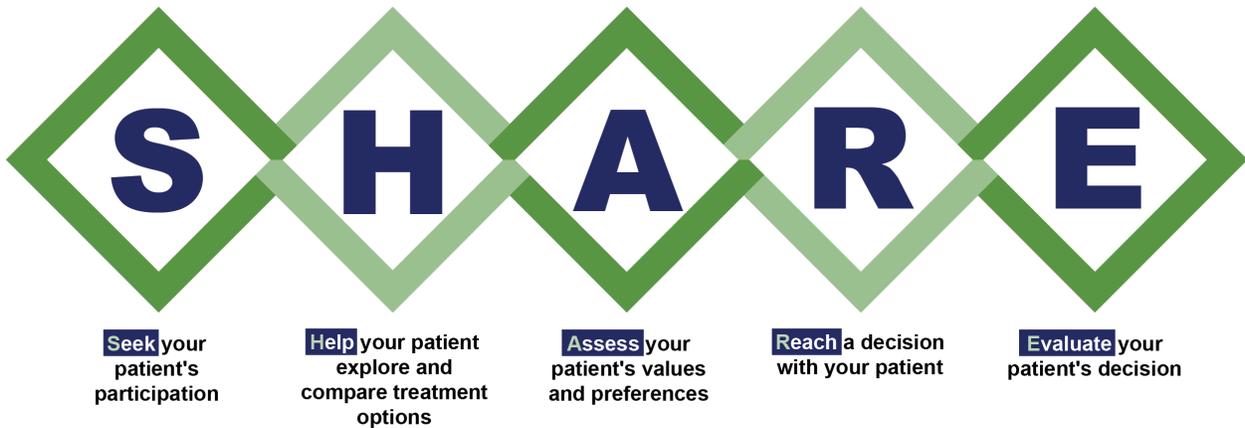


# The SHARE Approach: Communicating Numbers to Your Patients



Many people, even with college degrees, have trouble using and making sense of numbers.<sup>1</sup> Low numeracy makes it hard to read, listen to, talk about, and evaluate quantitative information. As a result, people with low health numeracy may be less likely to make the choices and take the actions needed to stay well.<sup>2,3,4</sup>

# Communicate Numbers Clearly:

## Try these tips:

- > **When possible, elaborate by providing estimated numbers.** Avoid explaining risks in purely descriptive terms (such as “low risk”). For example, say, “Out of every 100 people who have a stent, 1 to 2 people may develop a blood clot at the stent site.” (these numbers are illustrative and may not reflect the actual rate of clotting).
- > **Descriptive labels can help patients interpret the numbers, but be mindful of how you use them.** You might additionally choose to provide a descriptive label, for example saying “we consider 1-2 out of 100 to be a low risk”. However, labels also direct patients to interpret the number in a particular way. If you do choose to use descriptive labels, reflect on why you are doing so. For example, are you telling a patient something is low risk because you want them to get the procedure? Or, do you genuinely think most people would also consider it a low risk, and you are using the label to help people understand? Using a label to help the patient *understand* a number is consistent with shared decision making, but using a label to try to get them to make a particular choice is not consistent with shared decision making.
- > **Communicate using frequencies or percentages, and avoid 1-in-X or Number Needed to Treat (NNT) formats.** <sup>6,7</sup> For example, say, “13 out of 100” or “13 percent” instead of “1 in 8,” which is both harder to understand and creates biased risk perceptions. The NNT format should be avoided because it is difficult for most people to understand.
- > **Keep denominators and timeframes the same when you compare numbers.** <sup>1</sup> For example, say, “Without this medicine about 6 out of 10 women will break a bone in the next 10 years. However, taking this medicine reduces that number to just about 3 out of 10 women who will break a bone in the next 10 years.”
- > **Give absolute risk instead of relative risk.** <sup>1</sup> Absolute risk estimates are the clearest way to communicate just how likely or unlikely a health event is to happen. If you want to communicate risk differences (effect sizes), use absolute risk differences instead of relative risk estimates. For example, say, “Three out of 1,000 nonsmokers may have a stroke in their lifetime, and 6 out of 1,000 smokers may have a stroke in their lifetime” or “smoking causes strokes in 3 out of 1,000 people over their lifetime” instead of “smokers have 2 times the risk of having a stroke in their lifetime.”
- > **Frame outcomes to give equal clarity to the likelihood of an event and a non-event.** <sup>5</sup> For example, say, “With this treatment, 2 out of 10 people get side effects, which means that 8 out of 10 people do not get side effects.”

