field of prevention. An alliance for CVD prevention was formed in 2009 between Romanian medical societies – cardiology, diabetes, nephrology, and general practice – and the ministries for health and education. The alliance was motivated by the European Heart Health Charter and acts as a forum for the different societies within Romania to share data and information about their activities. It also aims to exert influence politically and to put pressure on the senate commission of health to take action at a national level against the main

cardiovascular risk factors of smoking, poor nutrition and physical inactivity. The alliance has begun to feel its way in the political arena and still working out how it might have an impact government level. The launch of the alliance generated considerable media coverage in Romania.

The Society of Cardiology established the Romanian Heart Foundation in 2010 with aim of extending the message on prevention to the general public. It has become a member of the European Heart Network and is preparing campaigns to improve the cardiovascular health of the population.

5. Challenges

Lack of prevention infrastructure

Cardiovascular prevention is poorly supported in the Romanian health system. In a country with a population of around 21 million there are only 3 centres for prevention and none in the capital Bucharest. The State does not lead on cardiovascular prevention. It is largely a scientific endeavour, reliant on the motivation and interest of a small group of enthusiastic medical professionals. While the State acknowledges the activities of the working group and is aware of the importance of prevention, neither it nor the district insurance funds have provided the financing to develop prevention services.

There are just 1,000 cardiologists for 20 million people in Romania. These cardiologists are engaged mostly in treating acute cases, and prevention is of lesser priority – hence the efforts of the Society of Cardiology to put prevention in the hands of GPs.

Lack of data

Data on cardiovascular disease and risk factors in the population are scarce, so physicians lack awareness of its prevalence and impact. It is difficult to get a picture of the cardiovascular health of the country and impossible to set targets for reductions in risk factors.

6. Advice for the 5th Joint Task Force

The main suggestion on updating the guidelines was to aim for greater simplicity in the message to both GPs and the general public about risk factors. If possible, an acronym even simpler than the numbers 0 3 5 140 5 3 0 that is easy to memorise should be sought. It was acknowledged that it is difficult to set cut-off values and to agree clear-cut guidance. But if the basic rules about prevention were communicated, people who wanted to know more could refer to other sources such as their GP, cardiologist or even the Internet.

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Russian Federation

1. Interviewees

National coordinator	Prof. David Nieberidze
Heart foundation	Prof. Nana Pogosova, vice-president, the Russian Society for Cardiovascular Prevention and Rehabilitation
Other	Dr Nadir Akhmedzhanov, cardiologist, National Research Center for Preventive Medicine

Consultation Gaps

- Cardiac society and health ministry interviews were arranged but the individuals were unavoidably not available on the day of the planned face-to-face meetings.

2. Health system

The health care system mirrors the administrative structure of the Russian Federation, with federal, regional and municipal levels of responsibility. There are several parallel systems of service provision run by the Ministry of Health and Social Development, other ministries and public enterprises. The population-based public health services are organized through the sanitary epidemiological service system, which operates at regional and municipal levels but reports to the federal level. Private and semi-private services are common.¹

3. Cardiovascular risk factors in the population

Smoking: 60% of men and 9% of women aged 18 years and over are current smokers.²

Fruit/vegetable consumption: 49% of men and 60% of women aged 45-69 years meet the WHO recommendation for fruit and vegetable consumption of 400g daily (HAPIEE study data, 2002-2005).³

Energy from fat: Men (aged 45-69 years) derive 42% of their daily energy from fat, while women in the same age group derive 43% daily energy from fat (HAPIEE study data, 2002-2005).³

Physical activity: 19% of men and 12% of women reported engaging in moderate physical activity (Republic of Karelia Risk Factor survey).⁴

Overweight/obesity: 30% of men and 25% of women are overweight or obese (HAPIEE study data, 2002-2005).³

Blood pressure: 30% of men and 25% of women have raised blood pressure (HAPIEE study data, 2002-2005).³

Cholesterol: 57% of men and 55% of women have raised cholesterol (total cholesterol > 5 mmol/L).³

Excessive alcohol consumption: 12% of men and 3% of women report very excessive alcohol consumption.¹

4. Status of the 4th JTF Guidelines

Multidisciplinary alliance

The multidisciplinary alliance for guideline implementation comprises the Russian Society of Cardiology, the Russian Society of Cardiovascular Prevention and Rehabilitation, the Russian Society of Hypertension, the Russian Society of Heart Failure, and the Russian Society of Atherosclerosis.

Endorsement and implementation

The alliance has endorsed and published a national version of the 4th JTF Guidelines. These are the first guidelines on cardiovascular disease prevention that have been published in the Russian Federation. The national guidelines are an adaptation of the 4th JTF guidelines to local requirements, with a different presentation but little deviation in terms of content. The main difference is that the Russian guidelines include a chapter on cardiovascular disease prevention in children.

The guidelines were presented at the Russian Annual Congress of Cardiologists in October 2010, where they generated much interest. They have also been presented at two other conferences on cardiovascular disease prevention and have been published in a national journal. A pocket version has also been published.

