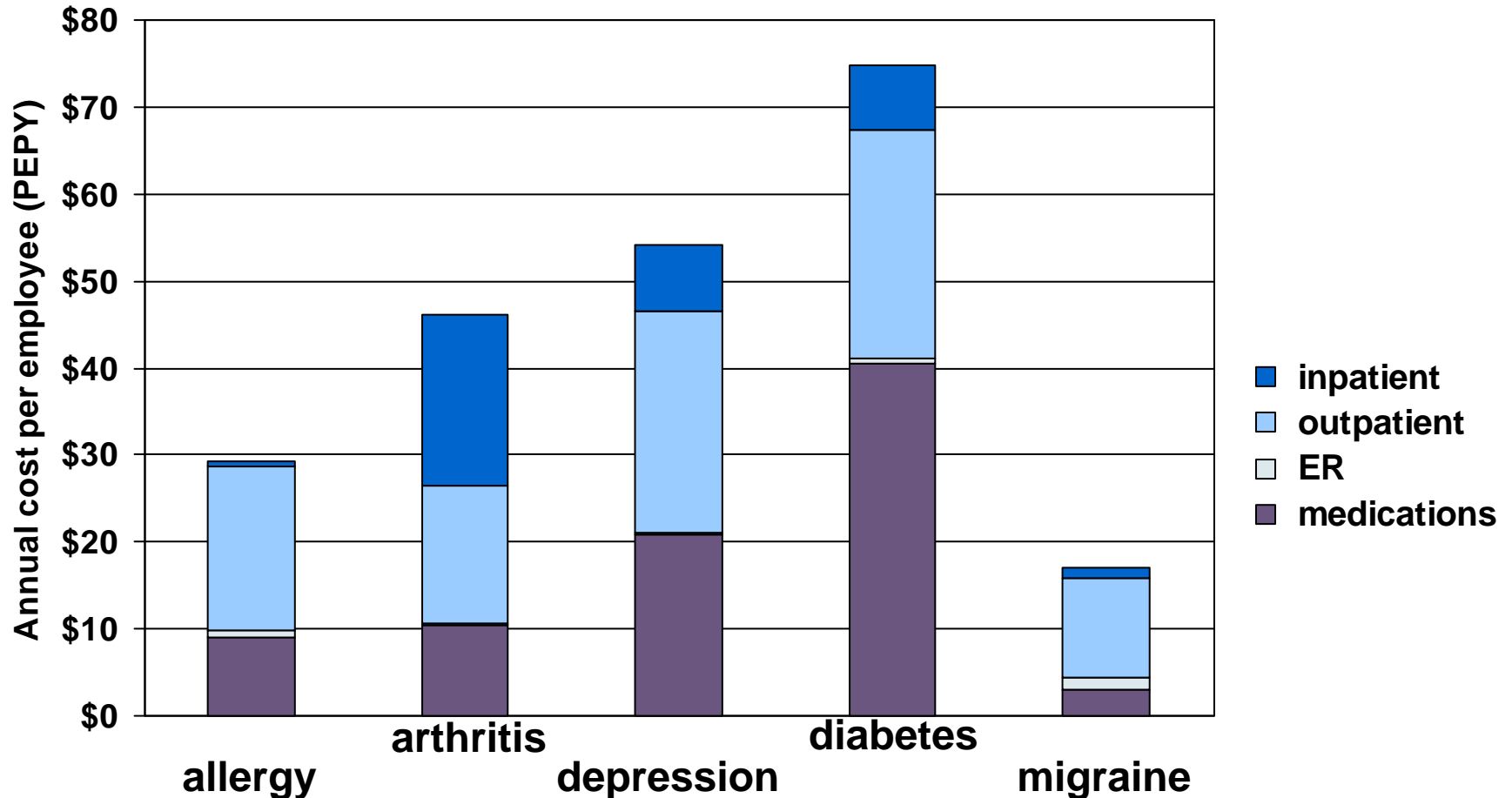


Multiple contributors to poor adherence

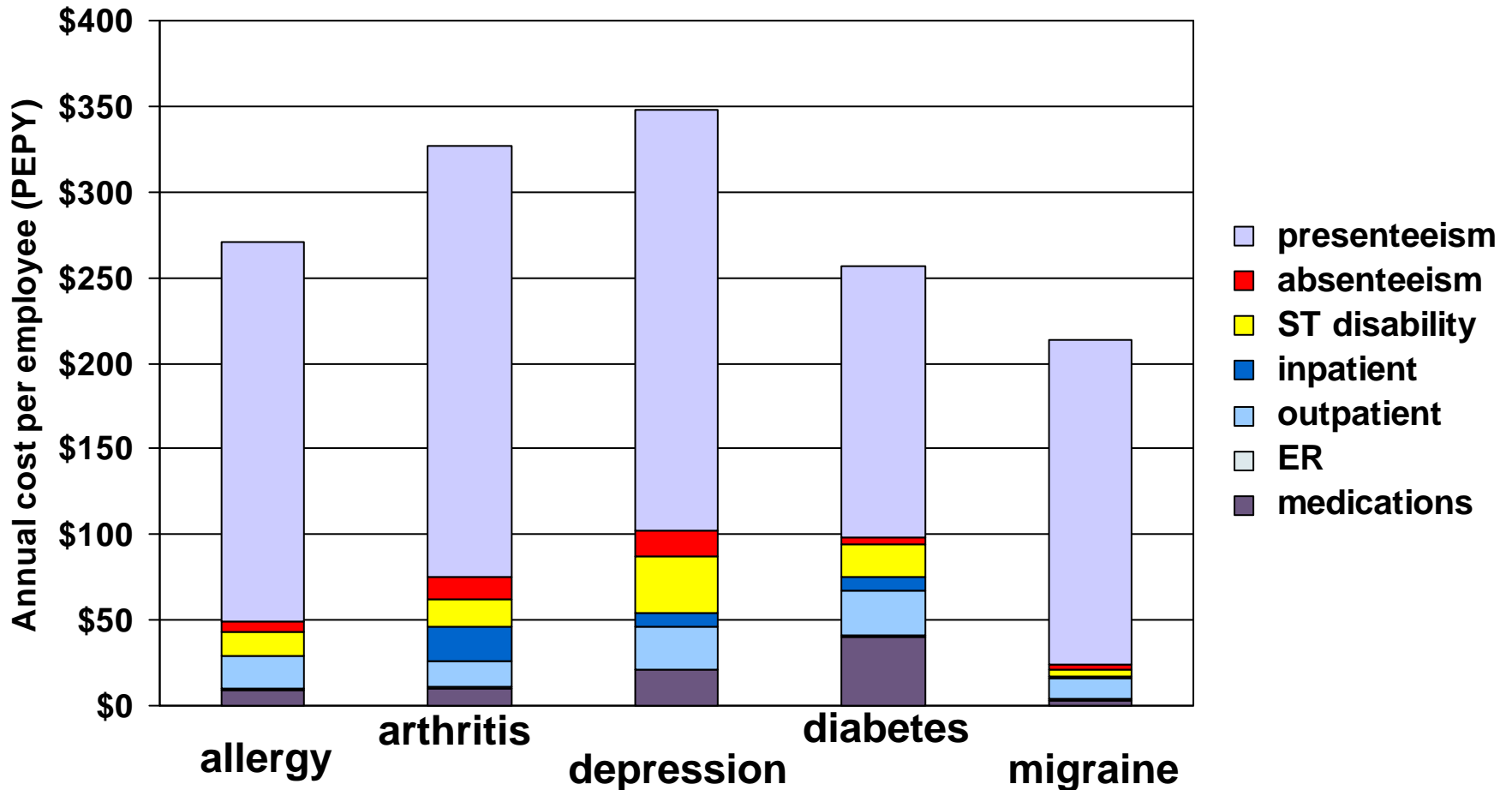
- ▶ Cost
- ▶ Health literacy
- ▶ Comorbid conditions and other medications
- ▶ Medication dosing schedule
- ▶ Side effects
- ▶ Perceived benefit from medication
- ▶ Self-efficacy and motivation
- ▶ Clinician relationship
- ▶ Clinician continuity and follow-up



