Evaluation of Written Prescription
Information Provided in Community
Pharmacies: A National Study

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Objectives

- Briefly review criteria, scoring methods
- Summarize major deficiencies
- Examine ratings by leaflet type, vendor
- Illustrate problems using sample leaflets

Study Differs From Past Work

- Shoppers presented 4 prescriptions at 384 randomly selected pharmacies in 44 states
- Expert raters nominated by 7 organizations
- Experts used 8 criteria from Action Plan
- Consumers also rated leaflets

Eight Criteria from 1996 Action Plan for Useful Information

1. Drug names and indications

2. Contraindications and what to do before using

3. Specific directions about how to use, monitor, and get most benefit

4 Specific precautions and how to avoid harm

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Eight Criteria from 1996 Action Plan for Useful Information

5. Serious and frequent adverse reactions, what to do

6. General information, encouraged to ask questions

7 Scientifically accurate, unbiased, up-to-date

8 Readily comprehensible and legible

Expert Rating Forms

- Each form had 8 criteria, 62-63 sub-criteria
- Sub-criterion worth 0-2 points *(2=full adherence)*
- Computer calculated % of points obtained
- Adherence to criteria ranged from 0-100%
- Five levels of adherence were defined

Five Levels of Adherence to Criteria

Adherence Level	Point Range %
Level 5	80-100
Level 4	60-79
Level 3	40-59
Level 2	20-39
Level 1	0-19

Consumer Rating Process

- Recruited 154 consumer raters in 11 states
- Facilitator met with 8-15 raters per session
- Each rater independently rated ~ 10 leaflets
- Leaflet rated on 12 items (1-5 points each)

Comprehensibility Items

- Poorly-well organized
- Poor-good length
- Unclear-clear
- Unhelpful-helpful
- Incomplete-complete
- Hard-easy to find important information

Legibility and Summary Items

- Legibility: Poor-good print size, poor-good print quality, poor-good spacing between lines
- Summary Items: overall ease of reading, overall ease of understanding, overall usefulness

% Shoppers Given Leaflet and Mean Expert Rating of Leaflet

	Given leaflet	Mean expert rating
atenolol	90 %	51 %
glyburide	89 %	51 %
atorvastatin	89 %	52 %
nitroglycerin	88 %	55 %

Expert Ratings, All Criteria
(n=1,367 leaflets)
■ Level 1   Level 2   Level 3   Level 4 ■ Level 5
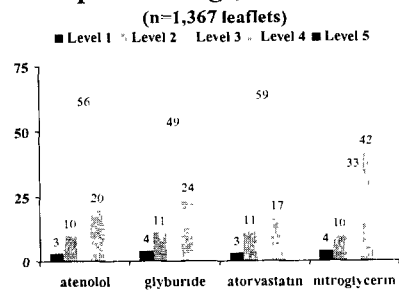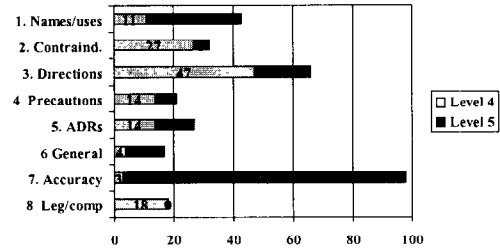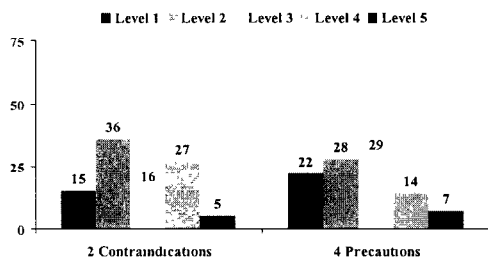
Expert Ratings by Criterion

- Highest Ratings:
  - #7 accuracy, unbiased
- Moderate Ratings·
  - #1 names, uses
  - #3 directions

