

**TITLE:** Usefulness of IApprove

**SOURCE:** Zaidi, S.T., Marriott, J.L., & Nation, R.L. (2008). The role of perceptions of clinicians in their adoption of a web-based antibiotic approval system: Do perceptions translate into actions?. *International Journal of Medical Informatics*, 77(1), 33-40.

A survey instrument was developed that included three scales (with 5-point Likert statements) to measure clinicians' usage of computers, perceived ease of use of iApprove, and perceived usefulness of iApprove.

*Usage of computers and iApprove.* The scale measuring the clinicians' usage of computers was adapted from Cork et al. (1998) and asked the respondent about the frequency of the routine clinical tasks they perform using computers.

To what extent do you personally use a computer for each of the following professional tasks? Please circle your answer.

1=Never perform this task

2=Never perform this task using computer

3=Sometimes use a computer

4=Often use a computer

5=Always use a computer

1. Documenting patient information (e.g. history & physicals, progress notes)
2. Accessing clinical data (e.g., laboratory data, EKGs, radiology reports)
3. Communicating with colleagues
4. Obtaining advice on a specific patient's diagnosis or therapy
5. Scheduling patient appointments
6. Preparing presentation slides or overheads
7. Searching the medical literature (e.g., MEDLINE)

The usage of iApprove among the participants was also monitored by using computerized usage logs that were automatically generated by the system from February 1 to August 31, 2005. The usage log showed the number of times an individual clinician obtained approval for restricted antibiotics.

*Perceived ease of use.* Ten items were constructed to measure perceived ease of use of iApprove in accordance with the heuristics proposed by Nielsen and Molich (1990), Davis's (1989) scale of perceived ease of use and common sense of what would be considered as ease of use of an electronic antibiotic approval program. Respondents were asked to indicate their level of agreement with each of the following statements ranging from 1-strongly disagree to 5-strongly agree.

1. It is easy for me to login to iApprove.
2. It is easy for me to find out what I want to look in to iApprove
3. It is easy for me to use iApprove with my daily workflow
4. It is easy for me to learn how to use iApprove
5. It is easy for me to use iApprove for getting antibiotic approvals
6. It is easy for me to use iApprove for calculating doses of antibiotics (e.g. Gentamicin)
7. It is easy for me to find more information related to the recommendations of iApprove
8. It is easy for me to show others how to use iApprove
9. It is easy for me to correct my mistakes in iApprove
10. It is easy for me to logout of the iApprove

*Perceived usefulness.* Ten items to measure the perceived usefulness of iApprove were constructed in the light of the scale of perceived usefulness proposed by Davis (1989) and common sense of what would be considered usefulness of iApprove. Respondents were asked to indicate their level of agreement with each of the following statements ranging from 1-strongly disagree to 5-strongly agree.

In my opinion, I believe implementation of the iApprove will:

1. Improve the documentation of patient care related to antibiotics at RMH.
2. Improve the communication between doctors and pharmacists related to antibiotic use
3. Improve the quality of care patients receive at RMH
4. Improve my adherence to evidence based practice
5. Improve my knowledge related to evidence based use of antibiotics
6. Increase the timely delivery of antibiotics to patients
7. Increase cost-effectiveness of antibiotic use at RMH
8. Increase my knowledge about antibiotic prescribing guidelines at RMH
9. Decrease the inappropriate use of antibiotics at RMH
10. Decrease the time I spend in getting antibiotic approvals for my patients

## **CITATIONS:**

Cork, R.D., Detmer, W.M., Friedman, C.P. (1998). Development and initial validation of an instrument to measure physicians' use of, knowledge about, and attitudes toward computers. *Journal of the American Medical Informatics Association*, 5, 164-176.

Davis, F.D. (1989). Perceived usefulness, perceived ease of use and user acceptance of information technology. *MIS Quarterly*, 13, 319-340.