

# Rx for Pharmacies

*The American Pharmacists' Association reported that more than 1.5 million preventable medication-related adverse events occur each year in the U.S. The number of outpatient prescriptions and inpatient orders increases every year, but the number of pharmacists available for hire is decreasing. By 2020, there will be 157,000 unfilled pharmacy openings. How will your pharmacy cope with the pressures of meeting increased demand with fewer employees? Can the design of your pharmacy help in your efforts to become safer and more efficient?*

## A user-centered research and design process

To better understand the critical issues affecting pharmacy environments and the needs of clinical and pharmacy staff, Nurture launched an extensive research and design initiative.

**Phase One: Understand.** We conducted secondary research to explore the existing state of inpatient and outpatient pharmacy work in the U.S. and to understand the trends that will affect them in the future. We studied pharmacy as a business, how orders are processed, and how pharmacies are currently being designed.

**Phase Two: Observe.** Observation is critical to understanding how issues and needs play out in pharmacy environments. Our research team visited 13 pharmacies, including inpatient, outpatient and retail facilities, to study workflow patterns and uncover explicit, tacit and latent user needs.

**Phase Three: Synthesize.** By synthesizing our secondary and primary research, we developed design principles that helped generate planning ideas for pharmacy spaces. These serve as starting points for discussions about these environments, and may be used as a checklist during the design process.

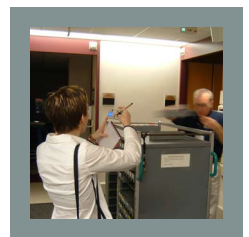
**Phase Four: Realize.** A series of design charrettes produced sketches and small-scale models of product and environment concepts based on our design principles. The thought starters suggest different ways to think about the pharmacy as a system, depending on the specific needs of an individual facility.

**Phase Five: Prototype.** The most promising sketches and models generated during the Realize phase were further developed into full-scale prototypes, which were then measured through user feedback to help inform future iterations.



### Synthesize

We synthesize our secondary and observational research to uncover insights and opportunities.



### Observe

We use a variety of observation techniques to study explicit, tacit and latent user needs.



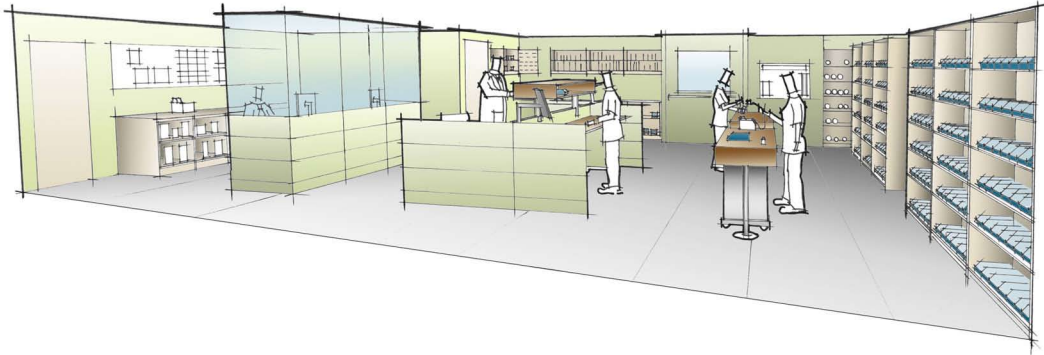
### Prototype

We build full-scale prototypes to generate user feedback.

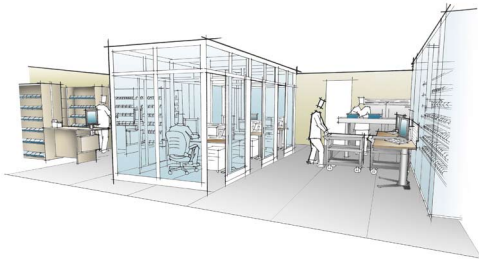
*Nurture has gained many insights and examples of how to make the pharmacy environment a more efficient space. Here are just a few examples of what we've learned...*

### Improving the process

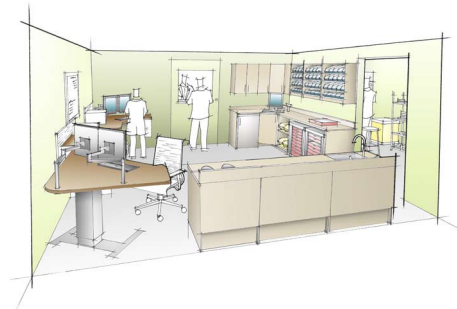
The measure of a pharmacy's efficiency is how quickly it can process orders while maintaining the highest level of accuracy. Our observations showed that many pharmacy environments actually inhibit an effective workflow, rather than supporting it. These thought starters represent new ways of thinking about the workflow.



**Inpatient Lean, Non-automated Pharmacy.** Pharmacy work is constantly changing as new machines are invented to take over some of the tasks, new processes are initiated by the hospital, and staff roles are changed to meet demands. In this setting, the pharmacy is designed to be easily reconfigured around changing needs, while providing the environments necessary for concentrated work and efficient handoffs.



**Inpatient, Automated Pharmacy.** One way in which pharmacies are trying to meet demand is through the use of automated dispensers, or robots. This setting shows how a pharmacy can be redesigned to efficiently accommodate the change in workflow.



**Inpatient, Satellite Pharmacy.** Many pharmacies are establishing satellites throughout the hospital, to support specialized units such as ORs, pediatrics, labor and delivery, cardiac, etc. In this setting, the satellite is designed to process requests from the specialized unit, whether in the form of pre-packaged kits, or on-demand order fill.

To learn more about Nurture research and how we can collaborate with you, please contact us and ask about scheduling time for our *Rx for Pharmacies* presentation.