

Trends in Uncontrolled Diabetes
Ambulatory Care Utilization
Among Hispanic and Non-
Hispanic Populations, 1996-2005

David J. Delgado, PhD

Dhanush Mekala MBBS, MPH

Department of Health, West Chester
University, West Chester PA

PRESENTER DISCLOSURES

- The presenter, David J. Delgado, PhD, MPH reports no relationships to disclose.

BACKGROUND

- 2010 Prevalence: 25.8 million diabetics¹
- Complications: heart disease and stroke, hypertension, blindness, kidney disease, amputations and others¹
- Total cost of diabetes: \$174 billion (2007)²
- Hospital reimbursement for uncontrolled diabetes: approximately 2.4 billion (2004)³

AIMS

- To present preliminary estimates of national ambulatory visits for Hispanic and non-Hispanic uncontrolled diabetes patients from 1996-2005.

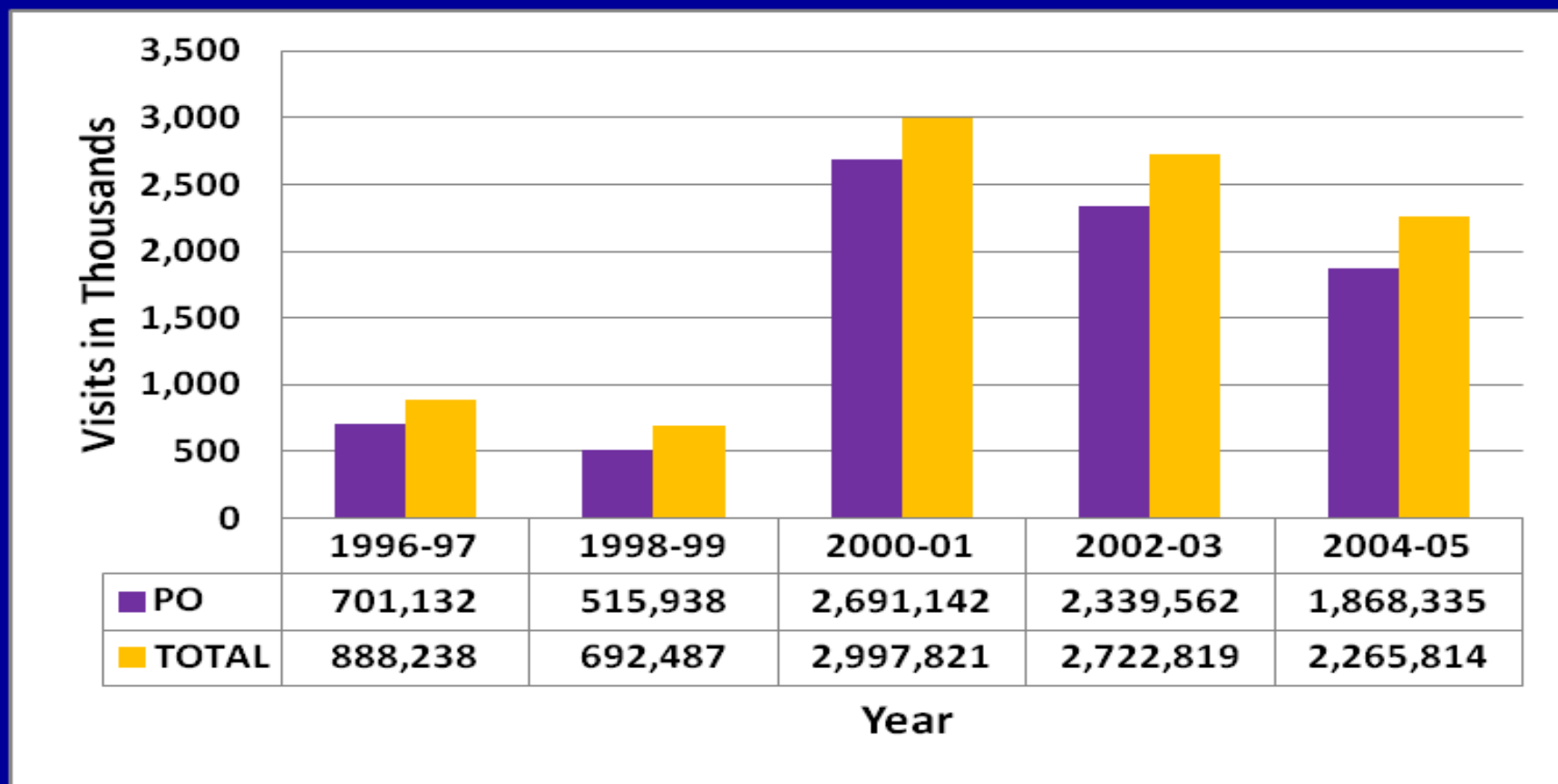
METHODS

- We used 1996-2005 data from National Ambulatory Medical Care Survey and National Hospital Ambulatory Medical Care Survey collected by the National Center for Health Statistics.
- Estimations were done using the Statistical Export and Tabulation System software.

METHODS

- Utilization of ambulatory care included visits to: physician offices (POs), hospital emergency departments (EDs) and hospital outpatient departments (OPDs).
- Visits for which uncontrolled diabetes was listed as the first diagnosis (ICD-9-CM codes 250.x2 and 250.x3) were estimated.

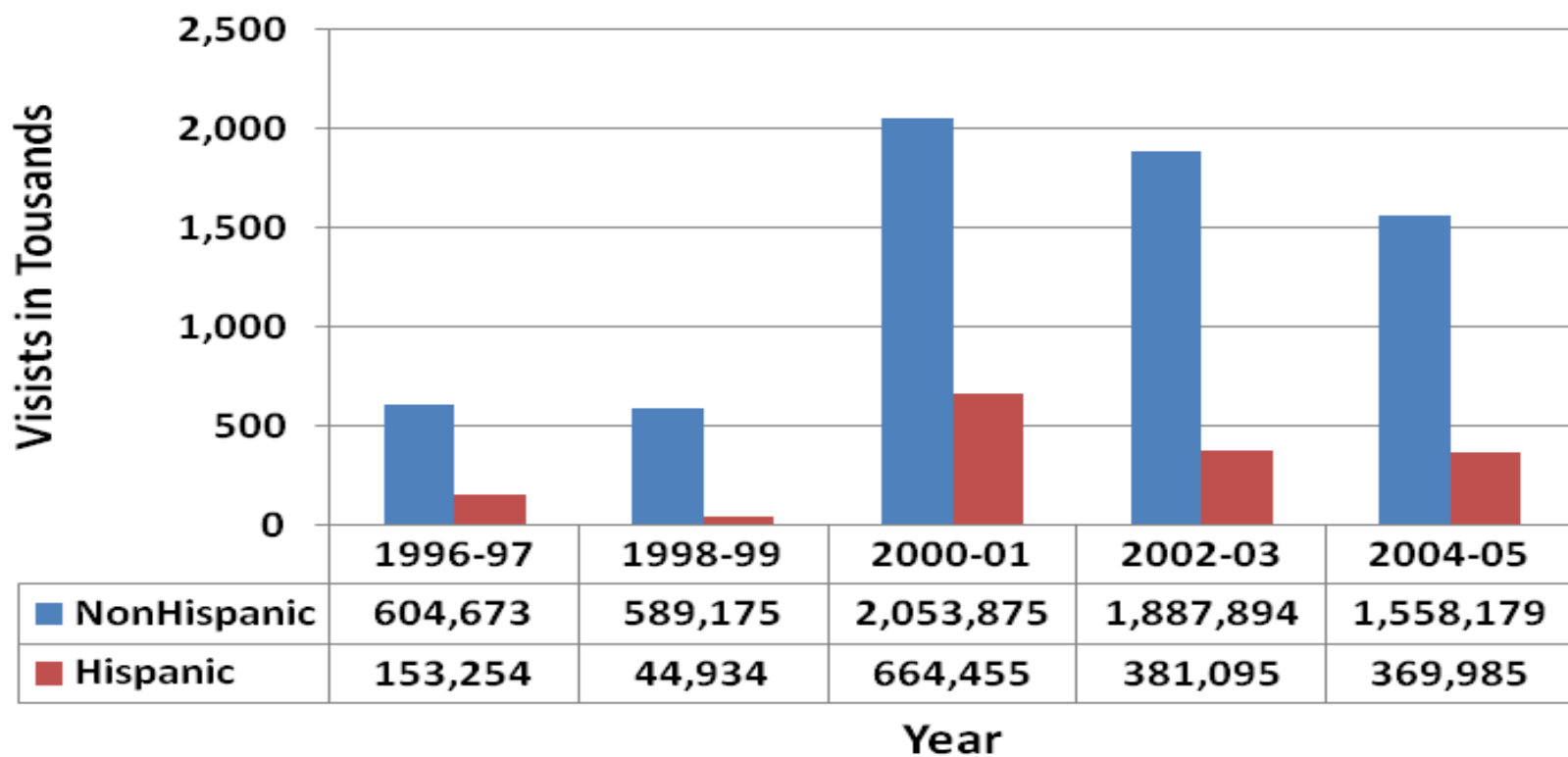
Figure 1: Estimated Number (includes imputation) of Ambulatory Visits for Uncontrolled Diabetes in the US, by Site and Year, 1996-2005.