Following feedback and suggestions, an updated version of the guidelines will be published and distributed in early 2011. The alliance hopes that the guidelines will be endorsed by other medical professional societies and by the health ministry.

The alliance hopes to publish two versions of the Russian guidelines: a short, easy-reference version containing targets for the control of risk factors, and a long version containing relevant data and advice for patients for use during consultations on cardiovascular disease prevention. It is intended to publish the long version in the two national journals that have highest impact factor, *Kardiologiia* and *Cardiovascular Therapy and Prevention*. It is also hoped that the national society of general practitioners will distribute the guidelines to its members.

SCORE

The promotion of the SCORE charts has occurred just in recent years. Half of cardiologists report using the SCORE charts, but there is some doubt about the reliability of this statistic; no objective evaluation of usage has been carried out.

A Russian translation of HeartSCORE is available and efforts are in progress to recalibrate SCORE using Russian data. A study has found that patients respond more to HeartSCORE than to the paper version of the risk chart. Viewing their risk score on HeartSCORE appears to impress and engage patients to a greater extent, such that adherence to medication regimes is better and behaviour change is more likely than amongst patients who see the paper version.

Screening and prevention support services

The Ministry of Public Health and Social Development in 2009 initiated a major State programme to create new structures in primary care to improve disease prevention in Russia. This programme establishes a polyclinic model and which the general public can attend for health checks free of charge. Basic measures of health – BMI, cholesterol, glucose level, blood pressure, lung function, cognitive function and so on – are provided. The programme also includes assessment of risk status and giving them advice on how to improve their lifestyles.

The provision of smoking cessation services is just beginning in Russia and is not widespread.

5. Successes

While mortality and morbidity from cardiovascular disease are high, some trends are moving in a positive direction. Awareness of hypertension among the general public is increasing and control of hypertension is also improving. The latest data indicates that 27% of the population have normal blood pressure (140/90), which is in line with the European average, up from 15% a decade ago.

6. Challenges

Risk factors

Hazardous alcohol consumption and smoking are the two areas of greatest concern to cardiovascular prevention experts in Russia and the two priority risk factors to address. No specific targets have been set for reductions in these risk factors.

Reduction in smoking may be aided by changing attitudes to health in the general public; being healthy is becoming more of an aspiration and smoking, poor diet and excessive alcohol consumption are beginning to be regarded as undesirable.

Russia has signed the WHO Framework Convention on Tobacco Control. Smoking restrictions do not extend to an outright ban in public places. Cafés and restaurants are permitted to designate smoking and non-smoking zones.

Control of cholesterol is poor, as reflected in the EUROASPIRE III study. Russia is top of the European list with elevated cholesterol.

Psychosocial factors have a substantial impact on cardiovascular health in Russia. The prevalence of the common risk factors – obesity, raised cholesterol and hypertension – has not changed dramatically in the past 20 years while cardiovascular mortality has fluctuated in the same time period. These fluctuations have paralleled periods of economic or social instability in the country – financial default, rising poverty levels and the war in Chechnya, for example. Stress, anxiety and depression play a greater role in cardiovascular disease mortality compared with other countries. With increasing social stability in Russia, mental health problems are decreasing. In 2001/2002, 71% of people reported that they lived in situations of psychosocial

stress of a moderate or high level; this figure has fallen to 55%. However, no adequate screening for mental health will be available in the new centres of health.

Demography

Russia is a huge country and there are substantial regional differences in all types of mortality, morbidity and trends in risk factors. Mortality in Russia is higher in rural areas, in part because some rural populations are very isolated from medical institutions and difficult to access for emergency services. There are also differences between south and north – mortality is lower in the south than it is in the north. There are also differences in mortality between the different ethnic groups that comprise the Russian Federation.

Russian SCORE

The alliance is anxious to have a Russian version of the SCORE charts that is calibrated based on Russian data. Data and funding are available and efforts are under way to accomplish the project.

7. Advice for the 5th Joint Task Force

It was thought to be important that the next set of guidelines distinguish between people at high risk of developing atherosclerotic disease and those who have established atherosclerotic cardiovascular disease because they are not the same. In the 4th JTF Guidelines, the two groups are treated together.

It was suggested that epidemiological data from different countries be included to highlight similarities and differences between countries. When data is averaged across Europe, it is not so striking.

It was also felt that the work done on cardiovascular disease prevention by national societies should be cited in these recommendations because it contributes to understanding of the area.

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Spain

1. Interviewees

<i>National coordinator</i>	Dr José Ramón González-Juanatey
<i>Cardiac society</i>	Dr Luis Rodríguez Padial, guidelines coordinator of the Spanish Society of Cardiology
<i>Heart foundation</i>	Dr Luis Rodríguez Padial

Consultation Gaps

- Health ministry: A representative of the health ministry referred us to the Society of Cardiology.