## Make numbers meaningful:

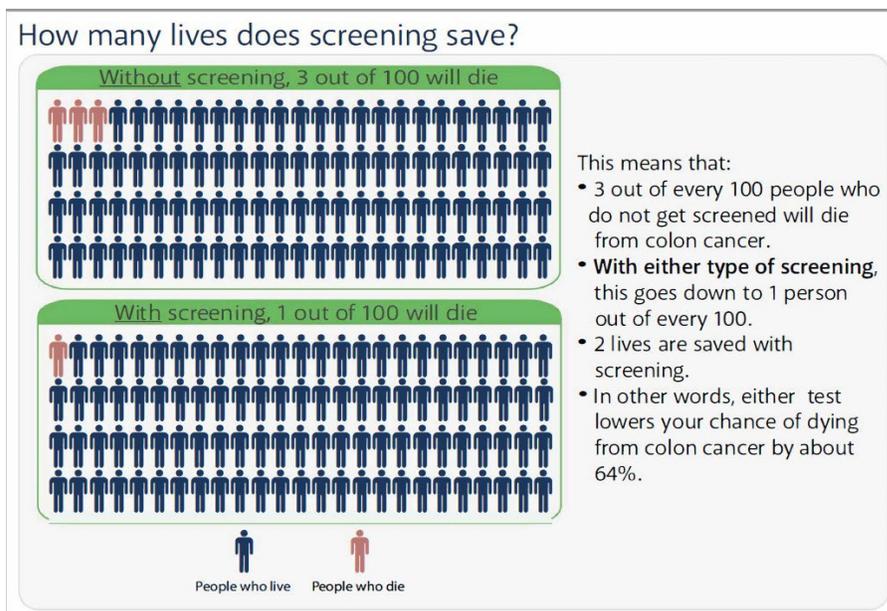
### Try these strategies to help your patients connect with the numbers:

- > **Make unfamiliar data (e.g., test results) meaningful by providing context.** Consider providing action thresholds, reference standards, or categorization rules (e.g., total cholesterol values of 200 to 239 mg/dl are “borderline high”). Patients need to know not only what is a normal value versus an out-of-range result but also which out-of-range values require urgent attention and which do not.
- > **Find out which measurement system your patient uses—standard or metric.** For example, say, “Would you like me to explain using ounces or grams?”
- > **Use everyday words when possible.**<sup>10</sup> For example, say, “chance” instead of “risk”.
- > **Explain size by using analogies and comparisons to familiar objects.**<sup>10</sup> For example, say, “A gallstone can be as small as a grain of sand or as large as a golf ball. Your gallstone was about half of a centimeter big, or about the size of a small green pea.”
- > **Use pictures to clarify what numbers mean.**<sup>5</sup> For example, consider using the Wong-Baker FACES pain scale rating to help patients communicate their level of pain, instead of a numeric rating scale. When available, use icon arrays or other visual displays of quantity when talking about the chance of outcomes (see example of an icon array on the next page).
- > **Use the teach-back technique.** Ask your patient to explain the numbers you just presented in his or her own words. This lets you make sure your patient understands. Check for understanding especially if you are using visuals (graphs, charts, and tables) that have numbers.

# Communicating risk with visual aids

Visual displays of probability can be helpful by making the chance of certain outcomes more concrete. The clearest probability visuals show what is called the part-to-whole ratio, i.e., the people who experience a health outcome AND the rest of the population who do not. Examples of part-to-whole graphics include icon arrays, stacked bar charts, and line charts that are scaled to show the full population. Supplementing good visual aids with text can help patients see the risk numbers in context, thus providing information and not just data.<sup>1,5</sup>

## Sample Icon Array\*



\*Sample icon array taken from a University of Colorado School of Medicine decision aid [https:// patientdecisionaid.org/wp-content/uploads/2020/09/CRC-Infographic-V-7-11-20-15-English-1.pdf](https://patientdecisionaid.org/wp-content/uploads/2020/09/CRC-Infographic-V-7-11-20-15-English-1.pdf)

## Learn more about risk communication and health numeracy

For additional information about communicating numbers in respect to health numeracy, please see the resources below.

### **Information on Presenting Probabilities**

Bonner, C., Trevena, L. J., Gaissmaier, W., Han, P. K., Okan, Y., Ozanne, E., Peters, E., Timmermans, D., Zikmund-Fisher, B. J. (2021). Current best practice for presenting probabilities in patient decision aids: fundamental principles. *Medical Decision Making, 41*(7), 821-833.

Trevena, L. J., Bonner, C., Okan, Y., Peters, E., Gaissmaier, W., Han, P. K., Ozanne, E., Peters, E., Timmermans, D., Zikmund-Fisher, B. J. (2021). Current challenges when using numbers in patient decision aids: advanced concepts. *Medical Decision Making, 41*(7), 834-847.

### **Information on Tables, Charts, and Diagrams**

Toolkit for Making Written Material Clear and Effective. Section 2, Part 5, Chapter 7: Guidelines for tables, charts, and diagrams. Centers for Medicare & Medical Services; 2010. Available at: <http://www.cms.gov/Outreach-and-Education/Outreach/WrittenMaterialsToolkit/Downloads/ToolkitPart05Chapter07.pdf>

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11. Trevena L., Zikmund-Fisher B., Edwards A., Gaissmaier W., Galesic M., Han P., King J., Lawson M., Linder S., Lipkus I., Ozanne E., Peters E., Timmermans D., Woloshin S. Presenting probabilities. In Volk R & Llewellyn-Thomas H (editors). 2012 Update of the International Patient Decision Aids Standards (IPDAS) Collaboration's Background Document. Chapter C.; 2012. Available at: <http://ipdas.ohri.ca/IPDAS-Chapter-C.pdf>