Uncontrolled Diabetes Visits in the Total Population (includes imputation) 1996-2005

- Uncontrolled diabetes visits increased from 888,238 in 1996-97 to 2,265,814 in 2004-05.
- Visit Sites:
 - PO increased from 701,132 to 1,868,335
 - OPD increased from 87,065 to 274,429
 - ED increased from 100,041 to 123,050.

Figure 2: Estimated Number (excludes imputation) of Ambulatory Visits for Uncontrolled Diabetes in the US, by Ethnicity and Year, 1996-2005.



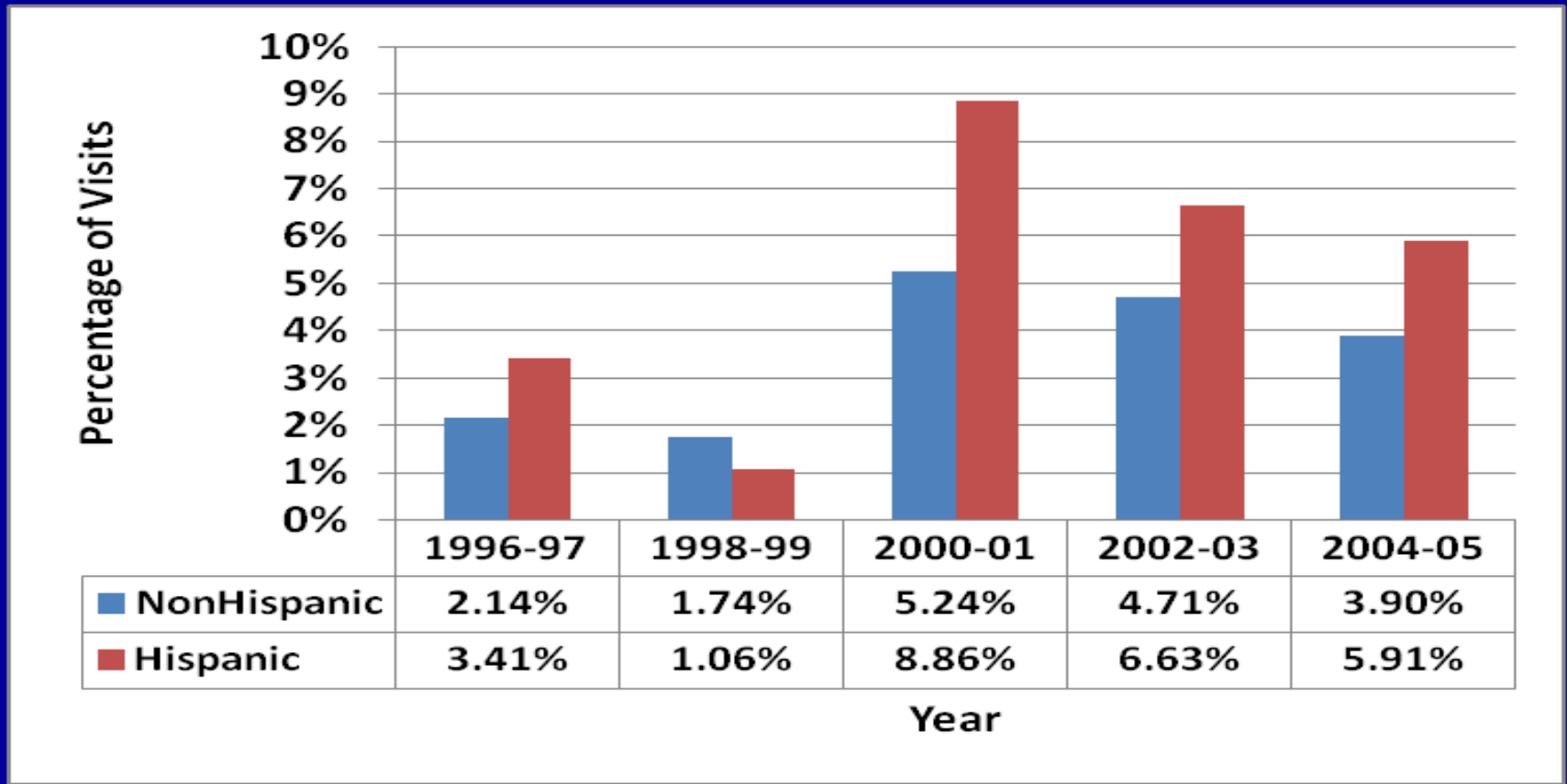
Uncontrolled Diabetes Visits in Non-Hispanic Population (excludes imputation) 1996-2005