2. Health system

The Spanish health system is tax-funded and coverage reaches the entire population. It is decentralised to 17 autonomous communities. The Ministry of Health and Social Policy establishes norms that define the minimum standards and requirements for health care provision, has regulatory power, sets up information systems, and assures cooperation between national health authorities and the autonomous communities. The autonomous communities decide how to organise and provide health services, and implement the national legislation. An inter-territorial council composed of representatives of the autonomous communities and the state administration is in charge of promoting the cohesion of the health system.¹

3. Cardiovascular risk factors in the population

Smoking: 35% of men and 24% of women aged 16 years and over are smokers.²

Fruit/vegetable consumption: 256 kilos of fruits and vegetables are consumed per person per year; the recommended is 150 kilos per capita per year.²

Energy from fat: No data available.

Physical activity: 44% of men and 36% of women aged 16 and over report achieving the recommended amount of physical activity.²

Overweight/obesity: 45% of men and 29% of women aged 18 years and over are classified as overweight (BMI 25-29.2kg/m²); an additional 16% of men and 15% of women are classified as obese (BMI ≥ 30kg/m²).²

Blood pressure: In a study of adults aged >60 years, 73% had diagnosed hypertension and 13% showed high blood pressure without a previous diagnosis of hypertension. (Values of BP

<140/90 mmHg for nondiabetic subjects and <130/80 mmHg for diabetic subjects were considered on control.)⁴

Cholesterol: No data available.

4. Priorities

The Spanish Interdisciplinary Committee for Cardiovascular Disease Prevention (CEIPC) is responsible for the identification every three years of priority areas in cardiovascular prevention on which to focus health policy. The current priority areas are obesity in children, smoking in the young population, especially amongst young women, and salt consumption in certain regions of Spain.

In relation to obesity, health strategy is concentrating on educating young people on healthy eating and improving the menus of school canteens. The objective is to reduce BMI by 1 point in the population under 10 years of age in the next 10 years, and there is a plan to assess the BMI of this population every year.

In relation to smoking cessation, the objective is to reduce smoking by 1% per year among young adults. The first legislation banning smoking in public places was poorly implemented, and it was possible to smoke in many public places such as restaurants, bars and pubs. Much stronger legislation restricting smoking came into operation in January 2011.

There is also a salt reduction target to reduce the amount of salt in bread by 1g per kilo each year.

5. Status of the 4th JTF Guidelines

Multidisciplinary alliance

The CEIPC is a multidisciplinary alliance responsible for endorsing cardiovascular prevention guidelines and developing policies for their implementation. It comprises 15 medical societies and includes a representative each of the Spanish Ministry of Health and the Carlos III Health Institute. The committee was established and is funded by the Ministry of Health.

Endorsement and implementation

The CEIPC has reviewed and endorsed the 4th JTF Guidelines and has adapted them for Spain and developed a pocket version; these activities were funded by the Ministry of Health. The Spanish guidelines focus on primary prevention and emphasise the role of general practitioners and practice nurses in managing cardiovascular risk factors.

To disseminate the guidelines to all the relevant specialties, the guidelines have been published in a number of Spanish medical journals. They have not been sent out to individual doctors, but they can be accessed online and printed out. Different aspects of the guidelines have been presented by the Spanish Society of Cardiology in various meetings.

No other guidelines are in use in Spain and it is felt that having a single set of guidelines is an important step to achieving consistency in decision-making on treatment.

SCORE

SCORE has been recalibrated for the Spanish population. The guidelines promote the use of SCORE charts in risk evaluation, and the CEIPC develops policies to increase the use of record and to use it to guide treatment.

Adherence and audit

No systematic audit of the uptake and adherence to the guidelines has been carried out. It is felt that larger hospitals may be performing better in relation to guidelines. General practitioners are a heterogeneous group and it is unclear to what extent they are adhering to the guidelines. Three studies have been carried out to examine different aspects of guideline adherence, such as the use of the SCORE charts among primary care physicians.

The potential for auditing exists in the health care system, however, as the majority of general practitioners record patient data in a computer-based patient record system. This system factors in patients.

6. Challenges

Administrative structure

Spain comprises 17 autonomous communities, each of which develops its own health policies and strategies. This presents an impediment to guideline implementation as the CEIPC must deal with regional health ministries separately. While the scientific societies have engaged well with the Ministry of Health, a major objective of the CEIPC is to engage with regional governments in order to translate guideline recommendations into regional health policy. This aim is facilitated by the presence of chapters from each of the scientific societies in each region.

Administrative priorities

There is little incentivisation of doctors to engage in prevention, apart from isolated programmes implemented on a regional level. In fact, the focus of regional ministries of health on controlling GP spending without in parallel examining the quality of patient care might deter GPs from engaging in prevention activities and controlling risk factors in order to keep spending in practices low.

Attitudes and habits

Lack of knowledge of prevention was not seen as a barrier to guideline implementation, but it was felt that the habits and attitudes of doctors needed to change so that they regard prevention as a priority. Patients will not begin to take prevention seriously unless their doctors do so first. Understanding how to change the behaviour of doctors and of patients was felt to be a substantial challenge.

