

Editorial

Indications for coronary revascularisation: guidelines for the Netherlands

The desire for quality assurance by medical professional organisations has led to the development of guidelines by national and international societies, formulated by expert panels and based on current evidence in the literature. Governments and third party payers have increased their scrutiny of what physicians do and how they do it. As the costs of medical care grow, the call for assessment of appropriateness and cost effectiveness of medical procedures increases. In evaluating clinical practice, a number of studies have pointed to the large variations in daily practice between countries, centres, and individual doctors.

Governments, insurers, and doctors would like to see this variance reduced. This has led to the development of guidelines for clinical practice which can serve the purposes of both physicians and administrators; if used wisely, antagonism between the two can be avoided.

Guidelines formulated by expert panels have several limitations. First, discordance is observed between panels addressing the same issue.¹ When more evidence is available, less discordance is expected, but it is unknown if different expert panels show better concordance with increasing evidence. Paradoxically, variability in opinions (and practice patterns) may in fact increase with increasing evidence. Similarly, the need for guidelines may increase with increasing evidence—for example, cholesterol lowering treatment.

Second, the evidence from the literature is usually derived from highly selected cohorts of patients, making extrapolations to the general population difficult or impossible.

Third, the advances in some clinical fields are so rapid that guidelines may be outdated by the time they are published; therefore, they need to be updated regularly. If updated by a different panel, the guidelines may be changed considerably, whereas updates by the same experts may lead to a static, one sided view.

Fourth, a number of procedures are considered by experts to be appropriate based on their experience, even though they have not [yet] been scientifically evaluated. These procedures are carried out without being “evidence based”. An example is the placement of a stent in the left main left coronary artery. Even though there is little scientific support for the performance of these interventions, it would not be right if angioplasty of the left main stem were prohibited by guidelines.

Instructions from the Minister

Due to the high volume of cases, the costs involved and the waiting times for the procedures, coronary revascularisation is a source of concern to both the Dutch medical profession and the government.

In 1996 Minister Borst of Public Health, Welfare and Sports issued the draft planning decree *Coronary surgery/intervention cardiology*, soon followed by the planning decree *Special interventions in the heart*. These documents outlined the expected need for facilities for coronary surgery and catheter interventions in patients with stenoses of the coronary arteries for the years ahead. In addition, they instructed that a nationally, applicable unequivocal protocol for the indications for these procedures was to be prepared. In contrast with other guidelines it should leave

no room for differences in interpretation. In pursuance of these instruction, and based on a desire to assure both the quality of care and optimal use of limited resources, the Dutch Society of Cardiology and the Dutch Society of Thoracic Surgery formed a task force, with representatives from the two professional organisations plus external experts in the field of medical technology assessment.

The minister's decree also raised the question of urgency grading, the national registration of waiting times, acceptable waiting times for non-urgent cases, and a mutual referral policy to even out waiting times. Furthermore, the minister wanted to know from the professional organisations whether it was possible to distinguish between low risk and low complex interventions, and high risk and complicated interventions in order to allocate new centres to specialise in low risk and low complex interventions.

The guidelines² discussed in this comment involve only the indication for coronary revascularisation—that is, catheter interventions and coronary bypass surgery.

The guidelines

During discussions of the working group it was agreed that a directive as requested by the minister was not advisable or feasible in the present medical reality. Many clinical questions have not been adequately addressed in the literature, and unique characteristics and circumstances necessitate an individual approach to each patient. Black and white situations are rare in medical practice, and clinical decisions demand weighing of data on technical, practical, and human levels. The recommendations from the working group are as much as possible evidence based. For the reasons mentioned, the professional organisations do not speak of a “protocol” as required by the decree, but of “guidelines”.

GENERAL APPROACH TO THE DECISION TO PERFORM REVASCLARISATION

The task force confirmed the necessity to discuss all patients who are considered for either elective or emergency revascularisation during a multidisciplinary meeting. During this meeting at least one interventional cardiologist and one cardiac surgeon should be present. For each case the heart team is to give its opinion about two aspects: first, the necessity for the intervention based on the patient's symptoms and prognosis; and second, the type of intervention to be selected. Thus there are three possible outcomes of the heart team's consultations for each patient:

- medical (conservative) treatment only
- coronary surgery
- catheter based intervention.

If the decision is made not to revascularise, it is necessary to indicate whether this is because of lack of (sufficient) indication or contraindications, or both. If the decision is made to proceed with revascularisation the following have to be considered:

- What is the expected advantage for the patient (a decrease in complaints and/or an improved prognosis)?
- What are the possible risks of the intervention?

- How urgent is this intervention and what is the estimated waiting time?

A written report of the decision and the considerations should be sent to the referring cardiologist.

The specialist who ultimately performs the intervention, regardless of the waiting time, is medically and legally responsible for his or her actions and can deviate from the proposed treatment if there are valid reasons to do so. For example, an important change in the patient's situation may have occurred while the waiting time elapsed. If necessary, the multidisciplinary heart team may be consulted again.

In emergency situations, such as urgent angiography for acute myocardial infarction, a cardiac surgeon may be consulted ad hoc, by telephone if necessary. In cases where ad hoc consultation of the other disciplines is not feasible, it is advised to review the case in retrospect with the purpose of continuous exchange of mutual insights and opinions.

The task force distinguished three categories of clinical presentation—chronic stable angina pectoris, unstable angina pectoris, and acute myocardial infarction—each of which needs separate guidelines as the considerations related to the choice of treatment for each category are very different, and these categories are distinguished in the literature. For each of the categories, the guidelines detail a number of clinical determinants of the decision to perform revascularisation such as age, comorbidity, and angiographic findings.

Implications

The guidelines are designed for the needs of physicians and administrators, with the aim of improving quality of care and appropriate use of limited resources.

With formal published guidelines, individual decisions may become subject to scrutiny by legislators, hospital administrators, and insurance companies. Physicians are tied by instructions more than they used to be, and they will have to accept the possibility of audits. This, however, should lead to a higher standard of care, not to a decay of the autonomous status of the doctor in making decisions for (and with) an individual patient. Given the complexity of each case, expert opinion from individual physicians remains indispensable. This should be facilitated and guided by the advice from guidelines, not dictated by them. Thus, guidelines should contribute to the quality of individual decisions, and decrease the wide variation between centres and physicians without affecting the responsibilities of the doctor.

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- 1 Shekelle PG, Kahan JP, Bernstein SJ, *et al.* The reproducibility of a method to identify the overuse and underuse of medical procedures. *N Engl J Med* 1998;338:1888-95.
- 2 Peters RJG, Bonnier HJRM, Bredee JJ, for the Working Group on Indications for Coronary Revascularisation of the Dutch Society of Cardiology and the Dutch Society of Thoracic Surgeons. *Int J Cardiovasc Intervent.* [In press].