- Uncontrolled diabetes visits increased from 604,673 in 1996-97 to 1,558,179 in 2004-05.
- Visit Sites:
 - PO increased from 468,588 to 1,243,379
 - OPD increased from 58,339 to 221,308
 - ED increased from 77,746 to 93,492

Uncontrolled Diabetes Visits in the Hispanic Population (excludes imputation) 1996-2005

- Uncontrolled diabetes visits increased from 153,254 in 1996-97 to 369,985 in 2004-05.
- Visit Sites:
 - PO increased from 131,725 to 315,584
 - OPD increased from 16,414 to 34,704
 - ED increased from 5,115 to 19,697.

Figure 3: Estimated Percent (excludes imputed) of Ambulatory Visits by Uncontrolled Diabetes Patients in the US, by Ethnicity and Year, 1996-05.



Percent of Uncontrolled Diabetes Visits in Hispanic and Non-Hispanic Populations (excludes imputation) 1996-2005

- The percent of uncontrolled diabetes visits increased from 2.14% in 1996-97 to 3.90% in 2004-05 among Non-Hispanics.
- The percent of uncontrolled diabetes visits increased from 3.41% in 1996-97 to 5.91% in 2004-05 among Hispanics.

FINDINGS

- Visits for uncontrolled diabetes affecting Hispanic and Non-Hispanic populations may have increased in the last ten years.
- Percent of uncontrolled diabetes appeared to be higher among Hispanics than non-Hispanics.

LIMITATIONS

- Unit of analysis: visit and not patient
- Reasons for differences observed between Hispanic and Non-Hispanics are unknown.
- Currently unable to calculate rates.
- Excluding imputed Hispanic visits may underestimate actual number of visits.
- Amount of imputation varied over time.

RECOMMENDATIONS

- We recommend reviewing data from the 2003-05 for ambulatory visit trends in Hispanic population.
- Improve access to primary health care.
- Behavioral counseling to promote healthy eating and physical activity.
- Verification of visit estimates with Statistical Analysis Software (SAS).

REFERENCES

1. Centers for Disease Control and Prevention. National diabetes fact sheet: national estimates and general information on diabetes and pre-diabetes in the United States, 2011. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2011.

REFERENCES

2. American Diabetes Association. Economic costs of diabetes in the U.S. in 2007. *Diabetes Care* 2008; 31: 596–615.
3. Kim S. Burden of hospitalizations primarily due to uncontrolled diabetes. Implications of inadequate primary health care in the United States. *Diabetes Care* 2007; 30 (5): 1281-1282.