

## Background

- ▶ With the advent of Web 2.0 technologies, user-edited online resources such as Wikipedia are increasingly tapped as resources
- ▶ Wikipedia is cited by health professionals, sometimes as an authoritative resource
- ▶ However, there is little research on the quality of health information found in Wikipedia

## Objectives

The objective of this study was to compare the scope, completeness, and accuracy of drug information in Wikipedia and a free, online traditionally-edited database

## Methods

- ▶ Wikipedia and a free, online database (Medscape Drug Reference) were compared on eight essential categories of drug information
- ▶ 80 questions were used to assess information scope (% of answers present), completeness, and accuracy (by error incidence)
- ▶ Each drug entry evaluated in Wikipedia was compared to its corresponding entry 90 days prior to assess positive or negative change
- ▶ Fisher's exact was used to compare scope, unpaired *t* test was used to compare completeness, and paired *t* test was used to compare current and previous Wikipedia results

## Results – Scope and Completeness

Figure 1. Scope for Wikipedia and Medscape Drug Reference (%)

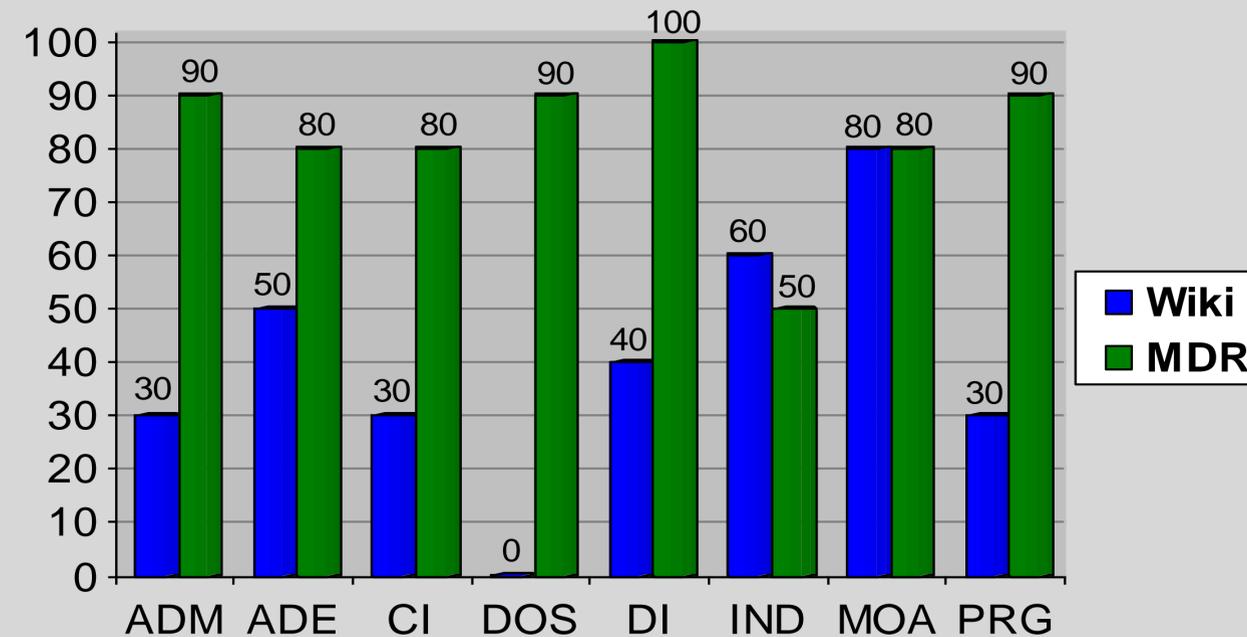
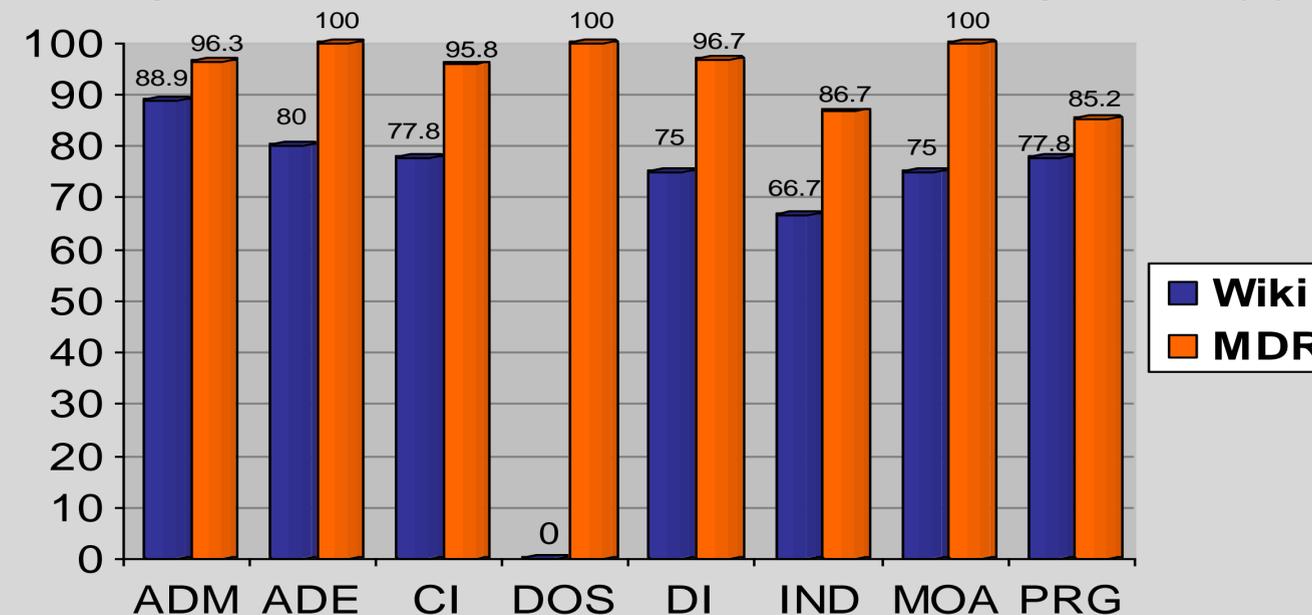


Figure 2. Completeness for Wikipedia and Medscape Drug Reference (%)



ADM=Administration, ADE=Adverse Drug Events, CI=Contraindications, DOS=Dosage, DI=Drug Interactions, IND=Indications, MOA=Mechanism of Action, PRG=Pregnancy

## Results – Summary

- ▶ Wikipedia was able to answer significantly fewer drug information questions (40.0%) compared to Medscape (82.5%) [ $p < 0.001$ ]
- ▶ Wikipedia answers (76%) were less complete than those in Medscape (95.5%) [ $p = 0.00076$ ]
- ▶ No factual errors were found in Wikipedia, whereas four answers in Medscape conflicted with the answer key
- ▶ Errors of omission were higher in Wikipedia ( $n=48$ ) than Medscape ( $n=14$ ).
- ▶ Current Wikipedia entries were superior to those 90 days prior ( $p=0.024$ )

## Conclusions

- ▶ Drug information in Wikipedia has a narrower scope, is less complete, and has more errors of omission than the comparator database
- ▶ This user-edited process model (Wikipedia) demonstrated improvement over time for drug information entries
- ▶ Wikipedia may be a useful point of engagement for consumers but is not authoritative and should only be a supplemental source of drug information

## Disclosure

Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities:

Nothing to disclose: Kevin A. Clauson, Hyla H. Polen, Maged N. Kamel Boulos, and Joan H. Dzenowagis