- Low Ratings:
  - #5 ADRs, what to do
  - #6 general information
- Lowest Ratings:
  - #2 contraindications
  - #4· precautions
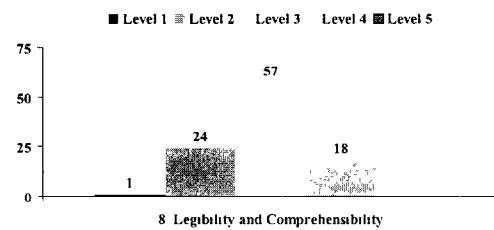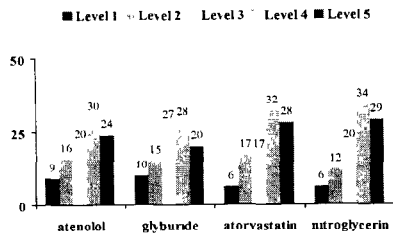 - #8 legibility/comprehens

% Leaflets Rated Level 4-5

1. Names/uses
2. Contraind.
3. Directions
4 Precautions
5. ADRs
6 General
7. Accuracy
8 Leg/comp

□ Level 4
■ Level 5

0   20   40   60   80   100

Lowest Expert Ratings - Criteria 2 & 4

■ Level 1 Level 2   Level 3 Level 4 ■ Level 5

75
50
25   15   36   16   27   5   22   28   29   14   7
0

2 Contraindications   4 Precautions

Lowest Expert Ratings - Criterion 8

■ Level 1 Level 2   Level 3   Level 4 ▦ Level 5

75
50   57
25   24   18
0   1

8 Legibility and Comprehensibility

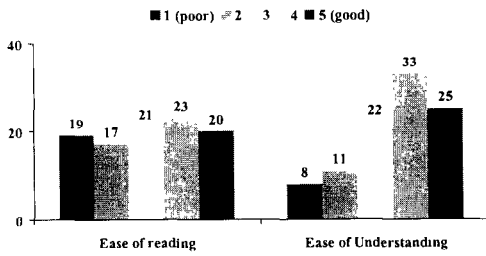## Consumer Ratings, All Items (%)
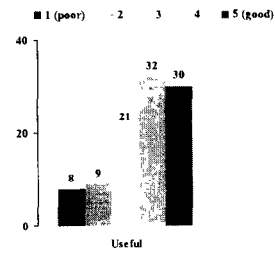
■ Level 1 ⋅ Level 2   Level 3   Level 4 ■ Level 5

Consumer Ratings by Item

- Lowest ratings: print size, print quality, spacing, overall readability
- 36% of leaflets given low ratings on readability

Consumer Summary Rating:
### Readability and Understandability

■ 1 (poor) ⋅ 2   3   4 ■ 5 (good)

Consumer Summary Rating:
Usefulness
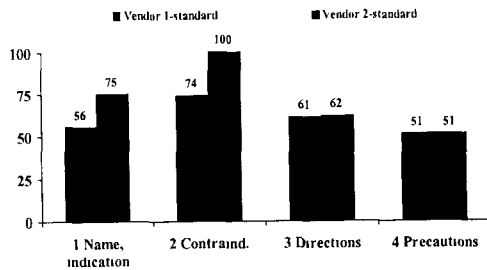
■ 1 (poor) ⋅ 2   3   4 ■ 5 (good)

Factors Linked to Ratings (atenolol)

- Leaflet type: - abbreviated (n=48 sites or 13 7%)
                - standard (n=302 sites or 86 3%)
- Leaflet vendor and version
    - Vendor 1, Versions 1-3 (304 sites, 86 9%)
    - Vendor NA, Version 1-2 (46 sites, 13 1%)
    - Vendor 2 (comparison, hospital leaflet)
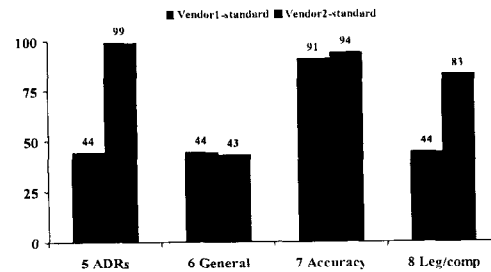- Leaflet format and pharmacy type

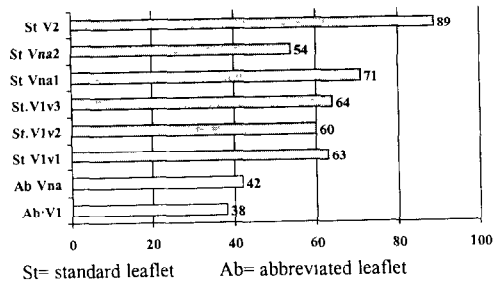## Expert Ratings by Leaflet Type, Vendor, and Version

