OBJECTIVES
To explore patient preferences in private rooms, semi-open areas, and open spaces for infusion treatments in order to assess which environmental elements are most important to patients.

Patient needs and environments for cancer infusion treatment


Key Concepts/Context
Roughly 1.5 million Americans are diagnosed with cancer every year, and more than 50% of cancer patients receive chemotherapy for treatment. Chemotherapy is delivered through infusion, which uses an intravenous (IV) administration and support system to deliver treatment. A cancer patient may visit an infusion center up to 100 times during the first year of treatment, with each individual treatment potentially lasting several hours. Considering how infusion typically results in unpleasant health side effects in patients, and how patients spend a substantial amount of time in these infusion environments, it is important to consider how these areas can be optimized to enhance the overall quality of patient care.

Methods
166 patients were surveyed and 252 patients observed over the course of this study, which was conducted in an academic cancer center. The 12-item survey questioned patients about their preferences in infusion room environments and asked about their previous experiences with these environments. Recurring themes were extracted from a written portion of the survey and factored into data analysis. On-site observations of patients were divided among 75 private rooms and 177 shared environments, and included notes on both environmental items and user behavior.

Findings
Results indicated that the three types of infusion environments (private, semi-open, and open) were equally popular among participants. Most participants over the age of 70, as well as most male participants, preferred semi-open and open environments. Patients who preferred private rooms voiced an attraction to privacy, high-quality sleep, reduced sound levels, and easy restroom access. Patients who preferred semi-open environments often voiced a desire to interact...
with other patients. Patients who preferred open environments also noted a desire for social interaction, but also mentioned natural light and window views as important factors. Common physical features noted by all participants included personal televisions, blankets, food and beverage access, window views, and natural lighting.

**Limitations**

The authors noted that the sample of participants involved in the study was not diverse: 70% were female and 85% were Caucasian. Window availability may have greatly affected patient preferences, but was not controlled in this study and can vary greatly depending on the hospital. This study was conducted in one hospital; therefore the results may not be universally applicable to all hospitals.

**Design Implications**

Since different patients have different preferences for infusion room environments, designers should consider providing a variety of options ranging from private to fully open spaces. Infusion room designers could consider providing window-view access to patients, and positioning the windows so that natural light is allowed into the environment. Lightweight and moveable furniture, such as book carts, could be considered for infusion rooms so that patients have easier access to their own belongings while alone.