

Emergency Department Use for Dental Conditions: National trends over 10 years

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Background

- ✎ Why people go to emergency departments (EDs) for dental care?
 - Dental emergencies
 - Can't afford a dentist
 - Dentists would not accept them as patients

- ✎ Why are dental ED visits an issue?
 - Significant costs
 - Not intended as a dental safety net
 - Poor diagnoses and palliative treatment
 - No comprehensive care

Literature Review

☞ Many studies limited to local single institutional analysis

☞ A study assessed national data (NHAMCS-ED) 1997-2000¹:

- Dental visits → 2.95 million visits over 4 years
- No significant increasing trends

☞ Recent study assessed ED visits for non traumatic dental conditions, using NHAMCS-ED 1997-2007²:

- Dental visits → 16 million visits over 11 years (1.4% of all ED visits)
- Increasing trend over time
- Medicaid and self pay patients – greater odds

1. Lewis C. Lynch C. Johnston B. 2003. Dental Complaints in Emergency Departments: A National Perspective. Annals of Emergency Medicine. Vol. 42 (1): 93-99
2. Okunseri C. Okunseri E. Thorpe JM. Xiang Q. Szabo A. 2012. Patient characteristics and trends in nontraumatic dental condition visits to emergency departments in the United States. Clinical, Cosmetic and Investigational Dentistry 2012:4 1-7

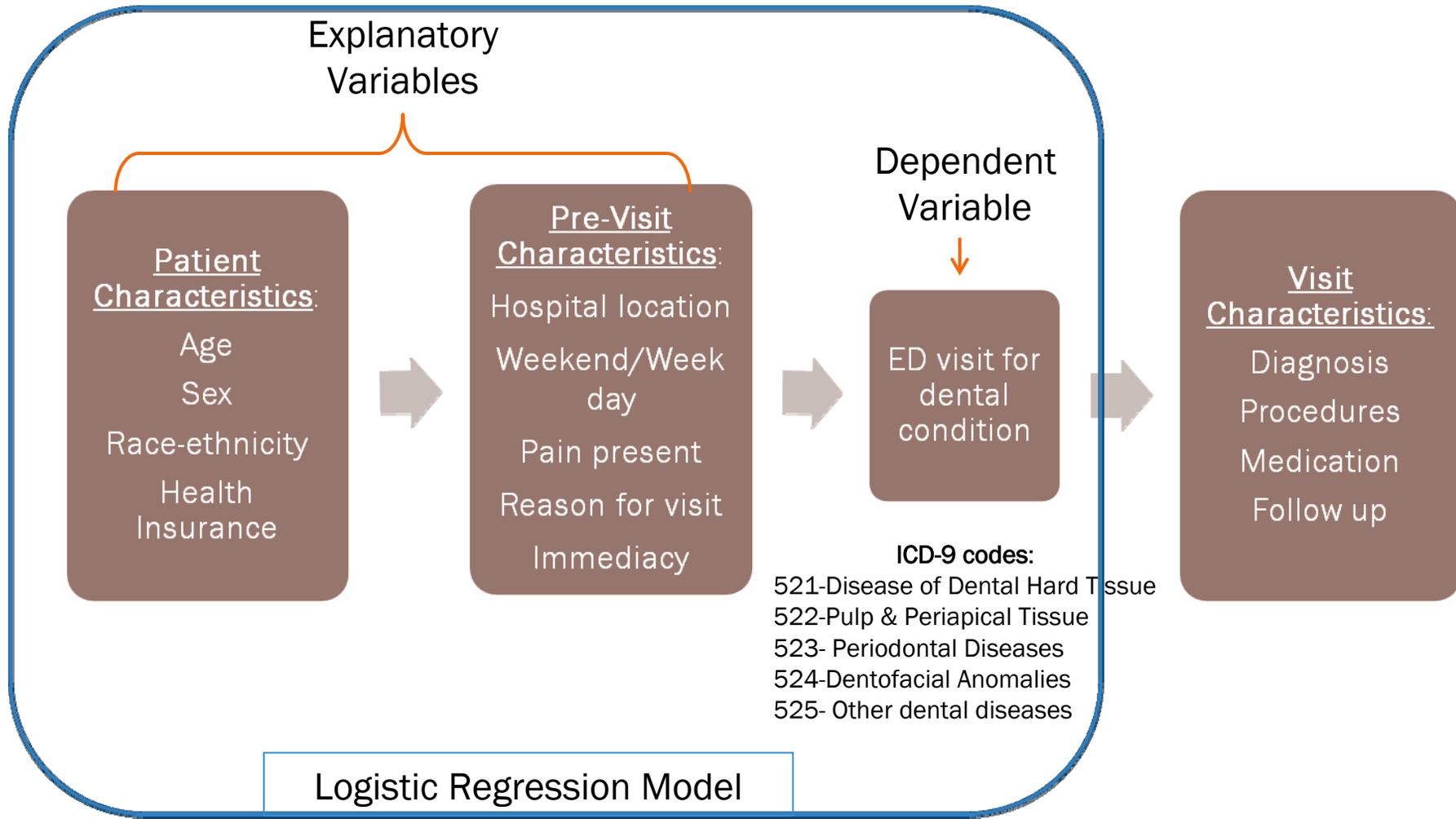
Research Questions

- ∞ What is the number and proportion of ED visits for dental conditions?
 - Is it increasing over the 10 year period?
- ∞ What populations seek care for dental conditions at the EDs?
 - How are they different from population that seeks other services at EDs?
- ∞ What are the presenting features of dental ED visits?
- ∞ What services are provided at dental ED visits?

