

# Editorial

## SCIENCE TO SALES: DECODING THE COMPLEXITY OF RESEARCH

### Clinical Research: Technical and Complex Statistics

The goal of clinical research is to analyze new biomedical discoveries and clinical protocols that will be beneficial for understanding the etiology, prevention, diagnosis, and treatment of human diseases. The clinical research is categorized into various phases as illustrated in Table 1. Clinical studies differ in their primary goal or endpoint (i.e., the most important outcome of the trial), the number of patients involved, and the specifics of the study design. However, all clinical studies conform to a strict set of criteria to protect the patients involved and to ensure rigorous evaluation of the drug.



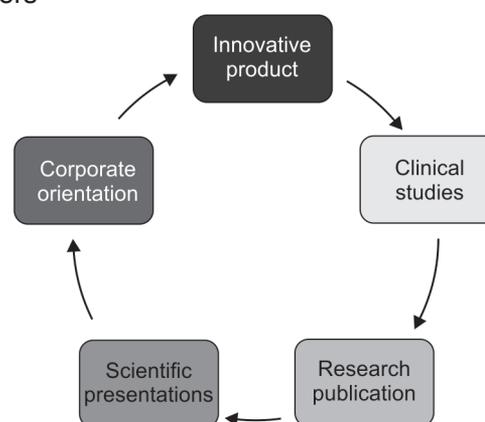
Clinical Trial Stages	Features
Phase I: Safety evaluation (4 years)	To test a potential therapy, procedure, or drug for the first time in human beings. The most important goal at Phase I is to establish a potential new treatment that is safe for humans.
Phase II: Efficacy evaluation (1.5 years)	More comprehensively evaluate a treatment's safety and effectiveness in a larger group of participants.
Phase III: Confirming in large group (5 years)	Confirm a therapy's effectiveness, monitor side effects, and compare it against the current standard treatments in a much large group of people.
Phase IV: Reviewing in clinical practice (1.5 years)	Conducted after a treatment has received Food and Drugs Association (FDA) approval and been brought to market. These trials help further evaluate long-term side effects and potential new uses for other conditions.

**Table 1:** Clinical Trial Phases

The results of clinical trial and research are transformed into scientific literature via technical publications and database of clinical trial registry. The clinical data written with technical language and complex medical terminologies are extremely perplexing for the consumers to understand the facts and figures of the trial process outcome.

### Information Technology: Bridging Scientific Connections To Consumers

More than 3 billion people are now using the Internet, according to the United Nations agency that oversees international communications. The number of Internet users has increased from 738 million in 2000 to 3.2 billion in 2015, according to a new report from the International Telecommunication Union (ITU). That's a sevenfold increase that brought Internet penetration up from 7 to 43% of the global population. Much of the growth in web connectivity has come from mobile. Mobile broadband penetration has gone up 12-fold since 2007, and this year 69% of people on earth will be covered by 3G broadband. One reason Internet access has taken off over the past 15 years is rising affordability. The ITU reports broadband is currently affordable in 111 countries, with a basic fixed or mobile plan costing less than 5% of Gross National Income (GNI) per capita. Internet use is also climbing in the developing world, often through the use of smart phones.



**Fig.1:** Product Establishment

The stages of providing the information to the consumers with the product establishment usually involve the following cyclic process as illustrated in Figure 1. For consumers to understand the research process and to evaluate the end point of the research, more technology-based tools will be the medium of choice, such as motion graphics, 3D animations, mobile apps, and web-based quick links. They will not only function as primary source of information but also will be able to provide the succinct information in a more acceptable fashion. The transformation of converting complex research into informative animation/graphics will totally change the consumer's attitude, knowledge, and behavior in accepting the new products and technologies. As introduction and development of new products are

emerging, clinical trials have been progressively mounting in intricacy over the past decade. Understanding the complexity of a trial plays a key role in helping consumers to properly recognize the new treatment modalities, drug developments, and new medical devices.

The blend of technology and science will globally reshape the future of corporate marketing and communications strategy.

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