Guidelines

It was felt that the current guidelines are clear, much more so than the previous guidelines, and approval was given to their increasing alignment with the American guidelines. Spanish cardiologists previously used to find the American guidelines more useful. Criticisms of the guidelines were that they are too long, that they are not easy to use during consultations, and that doctors have too many guidelines to follow. It was also thought to be problematic that different guidelines are inconsistent in their objectives for the same risk factor, and sometimes the one society issues different guidelines on the same risk factor. This creates confusion and leads to inconsistency of application amongst physicians and acts as an excuse for practitioners to do what they prefer.

7. Advice for the 5th Joint Task Force

Assessing physician performance and adherence to guidelines is seen as important. In the absence of assessment, doctors cannot judge their performance or benchmark it against their colleagues. It was suggested that assessment could be achieved using a computer-based performance assessment system that would monitor symptoms in patients and indicate whether their risk profile was improving. The *Get with the Guidelines* programme was mentioned as a model that should be considered. While the scope of the system could be narrow confined to individual hospitals or regions, it could operate also on a national or European level.

Including decision support in the performance assessment system might increase efficiency and assist physicians in adhering to the guidelines. It was noted that referring to guidelines on paper during patient consultations is awkward.

It was suggested that the focus of the ESC and other cardiovascular societies should shift from individual risk factor guidelines to developing a single European prevention guideline. The evidence is that more benefit can be achieved by reducing risk in several risk factors than by strictly controlling a single risk factor. The focus on individual risk factors, it was suggested, is a result of pressure from industry and was particularly apparent in relation to hypertension guidelines.

Other advice on improving the guidelines was as follows:

- Keep the guidelines short, with a clear message. Provide a summary document where the objectives for overall risk and particular risk factors for doctors are clear.
- Put more emphasis on lifestyle changes in preference to medication in preventing disease. In the current guidelines that message is not so clear.
- Have a single clear target number for the control of each risk factor.
- Produce more algorithms that allow clear, practical conclusions to be drawn, in preference to tests, which are difficult to read.

- Develop two additional sets of guidelines – one for the general public, the other for health professionals and social care workers – alongside the clinical practice guidelines. These documents should be short with simple, clear information on preventing cardiovascular disease. The version for the general public should concentrate on giving clear information about lifestyle changes.

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Sweden

1. Interviewees

<i>National coordinator</i>	Prof. Joep Perk
<i>Cardiac society</i>	Dr Kristina Hambraeus, chair of the Swedish National Registry for Secondary Prevention after AMI, Swedish Society of Cardiology
<i>Health ministry</i>	Ms Kristina Eklund, National Guidelines Unit, National Board of Health and Welfare

Consultation Gaps

- Heart foundation: Both the Swedish Heart and Lung Patients Association and the Swedish Heart Lung Foundation declined to participate on the basis that they have no role in guideline implementation.

2. Health system

Sweden has a public health care system, funded mainly through taxation, that covers the entire resident population. It is heavily decentralised and organised in three levels: national, regional, and local. On the national level, the Ministry of Health and Social Affairs is responsible for setting health care policy and ensuring that the system runs efficiently. The Swedish Public Health Agency is the national agency for health and social services. On the regional level, 21 county councils provide and finance health care services. At local level, the 290 municipalities are responsible for delivering and financing social welfare services.¹

3. Cardiovascular risk factors in the population

Smoking: 14% of men and 18% of women aged 16 to 84 years are daily smokers. Smoking was banned in public places in 2005.²

Fruit/vegetable consumption: 5% of men and 14% of women aged 16–84 years consume 500g or more of fruit or vegetables daily (corresponding to the national goal).³

Energy from fat: 34% of daily energy is derived from fat for both men and women.⁴

Physical activity: 49% of men and 53% of women aged 16–84 years take exercise at least twice a week.²

Overweight/obesity: 52% of men and 36% of women aged 16–84 years are overweight (including obese), having a BMI $\geq 25\text{kg/m}^2$; 11% of men and 10% of women are obese (BMI $\geq 30\text{kg/m}^2$).²

Blood pressure: 20% of both sexes have raised blood pressure. © 2011

Cholesterol: No data available.

4. Status of the 4th JTF Guidelines

A summary in Swedish of the 4th JTF guidelines was published in the Swedish Medical Journal, which all doctors receive, and on the website of the Swedish Society of Cardiology. The summary referred readers to the main document in English if they wished to have further detail. It was felt sufficient to communicate the main message of the guidelines in the local language; a translation of the full document would have involved unnecessary effort and expense because doctors in Sweden are quite fluent in English.

Multidisciplinary alliance

A concerted effort was made to form a task force for implementation of the guidelines at EuroPrevent 2009. The Ministry of Health and Social Affairs, the National Institute of Public Health, and the heart foundations were interested in the idea, but the general practitioners (GPs) were reluctant to participate. GPs believe that preventive cardiology is their field and that the role of cardiologists is in the hospital setting. There is a feeling amongst GPs that cardiologists are the fingertips of the pharmaceutical industry and that cardiologists leading prevention endeavours would emphasise drug therapies in primary prevention.

