Medical progress is part determination, creative thought, science, manufacturing and distribution, sound regulation...and the list goes on. This infographic is one way of depicting key steps in the process. As described below, science plays a pivotal role in each phase:

- **Discovery:** In the discovery phase, scientists conduct experiments to better understand how the natural world works, with an eye toward applying that knowledge to improving, protecting and restoring human health. This broad-based pursuit of knowledge often provides unexpected clues to improve health care. For example, NIH-funded studies on recoding an organism’s genome to produce synthetic insulin which could help lower the cost of diabetes treatments for millions. Studying why a jellyfish glows green led to advances in genetics, cell biology and neurobiology, and to a better understanding of diseases like cancer and Alzheimer’s.

- **Development:** In the developmental pipeline, scientists conduct translational research using clinical trials and other research paradigms to refine and apply the knowledge gained through basic research. In the examples above, researchers adapted bacterial processes to the production of human insulin and developed a process for using jellyfish protein in cell imaging studies. Clinical trials on animals and humans ensure the safety and efficacy of new therapies.

- **Delivery:** Finally, researchers deploy health services research, health economics research and behavioral research to optimize the delivery of health care, help Americans protect and enhance their individual health, ensure that medical advances reach the right patients in the right settings at the right time, minimize medical errors and in other ways work to maximize the value of medical progress to patients and their loved ones.