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Applying User Experience Design to Develop Effective Patient Support

Treatment nonadherence is a complex behavior that requires much more than a simple one-size-fits-all approach to address the challenge. What can pharma learn from the behavioral sciences to deliver patient support that is effective in improving tx adherence?

Health psychology and behavioral economics provide us with theories and insights to develop effective patient support programs (PSPs) to optimize treatment adherence. The field of User Experience (UX) design provides another critical area to consider, especially with programs that have a digital component.

UX design is a term that describes a wide field of work, and has been variously defined. When applied to patient support, UX design is focused on how an individual experiences a digital PSP, usually a website or mobile app.

Why is UX design important?

How an individual experiences a website or app includes how the PSP is *used*, how it is *valued and perceived* by the individual, and how the interaction makes the individual *feel*. Robust UX design should ask the following questions:

- ▶ **Content:** is the content perceived as relevant, useful and credible?
- ▶ **Form/function:** is the design intuitive and usable? Can the content be easily accessed, even for individuals with limited abilities?
- ▶ **Time:** does the program support the individual over the patient journey as their needs vary?

Any good UX designer will tell you that to effectively design a website or app for an individual user, you must first understand the user. In my experience, the best UX design draws on robust theory to develop digital programs that are experienced as both relevant and usable to the individual patient. Specifically, good UX design leverages:

- ▶ **Health psychology** to help build PSP content, by understanding why or why not individuals engage in behavior change, and how to apply strategies to support behavior change.
- ▶ **Behavioral economics** to structure content and help make it accessible to patients by understanding the common errors individuals make in decision making, and how to mitigate these.

Pharma would be remiss if they failed to apply these learnings from the behavioral sciences to guide the development of PSPs that are personalized to individual patient need and pleasing to engage with.

Learn more about our use of UX design in patient support programs at www.atlantishealthcare.com. [@AtlantisHlthUS](https://twitter.com/AtlantisHlthUS)



Nanotechnology will continue to substantially change the bioavailability of drugs that just aren't very bioavailable.

MARC IACOBUCCI
NanOlogy

Our technology is so exquisitely targeted, and we have shown in preclinical models it selectively blunts autoimmune disease without impairing immunity.

DR. JANICE LECOQC
Parvus Therapeutics



sonication, reducing that dissolved drug substance into smaller and smaller droplets that are then precipitated by super critical fluid carbon dioxide into submicron particles that meet strict specifications for mean particle size."

NanOlogy's process is unique, he says, because the other ways of making small particles impart static energy charged into the particles, which creates a nonstable powder that can simply clump together and cannot be easily handled for further processing.

"Our technology doesn't impart any energy into the small particles so they remain stable in powder form, and we're able to suspend the medicine in a simple vehicle like saline, which allows for the particles to be delivered locally to tumors," Mr. Iacobucci explains.

The particles themselves are a sustained-release form, which allows the molecules of active ingredient to release at the tumor site for weeks.

In November 2017, the company began enrolling patients for its Phase II trial of NanoPac (nanoparticle paclitaxel) for the treatment of mucinous cystic neoplasms (MCNs) of the pancreas. In December, a pancreatic cancer trial was launched. The company's clinical trial in actinic keratosis is expected to complete in January 2018.

Nanoparticles as Active Ingredients

Another branch of the new generation of nanomedicine research is investigating the use of the nanoparticle itself as the active ingredient. One company involved in this research is Parvus, which is developing a new class of biological therapeutics called Navacims that are designed to halt autoimmune disease by restoring immune tolerance.

"The nanoparticle enables proteins to acquire function that by themselves cannot mediate," says Pere Santamaria, M.D., Ph.D., founder and chief scientific officer, Parvus Therapeutics. "There is a symbiotic relationship between the nanoparticle and the proteins that we coat onto it; the result is a powerful new biological activity that enables the protein to reprogram disease-causing lymphocytes into disease-suppressor ones."