It was felt that the absence of a formal alliance has not been a barrier to implementation of the guidelines. There is general agreement on prevention among the different stakeholder organisations and they work together.

Endorsement and implementation

The role of the Swedish Society of Cardiology in implementation is mainly to organise three national meetings on the guidelines; one of these is for all physicians in Sweden, and the other two are more specifically directed at cardiologists and other personnel working in cardiology. While the society has accepted the guidelines, it has not formally endorsed them. It has been proposed that the working groups within the society should endorse the different guidelines that are issued, but no procedure for doing so has been established.

While the cardiac societies are important in disseminating the guidelines to cardiologists, the Swedish Association of General Practice (SFAM) is particularly important for disseminating information to general practitioners because the area is much less structured than cardiology, making GPs harder to reach. In order to have the guidelines accepted by GPs, it was felt that they should be by being summarised and fitted on a single A4 page. They should also be seen to be owned by SFAM, even if they originated from a collaborative European effort. Funding for this format was not thought to be a potential barrier. If an agreed summary could be produced, it would be a simple task to translate it and

The aim of the ESC guidelines should be to be explicit and unambiguous, to give the latest appraisal of new knowledge that physicians can put into practice in their own clinical work.

Other guidelines

The main guidelines in use in Sweden are the National Guidelines on Cardiac Care 2008, developed by an expert group appointed from different specialities by the National Board of Health and Welfare, a government agency under the Ministry of Health and Social Affairs. These guidelines were submitted prior to publication for comment to several organisations and societies. Involving societies in this way was a strategy for disseminating the national guidelines and encouraging acceptance of them among the different specialities and societies.

The national guidelines are comprehensive, covering each aspect of cardiovascular disease including prevention, and are strongly promoted by the health ministry. They are based on several sources, including the ESC guidelines and the SCORE charts. Compared to the ESC guidelines, the Swedish national guidelines have a broader macroeconomic perspective and set priorities that are somewhat different in terms of the implementation of certain health care measures. The national guidelines aim for the most efficient use of health care resources and rank recommendations according to need based on an ethical platform. In addition, the guidelines are aimed more at the decision-makers in health care rather than individual physicians. Nevertheless, they are used regularly by a majority of cardiologists.

In addition to the national guidelines, there are also regional and local guidelines.

Role of the ESC

The ESC was not seen to have a role in the implementation of guidelines nationally because that is strictly the responsibility of the Ministry of Health and Social Affairs, and physicians would reject a document issuing from an external, European body. The role of the ESC is to provide the scientific basis for the guidelines and then to pass them to national bodies for implementation. A national implementation committee instigated by the ESC would simply compete with existing bodies and cause confusion.

Adherence and audit

No audit of how well Swedish doctors adhere to the ESC guidelines has been performed. The health ministry would not facilitate an audit under the auspices of the ESC as it has assumed the main responsibility for cardiovascular guidelines. One upshot of the absence of audit, it was felt, was an ongoing and substantial distance between practice and guidelines.

The National Board of Health and Welfare conducts an Open Comparison and Assessment of Cardiac Care every 5 years to evaluate whether care is being delivered in line with the national guidelines. It uses 45 indicators covering acute coronary syndrome, arrhythmia, heart failure, valvular heart diseases, and congenital heart diseases to assess the quality of care at national, county and hospital levels.

Performance in prevention in hospitals is monitored through the national cardiac registries, which collect data from most hospitals on acute cardiac care, diabetes and, more recently,

secondary prevention. Data from these sources is published yearly. The national registries have been able to show differences in care between hospitals and these differences have decreased over time, mainly for the acute treatment of myocardial infarction. The newer secondary prevention registry, set up in 2005, still reflects variation in care.

Screening

There is no national cardiovascular disease screening programme, although screening programmes are running in some regions.

Incentivisation

In some regions a financial reward is offered in hospitals if the national guidelines are followed as reflected by the cardiac registry. Such rewards are not offered in general practice; however, there is reimbursement for engaging in prevention in primary care. The rules are more stringent for private primary care centres than for public centres.

5. Successes

Sweden has been quite successful in the area of prevention. Several GPs have taken up SCORE and the risk management system. Publications on the guidelines in the professional press have been good, and physicians have taken the message on board.

6. Challenges

Risk factors

Obesity, especially obesity in children, is of concern as is the prevalence of smoking among young women. Both these issues have given rise to debate within Sweden. Smoking has been banned in public places, and there have been some proposals to lower the price of fruit and vegetables and to raise the price of confectionary and fast food, but no legislation has been introduced so far. Sweden is the only country within the EU that has not adopted the free provision of fruit and vegetables to schoolchildren and students in spite of the EU recommendation.

