

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 (%)

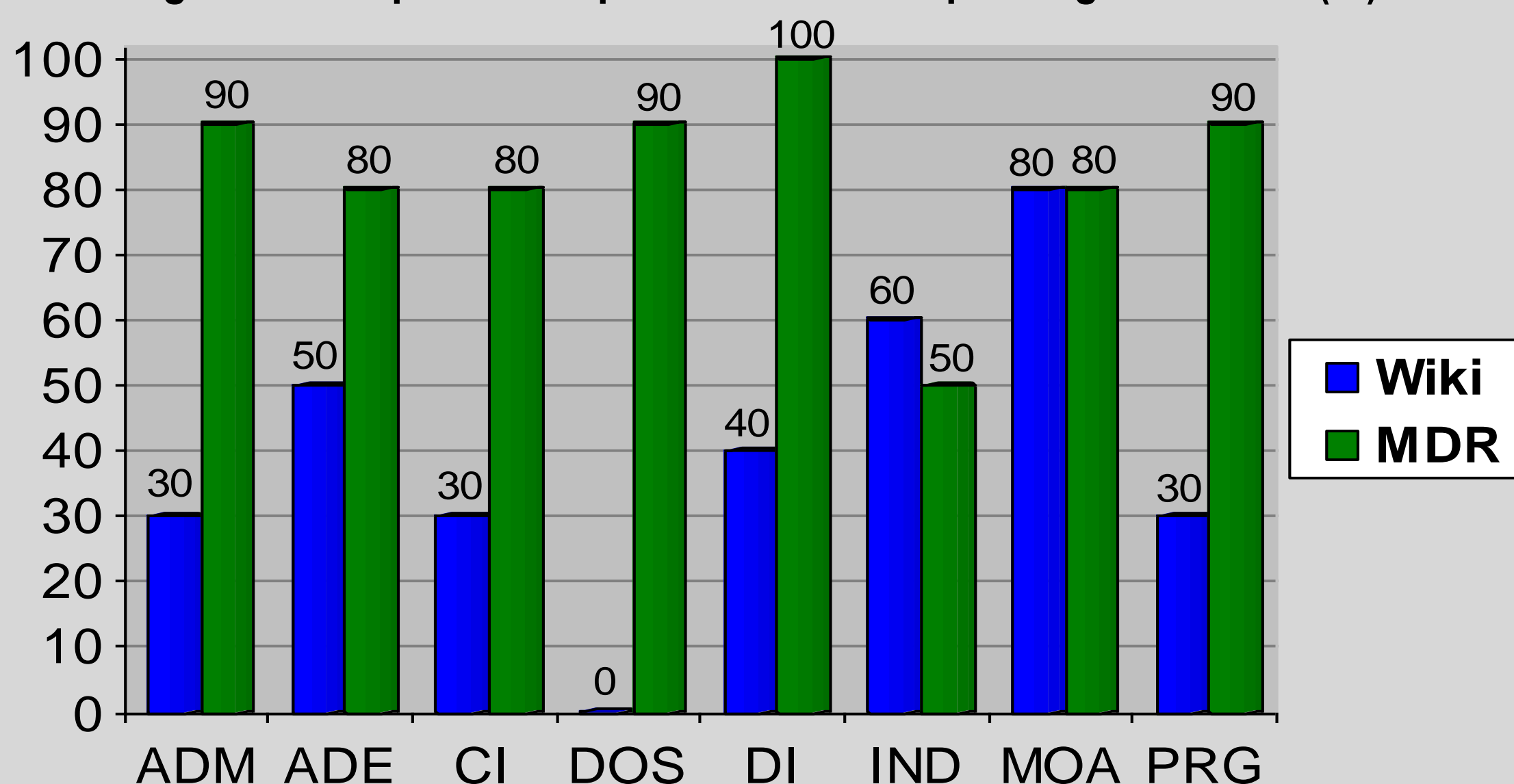
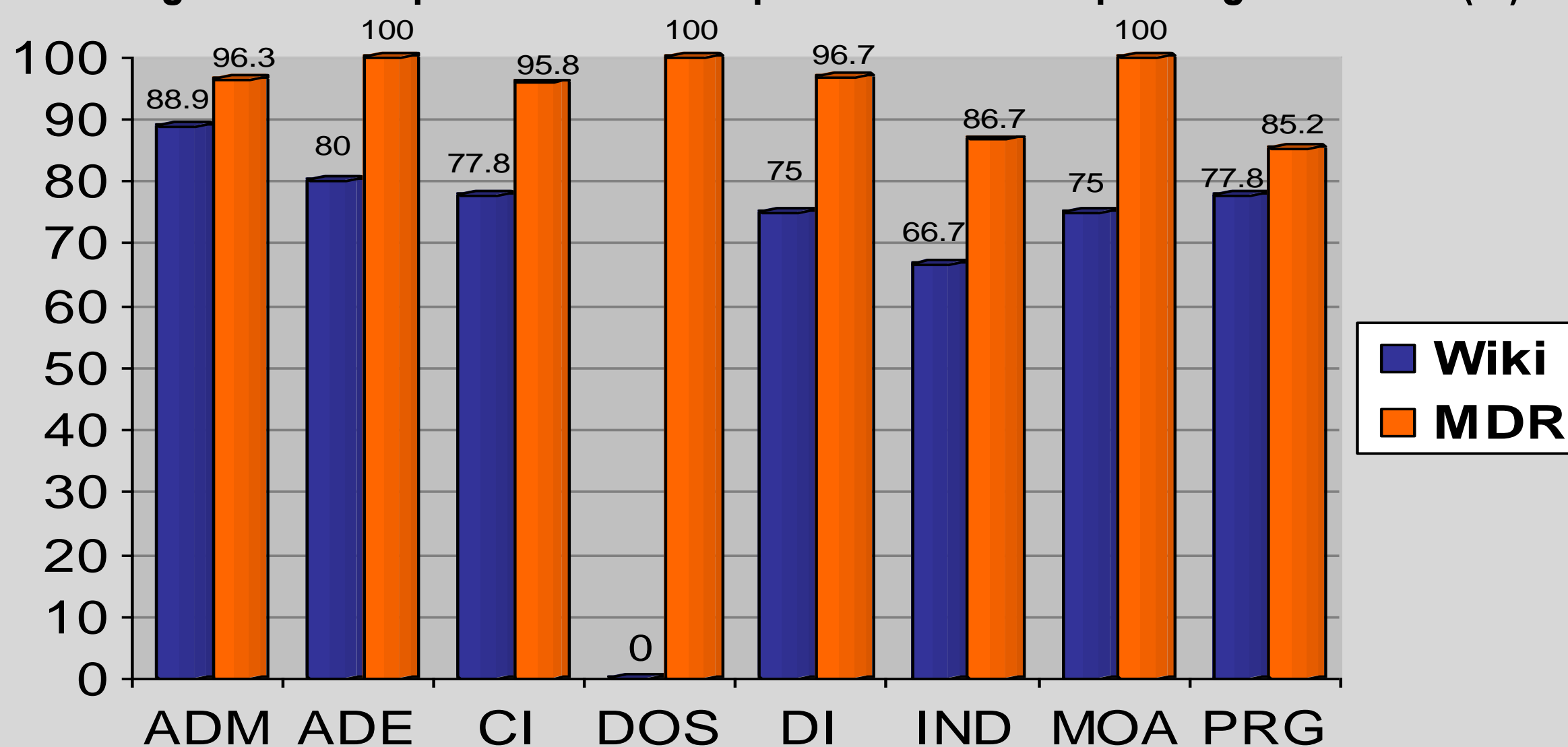


Figure 2. Completeness for Wikipedia and Medscape Drug Reference (%)



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