THE MYTH OF AVERAGE

Understanding which health care treatments or preventive care will work best for you is important.

Individual Patient Differences Matter

Often, health care is designed assuming patients look like this:

But in the real world patients look more like this:

Why?

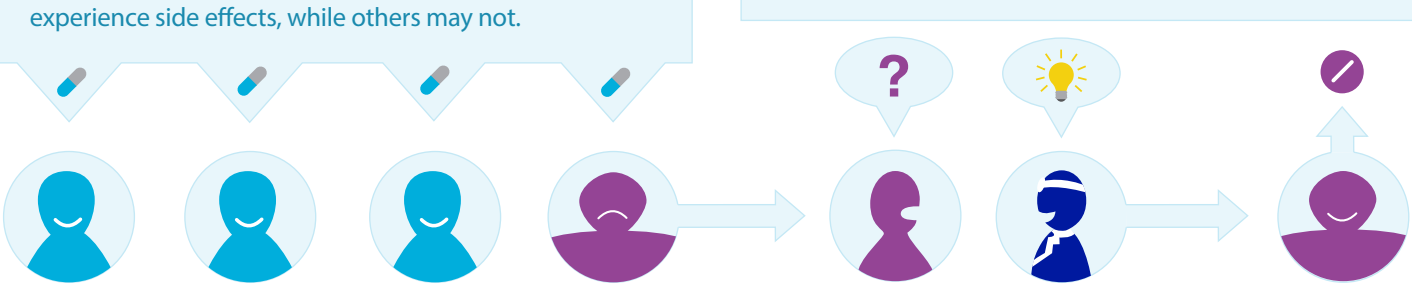
There are many different factors that affect how patients will respond to treatment:

Age · Race · Gender · Other Conditions · Genetics · Personal Preferences · Risk Profile · Care Setting · Social Support · Medication Interaction

The Average vs. the Individual Patient

That might mean the same treatment may work effectively for one person but differently for others. Some people may experience side effects, while others may not.

Those patients need the flexibility to explore other treatment options with their care provider.



Education Increases Understanding of Individual Patient Differences

In addition to physicians and patients, it is important for other medical decision makers to understand heterogeneity as they consider how to provide care for large patient populations.

50 managed care and pharmacy directors

who participated in a continuing education program responded to a survey on heterogeneity awareness.

At the start of the program, only

1 in 2 participants had heard of the term "heterogeneity of treatment effects" and fewer than

1 in 2 considered heterogeneity of treatment effects in making basic coverage decisions.

After the program, participants rated their **knowledge, understanding and confidence** in using heterogeneity **higher** than prior to the program.

UNDERSTANDING TREATMENT DIFFERENCES

The following checklists can help health care professionals identify when there are differences in patients, populations of patients, or clinical studies.

Understanding Patient Differences
Within a Study

Reviewing subgroups within a study can help identify which patients may or may not benefit from a particular treatment. It's important to recognize when you can rely on subgroup analyses to identify what works best for individual patients, as well as how to ensure that differences exist and are not related to other characteristics.

- ✓ Does the study show how risk may vary in the overall study population and the treatment arms by using a risk prediction tool or index?
- ✓ Are primary subgroup comparisons risk-stratified with absolute and relative risk reductions?
- ✓ Are primary sub-group analyses prespecified, and is there good scientific basis for questions that are explored?
- ✓ Are secondary or exploratory subgroup comparisons reported separately from primary or confirmatory subgroup comparisons?
- ✓ Do the authors report all subgroup analyses, use appropriate statistical methods to test variations in treatment effects, and avoid over-interpretation?

Understanding Patient Differences
Across Studies

Sometimes we need to combine studies to get a fuller picture of patients with a particular condition. It's important to understand whether patient differences are due to how the individual studies were conducted, the types of patients included in those studies, or simply by chance.

- ✓ Are the studies presented graphically to allow readers to visualize variations among study results?
- ✓ Were the methods used to combine the findings of studies appropriate?
- ✓ Was the likelihood of publication bias assessed?
- ✓ Were the characteristics of the included studies provided?

Want More Information?

Learn more about individual treatment effects and how they can impact your ability to find and access the care that's right for you.

Visit **npcnow.org** for more information.

Sources:

"The Myth of Average: Why Individual Patient Differences Matter." National Pharmaceutical Council. 2013.

Malone DC, Hines LE, Graff JS. The Good, the Bad, and the Different: A Primer on Aspects of Heterogeneity of Treatment Effects, *J Manag Care Pharm*. 2014;20(6):555-63.

Warholak TL, Hilgaertner JW, Dean JL, et al. Evaluation of an Educational Program on Deciphering Heterogeneity for Medical Coverage Decisions. *J Manag Care Pharm*. 2014;20(6):566-73.

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