Engaging with general practitioners

Engaging at the primary care level is a main challenge for guideline implementation. The national guidelines are not used to the same extent by GPs as they are by cardiologists. These guidelines are not ideal for use by GPs as the document is detailed and dense, covering every aspect of cardiac care, not all of which are relevant to GPs. Some GPs are familiar with and use the ESC guidelines, and the SCORE charts particularly. It was felt that disseminating the guidelines to GPs is very much dependent on the enthusiasm of individual coordinators at a regional level. SFAM has not issued any national guidelines to its members. In regions where regional or local guidelines have been developed, GPs are likely to use those; otherwise the decision is personal.

The view was expressed that there are differences between cardiologists and GPs in the way they approach prevention: cardiologists are more willing to treat patients with drugs to prevent disease, while GPs are more resistant to using drugs and focus more on lifestyle changes.

Guideline fatigue

The excess of cardiovascular prevention guidelines – ESC, national, regional and local – was thought to be a significant barrier to guideline implementation. Guideline fatigue is a problem among physicians in Sweden, particularly among GPs since they encounter so many different diseases. In the profusion of different CVD prevention guidelines, doctors tend to withdraw, ignore the guidelines and continue as they have done before. However, it was felt that because the ESC guidelines are clear, well presented and communicated effectively, physicians will be able to implement in practice, putting the issues of competing guidelines to one side. It was acknowledged that while a lot of effort is invested in producing guidelines, aside from a few new points, nobody cares about the rest.

7. Advice for the 5th Joint Task Force

It was felt that the 5th JTF must aim to have a much more succinct document as the guidelines threaten to get excessively long. They should comprise one core document of 50 pages at most, focussing on what is new and useful, and a summary that distils the main conclusions onto an A4 page that can be attached to a wall or put on a desk.

A good document is critical to the success of the guidelines, it was suggested. The guidelines should include evidence from new research findings, new recommendations that have developed since the last guidelines were issued, and indicating areas where large gaps in evidence still exist.

It was also thought to be important that the 5th JTF guidelines should be consistent with other guidelines so that there should be no conflict among the guidelines for hypertension, diabetes, kidney disease, and so on.

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United Kingdom

1. Interviewees

<i>National coordinator</i>	Dr Susan Connolly, consultant cardiologist, Imperial College Healthcare NHS Trust
<i>Heart foundation</i>	Dr Mike Knapton, associate medical director, British Heart Foundation
<i>Health service agency</i>	Professor Roger Boyle CBE, national director for heart disease and stroke, Department of Health/National Health Service
<i>Health ministry</i>	Professor Roger Boyle CBE, national director for heart disease and stroke, Department of Health/National Health Service

2. Health system

The United Kingdom has a public health system, which is delivered through the National Health Service (NHS). Each of the constituent countries – England, Wales, Scotland and Northern Ireland – is responsible for its own health care. The NHS in each country is funded through national taxation and delivers services through public providers. Local bodies are responsible for purchasing patient care: primary care trusts (PCTs) in England, local health boards (LHBs) in Wales, health boards in Scotland, and primary care partnerships in Northern Ireland. The National Institute for Health and Clinical Excellence (NICE) provides guidance in England and Wales on the effectiveness and cost-effectiveness of services and whether they should be made available to all or part of the population.¹

An NHS white paper published in July 2010 instigates the replacement of PCTs with consortia of GPs responsible for managing their own budgets and commissioning treatment for patients in hospitals. Six additional white papers have been published around information, choice, commissioning and outcomes in health care. A white paper on public health in November 2010 sets out long-term plans on reforming the public health service in England. It has been suggested that the NHS might pay for this England only as Scotland, Wales, and Northern Ireland have different arrangements.

3. Cardiovascular risk factors in the population

Smoking: 22% of men and 21% of women in Great Britain (England, Wales and Scotland) aged 16 years and over are smokers.²

Fruit/vegetable consumption: Total consumption of fruit and vegetables by men aged 19 years and over in the United Kingdom is 234g per day; among women, the figure is 253g per day.³ Recommended daily consumption is 400g.

Energy from fat: Total fat comprises 36% of food energy intake for men and 35% for women aged 19 years and over in the United Kingdom.³

Physical activity: 39% of men and 29% of women aged 16 years and over in England spent 30 minutes or more in activities of at least moderate intensity on five or more days per week.⁴

Overweight/obesity: 45% of men and 27% of women aged 19 years and over in the UK are classified as overweight; an additional 24% of men and 32% of women are obese.³

Blood pressure: 31% of men and 28% of women aged 16 years and in England have hypertension. (Hypertension is defined as a systolic blood pressure of 160 mmHg or higher, or a diastolic blood pressure of 95 mmHg or higher, or treatment for blood pressure.)⁵

Cholesterol: 57% of men and 61% of women aged 16 years and over in England have a raised total cholesterol level (5.0 mmol/l or above).⁵

4. Status of the 4th JTF Guidelines

The 4th JTF guidelines have not been implemented in the countries of the United Kingdom. Two sets of guidelines are in use in England, Wales and Northern Ireland: the NICE guidelines⁶ and the SIGN guidelines⁷. In Scotland, the Scottish Intercollegiate Guidelines Network (SIGN) guidance is used. GPs in England and Wales use NICE guidelines as these are tied to targets and remuneration.

