Number needed to treat and baseline risks

I agree with Finlay McAlister’s analysis of the number needed to treat. However, I believe there is a missing issue associated with the use of the evidence-based terms we are so accustomed to using. Consider the following 2 scenarios.

In the first scenario, a drug reduces the risk of dying from a myocardial infarction from 3% to 2% over 2–3 years: the relative risk reduction is 33%, the absolute risk reduction is 1% and the number needed to treat is 100. In my experience, many people do not consider this drug to offer sufficient benefit to justify taking it. In the second scenario, a drug reduces the risk of dying from a myocardial infarction from 100% to 99%; the absolute risk reduction is 1% and the number needed to treat is 100. It is likely that many people would take this drug given that the risk of death without treatment is 100%.

These 2 scenarios demonstrate that terms such as relative risk reduction, absolute risk reduction and number needed to treat do not provide patients with any idea of their baseline risk. I have moved away from using these terms when trying to explain the benefits of drug therapy. Instead, I first use a variety of risk estimation tools to provide patients with a rough approximation first of their baseline risk (say 10%) of having an event (e.g., a myocardial infarction or fracture) in the next 5–10 years and then of their risk while taking drug therapy (say 8% assuming a relative risk reduction of 20%); I remind them their risk will not be reduced to 0%. I also outline the side effects and cost of drug therapy and then support them equally whether or not they decide to take the drug.

Most people understand this approach. It removes the need to do mathematical calculations and, most important, it provides people with an idea of what would happen if we do nothing. This is important because people typically believe their baseline risks are higher than they really are. The terms number need to treat, relative risk reduction and absolute risk reduction rarely enter my discussions unless I have to show people why the 20% benefit that they have heard about for a particular therapy translates to only a 2% absolute risk reduction for them.

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Fostering public engagement

I read with interest the article on public engagement in setting health care priorities. As the chief executive officer of Canadian Blood Services, an organization that emerged from the tainted blood tragedy of the 1980s, I can attest to the value of engaging the public in decision-making.

The Commission of Inquiry on the Blood System in Canada set the stage for engagement; however, owing to a history of mistrust, stakeholders and the public were reluctant to participate in decision-making about the blood system. Canadian Blood Services met this challenge by establishing 1 national and several regional standing committees, for which the founding members participated in defining the terms of reference. Initially the national committee was to report to the chief executive officer, but the committee members were not confident that their input would receive genuine consideration by decision-makers. Once the reporting structure was modified so that the committee reported to the board of directors, the committee members’ trust increased exponentially.

Experience has taught us that several critical success factors must be present within an organization to ensure effective public engagement: integration of public engagement into the business, establishment of formalized principles for engagement, commitment to building and maintaining trusting relationships with the public and stakeholders, and willingness to consider and act on their input. There must also be direct access of the public and stakeholders to the decision-makers, transparency with regard to the process and goals of engagement, openness to sharing all information relevant to the issue, an inclusive approach to identifying and involving the public and stakeholders, timely engagement at a point in the decision-making process when input can genuinely influence outcomes, and meaningful ways of recognizing stakeholders and the public for their contributions.

As a recent example, Canadian Blood Services has accepted the mandate to develop an integrated national system for organ donation and transplantation in Canada. In September, about 130 stakeholders contributed to setting priorities for the new system. These stakeholders will continue to be at the table as the system evolves because we firmly believe that operating in an open and collaborative manner is essential to ensuring a safe health care system and maintaining trust in that system.

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