The medical cost of illness

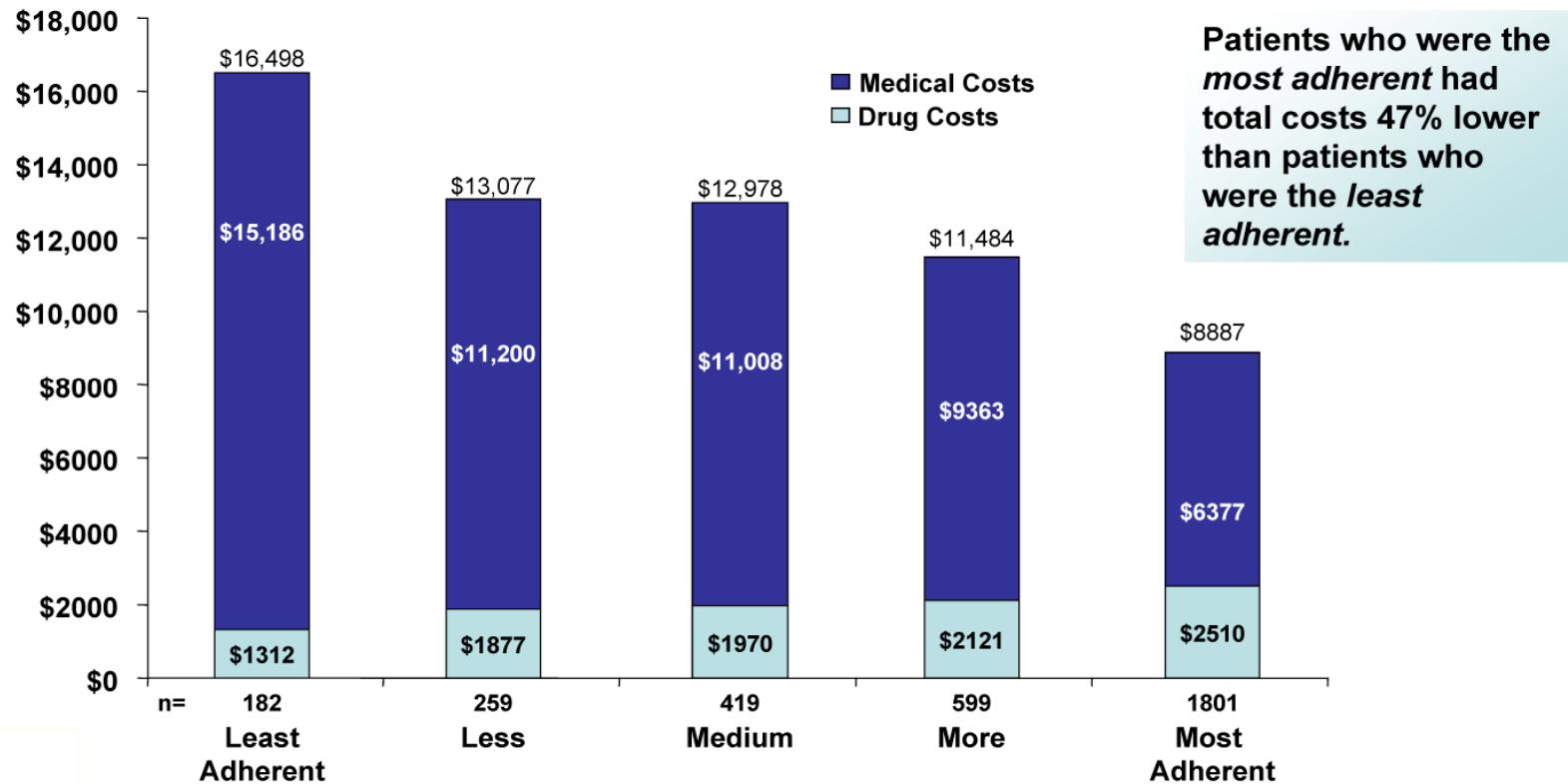


The total cost of illness



Lower medication adherence results in higher overall healthcare costs

Mean All-Cause Medical and Drug Costs by Adherence-Rate Category for Diabetes (1997-1999)



Sokol MC et al. *Med Care*. 2005;43:521-530.

Employer approaches to medication adherence

- ▶ **Cost-shifting:** “No wait – we’ve got it all wrong!”
- ▶ **Value-based benefit design:** Lower costs to promote adherence
- ▶ **Incentives:** Free medications and supplies in return for participation in disease management program

- ▶ **Big issue:** Compliance doesn’t mean that treatment to target goal will be achieved.





It's not just about the cost...

- ▶ Physician-patient relationships are important
- ▶ They drive improved compliance with care
- ▶ But do they have an impact on medication adherence?



Medication adherence – what role do physicians play?