The NICE guidelines are a suite addressing the different conditions such as hypertension and hypercholesterolaemia as well as topics such as interventions on physical activity, smoking cessation, and diet. On the other hand, the JBS2 guidelines, developed by six professional societies, take an integrated approach to cardiovascular disease prevention. The NICE guidelines are endorsed by the Department of Health, but the JBS 2 are not. However, the two sets of guidelines are complementary.

The JBS 2 guidelines are being updated (JBS 3) and whether they will be endorsed by the Department of Health has not been established yet, although a Department representative sits on the committee. A development with JBS 3 is the calculation of lifetime risk and heart age. The working group is working with risk communication experts on the best format to present this information in order to most effectively communicate risk to people. The guidelines will be disseminated through the British Cardiovascular Society and the British Heart Foundation. They will be published in the journal *Heart* and will be available on the web.

Risk assessment

Two risk assessment calculators are used in England and Wales: the JBS 2 charts, which are based on the Framingham model, and QRISK, which is based on the GP database in the United Kingdom and includes all the Framingham factors plus social deprivation, ethnicity, treatment for hypertension, and rheumatoid arthritis. JBS 3 charts are being developed at present, with the aim of having them available in early 2011. The updated charts are likely to use QRISK2 because that has been validated in the United Kingdom and there is more confidence in its accuracy. In addition, QRISK2 takes account of ethnicity, which is important as 9% of the population is Black or Minority Ethnic. Risk is not uniformly distributed across the population; it clusters in families, in minority ethnic groups (particularly South Asians) and among groups at the lower end of the social gradient.

While the choice of risk assessment tool was felt to be important, the first step of getting physicians to start using those tools for systematic risk factor assessment was seen to be more so.

Adherence and audit

GP adherence to the NICE guidelines is high as it is tied to remuneration. Audit of adherence in primary care and hospitals is carried out by the Care and Quality Commission (formerly the Healthcare Commission).

Screening

A multi-factorial approach drives risk assessment in England and Wales. The estimation of total cardiovascular risk, rather than focusing on individual risk factors, was suggested by the National Service Framework in 2000 and reiterated in JBS 2 in 2005. However, the concept was not taken up until more recently – after the publication in 2009 of NICE guidance on lipid assessment and the DoH strategy *Putting Prevention First*, both of which put total risk estimation at the fore. *Putting Prevention First* set out the plans for the NHS to introduce a systematic and integrated programme of cardiovascular risk assessment and management for those aged between 40 and 74 years. This was a stimulus to PCTs to move from opportunistic screening for risk to systematic screening.

Incentivisation

Incentivisation of prevention is very much silo based, i.e. focussed on individual risk factors, in particular hypertension. The result is that people are put on registers, but their overall cardiovascular risk is not measured. A register for high total CVD risk is needed. The primary prevention programmes currently in existence are fragmented. The GP will give patients a diet sheet, referral to smoking cessation, referral to exercise, and referral to community dietetics. However, an integrated approach is lacking.

5. Successes

Mortality rates

Cardiovascular disease mortality in England has fallen to the extent that it is no longer the leading cause of death; it has fallen to second place behind cancer. This is not the case in the other countries of the United Kingdom.