St= standard leaflet Ab= abbreviated leaflet
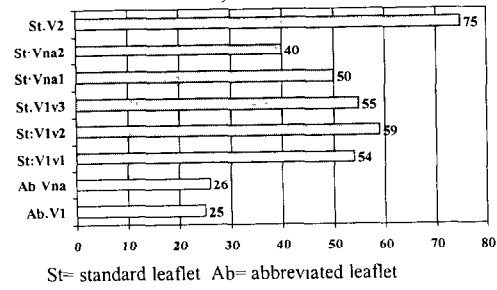
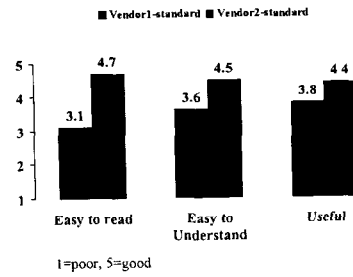## Expert Ratings of Standard Leaflets: Vendor 1 Vs. Vendor 2 (atenolol)

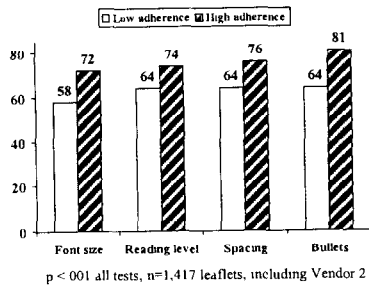## Expert Ratings of Standard Leaflets: Vendor 1 Vs. Vendor 2 (atenolol)

6

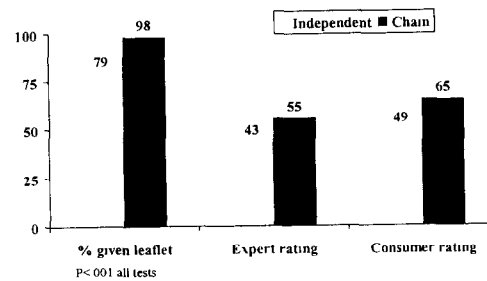## Consumer Ratings by Leaflet Type, Vendor, Version (atenolol)

Category	Value
St V2	89
St Vna2	54
St Vna1	71
St.V1v3	64
St.V1v2	60
St V1v1	63
Ab Vna	42
Ab-V1	38

Scale: 0, 20, 40, 60, 80, 100

St= standard leaflet   Ab= abbreviated leaflet

Consumer Ratings of Standard Leaflets: Vendor 1 Vs Vendor 2 (atenolol)

■ Vendor1-standard ■ Vendor2-standard

	Easy to read	Easy to Understand	Useful
Vendor1	3.1	3.6	3.8
Vendor2	4.7	4.5	4 4

1=poor, 5=good

Consumer Overall Ratings by Leaflet Format

□ Low adherence ▨ High adherence

	Font size	Reading level	Spacing	Bullets
Low adherence	58	64	64	64
High adherence	72	74	76	81

p < 001 all tests, n=1,417 leaflets, including Vendor 2

Leaflet Distribution and Ratings by Pharmacy Type

Independent ■ Chain

	% given leaflet	Expert rating	Consumer rating
Independent	79	43	49
Chain	98	55	65

P< 001 all tests

Leaflet Type by Pharmacy Type

□ Independent ■ Chain

P< 001
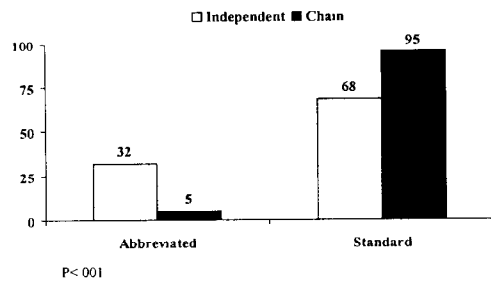
Conclusions:
Four Main Problems Identified

- ➤ 11% of pharmacies gave no leaflet
- ➤ 13% of pharmacies gave abbreviated leaflet
- ➤ 36% of leaflets hard to read (font, spacing)
- ➤ leaflets failed 6 of 7 content criteria; >90% failed on contraindications and precautions