- ▶ Six county region in NE Ohio
- ▶ One year's data from 88 plan sponsors
- ▶ Diabetes patients only
- ▶ Evaluation of patient medication adherence at a physician level
- ▶ Physicians separated into quartiles based on average adherence of their patients

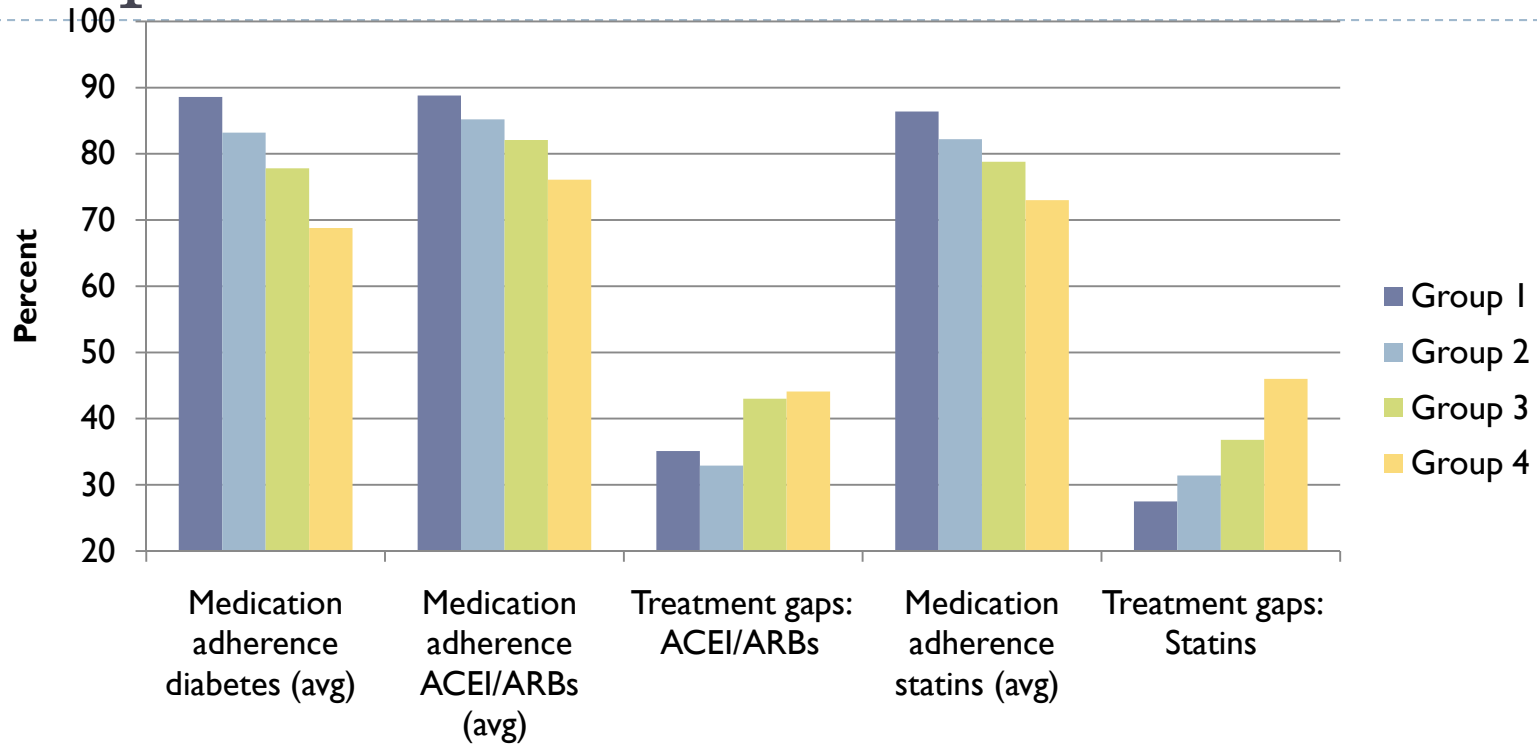


Study statistics

- ▶ Four groups of 50 physicians each
- ▶ Patient groups with between 824-1165 patients
- ▶ No significant differences among physician groups – specialty, number of patients
- ▶ No significant differences among patient groups – age, gender, race, zip code income/education, number of chronic medications, cost share



Medication adherence by physician group



- Clear differences among physician-specific adherence rates
- Consistent patterns for all medications
- Lower adherence is associated with lower frequency of medication use for ACE/ARBs and statins

