

## POSTER ABSTRACTS

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PS1 – 34

### A Comparative Assessment of Two Workflow Models for Patient Completed Computerized Questionnaires

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**Background:** It is widely recognized that valid and reliable patient-reported outcomes data can be used to guide and improve rheumatologic treatment decisions. Although validated questionnaires are available, they are rarely used in practice because of the workflow challenges associated with using paper-based instruments. Computerized questionnaires offer an advantage in using and displaying data in real time. However, in a busy clinical practice, electronic questionnaire administration must take into account extant workflows. We compared two workflow models, each using a touchscreen interface for patients to complete a 110 item validated questionnaire during routine visits.

**Methods:** Each workflow model was tested in a separate clinic site. In the first clinic (1 nurse, 1 rheumatologist) the workflow involved use of the touchscreen in the exam room. In the second clinic (larger, complex practice and lower exam room to physician ratio) the workflow involved use of the touchscreen in the waiting room. The primary outcome was the rate of questionnaire completion in each clinic.

**Results:** Use of computerized questionnaires in a clinical practice involves four steps: 1) registration (ensuring that a patient's data is uniquely recorded), 2) questionnaire completion, 3) scoring, and 4) storing of results for later use by providers. The waiting-room and exam-room workflows required a research assistant and nurse, respectively, to facilitate patient registration (using a keyboard and mouse to enter patient information). The exam room flow had a completion rate greater than 90%. As the registration requirements were the same for both workflows, the reason for the high rate was the built-in time allotted in the exam room to complete the questionnaire (i.e., while the patient was waiting for the physician). The waiting area flow required 3 months to achieve a questionnaire completion rate of >75%. The limited time allotted to questionnaire completion before being called back to the exam room (a result of the clinic's lack of spare exam room capacity) was the main reason for the lower collection rate.

**Conclusions:** Testing of the touchscreen patient-completed questionnaire showed that a high questionnaire collection rate is achievable in settings in which the process and/or physical layout allow sufficient time for completion. Otherwise, physician extenders (e.g., scheduling pre-exam visits) may be required to facilitate higher completion rates.