Government programmes/initiatives

- The NICE guidance on the prevention of cardiovascular disease at population level published earlier in 2010 was felt to have been very useful. It emphasises the importance of factors such as education, environment, and building policies instead of the individual with heart disease or risk.
- The Marmot Review of Health Inequalities⁸ was also noted as important, and it was hoped that the public health service under the new administration would adopt it.
- (3 2 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300 301 302 303 304 305 306 307 308 309 310 311 312 313 314 315 316 317 318 319 320 321 322 323 324 325 326 327 328 329 330 331 332 333 334 335 336 337 338 339 340 341 342 343 344 345 346 347 348 349 350 351 352 353 354 355 356 357 358 359 360 361 362 363 364 365 366 367 368 369 370 371 372 373 374 375 376 377 378 379 380 381 382 383 384 385 386 387 388 389 390 391 392 393 394 395 396 397 398 399 400 401 402 403 404 405 406 407 408 409 410 411 412 413 414 415 416 417 418 419 420 421 422 423 424 425 426 427 428 429 430 431 432 433 434 435 436 437 438 439 440 441 442 443 444 445 446 447 448 449 450 451 452 453 454 455 456 457 458 459 460 461 462 463 464 465 466 467 468 469 470 471 472 473 474 475 476 477 478 479 480 481 482 483 484 485 486 487 488 489 490 491 492 493 494 495 496 497 498 499 500 501 502 503 504 505 506 507 508 509 510 511 512 513 514 515 516 517 518 519 520 521 522 523 524 525 526 527 528 529 530 531 532 533 534 535 536 537 538 539 540 541 542 543 544 545 546 547 548 549 550 551 552 553 554 555 556 557 558 559 560 561 562 563 564 565 566 567 568 569 570 571 572 573 574 575 576 577 578 579 580 581 582 583 584 585 586 587 588 589 590 591 592 593 594 595 596 597 598 599 600 601 602 603 604 605 606 607 608 609 610 611 612 613 614 615 616 617 618 619 620 621 622 623 624 625 626 627 628 629 630 631 632 633 634 635 636 637 638 639 640 641 642 643 644 645 646 647 648 649 650 651 652 653 654 655 656 657 658 659 660 661 662 663 664 665 666 667 668 669 670 671 672 673 674 675 676 677 678 679 680 681 682 683 684 685 686 687 688 689 690 691 692 693 694 695 696 697 698 699 700 701 702 703 704 705 706 707 708 709 710 711 712 713 714 715 716 717 718 719 720 721 722 723 724 725 726 727 728 729 730 731 732 733 734 735 736 737 738 739 740 741 742 743 744 745 746 747 748 749 750 751 752 753 754 755 756 757 758 759 760 761 762 763 764 765 766 767 768 769 770 771 772 773 774 775 776 777 778 779 780 781 782 783 784 785 786 787 788 789 790 791 792 793 794 795 796 797 798 799 800 801 802 803 804 805 806 807 808 809 810 811 812 813 814 815 816 817 818 819 820 821 822 823 824 825 826 827 828 829 830 831 832 833 834 835 836 837 838 839 840 841 842 843 844 845 846 847 848 849 850 851 852 853 854 855 856 857 858 859 860 861 862 863 864 865 866 867 868 869 870 871 872 873 874 875 876 877 878 879 880 881 882 883 884 885 886 887 888 889 890 891 892 893 894 895 896 897 898 899 900 901 902 903 904 905 906 907 908 909 910 911 912 913 914 915 916 917 918 919 920 921 922 923 924 925 926 927 928 929 930 931 932 933 934 935 936 937 938 939 940 941 942 943 944 945 946 947 948 949 950 951 952 953 954 955 956 957 958 959 960 961 962 963 964 965 966 967 968 969 970 971 972 973 974 975 976 977 978 979 980 981 982 983 984 985 986 987 988 989 990 991 992 993 994 995 996 997 998 999 1000 1001 1002 1003 1004 1005 1006 1007 1008 1009 1010 1011 1012 1013 1014 1015 1016 1017 10

address public health problems that cannot be solved by regulation and legislation. There are Responsibility Deals on smoking, obesity, and diet.

- The Change4Life programme aims to create a large social movement towards living healthier lives, with the emphasis on good diet and physical activity. The programme has funding until March 2011, so its future is uncertain at present.

British Heart Foundation programmes/initiatives

- Hearty Lives, a programme aimed at tackling the uneven distribution of heart disease and premature mortality in communities. The approaches the BHF wishes to take are outside the scope of the NHS, so it is working with local authorities and community development organisations on approaches to address risk in these populations.
- The Heart HelpLine provides information, support and advice to the general public on heart health.
- Heart Matters is a free service for individuals that aims to provide tailored advice, information, and support to people who want to improve their heart health and reduce their risk. It includes, for instance, a lifestyle assessment and a bimonthly magazine. The service is not intended to substitute for full cardiovascular assessment but to complement it and motivate people. The service has around 200,000 members.
- The Foundation has worked on cardiac rehabilitation in hospitals to offer eligible patients menu-based options around rehabilitation, of which secondary prevention is a part.

6. Challenges

Health inequality

The overall cardiovascular disease statistics that show a reduction in mortality and morbidity conceal the social gradient in heart health. The difference between the healthiest and least healthy is stubbornly not closing and may be widening in the UK.

Cardiac rehabilitation

There is a prioritisation in the secondary sector towards treating the acute event, and cardiac rehabilitation is a lesser concern. Cardiologists assume, not unreasonably it was suggested,

“...the 4th JTF guidelines are too focused on delivering the detailed scientific basis for every clinical recommendation, which makes them difficult to work with. The 5th JTF should try to produce a more practical document, one that would really assist clinicians without being too lengthy.”

7. Advice for the 5th Joint Task Force

It was suggested that the 4th JTF guidelines are too focused on delivering the detailed scientific basis for every clinical recommendation, which makes them difficult to work with. The 5th JTF should try to produce a more practical document, one that would really assist clinicians without being too lengthy.

The importance of considering prevention of cardiovascular disease both in a clinical or healthcare setting and at a public health level was emphasised. It was also felt that more

account should be taken of the psychosocial factors that play a role in adherence to treatment. This aspect of implementation was seen as often forgotten. For instance, it is easy for a next guidelines must address the evidence on motivating people to change and the degree to which they can, as well as the importance of individual choice.

The guidelines should also consider the mechanisms in the health service that impede or support implementation. Change in the health service is agonisingly slow, so the factors at an organisational level and an individual level that enables them to change need to be identified. For example, in general practice one of the major factors that has supported change has been computerisation of medical records.

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