Physician-connected patients are more compliant with care

Performance measure	Physician-connected patients (%)	Practice-connected patients (%)	p value
Mammography	78.1	65.9	<.001
Cervical cancer	86.4	80.2	<.001
Colorectal cancer	72.1	58.0	<.001
HbA1c in past year	90.3	74.9	<.001
HbA1c <8%	74.7	70.5	.004
LDL in past year	83.2	61.2	<.001
LDL<100mg/dl	77.0	67.2	.64

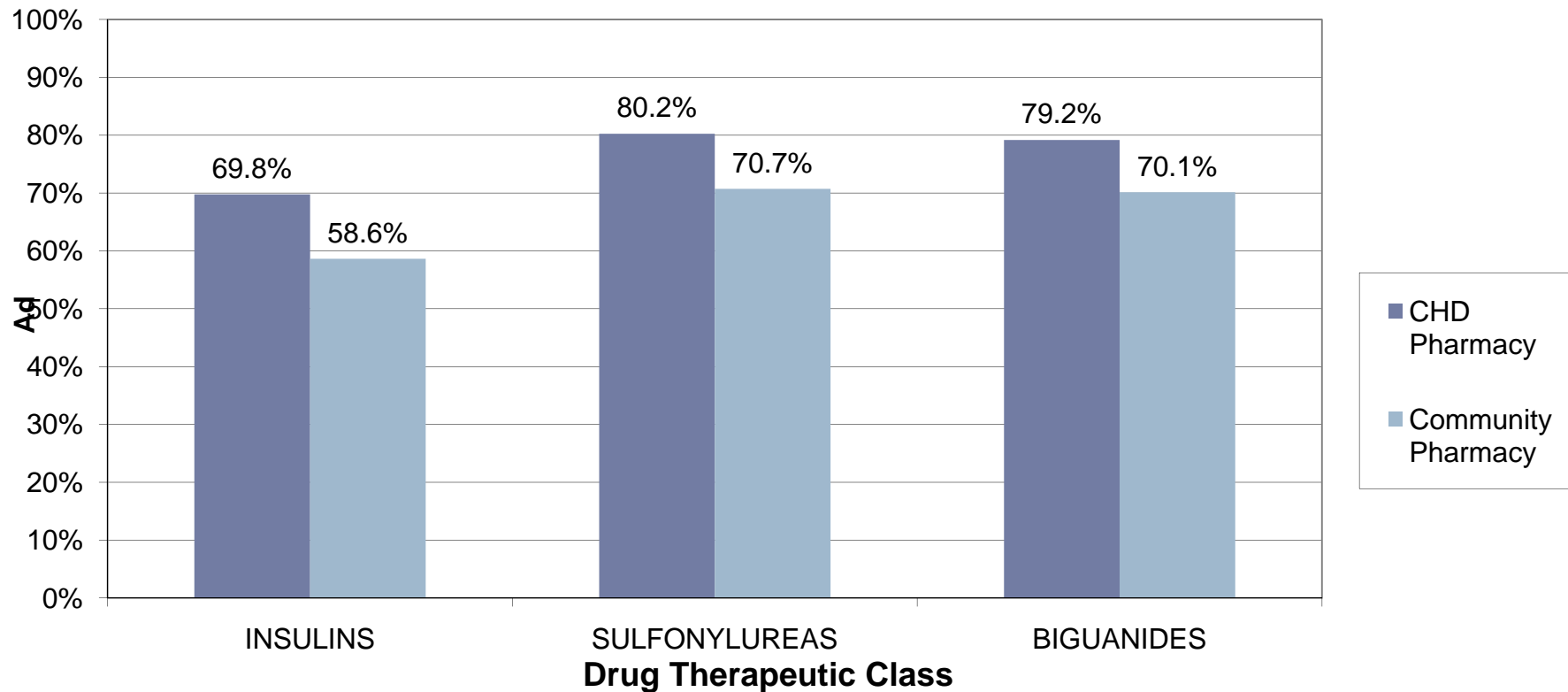
- Study involved 155,590 patients seen in one of 13 primary care practice sites
- Patients attributed to physician, practice, or neither based on validated algorithm

Ann Intern Med. 2009;150:325-335.



Improved medication adherence in the workplace primary care setting

Diabetes Medication Adherence for Patients Using On-site Services



Am J Manag Care. 2009;15:e53-e59