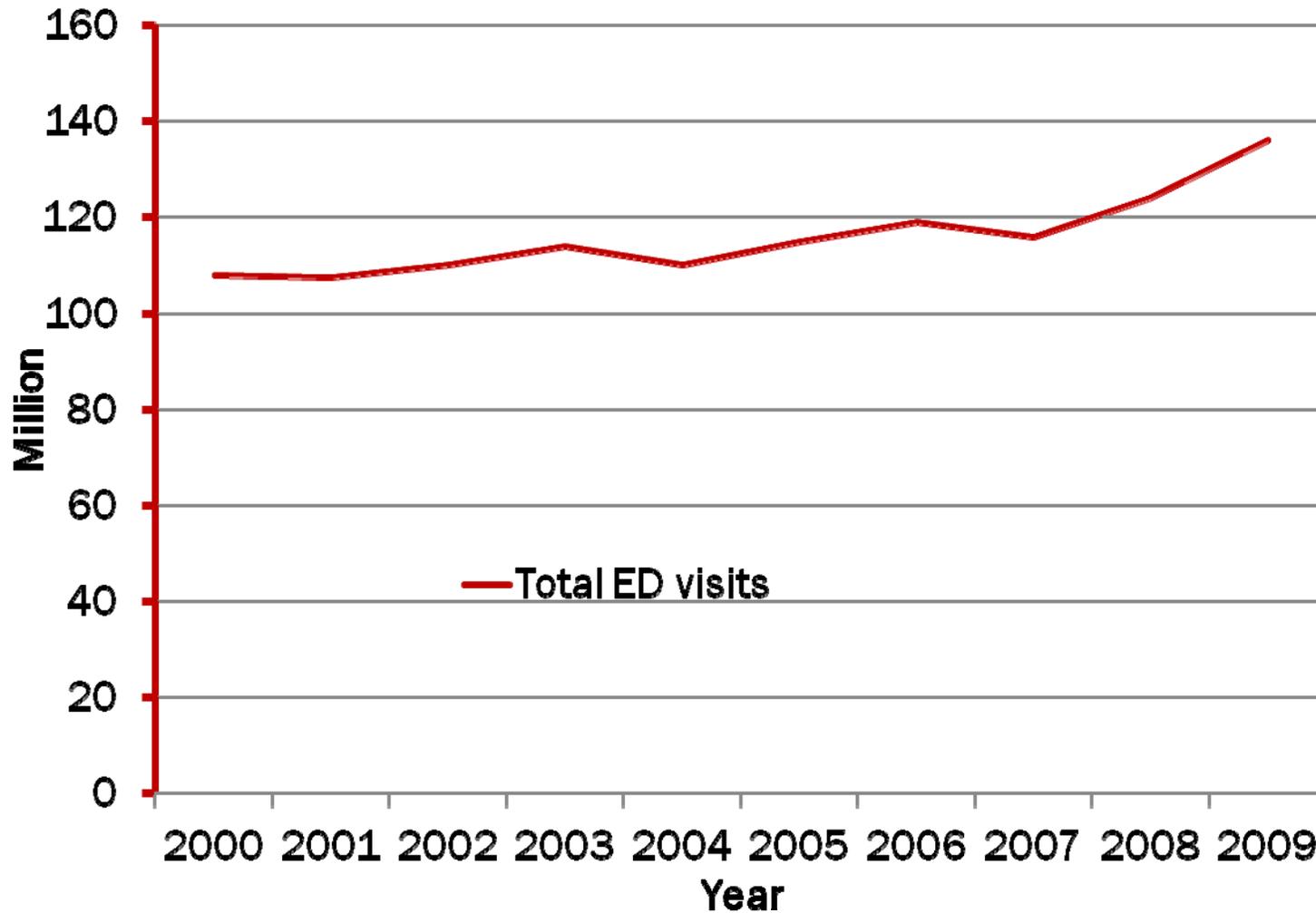
Methods

- ∞ Data source: National Hospital Ambulatory Medical Care Survey- ED (CDC)
- ∞ Utilization and provision of hospital ED services
- ∞ Time period: 2000-2009
- ∞ Nationally representative sample of ED visits
- ∞ ~ 500 hospitals

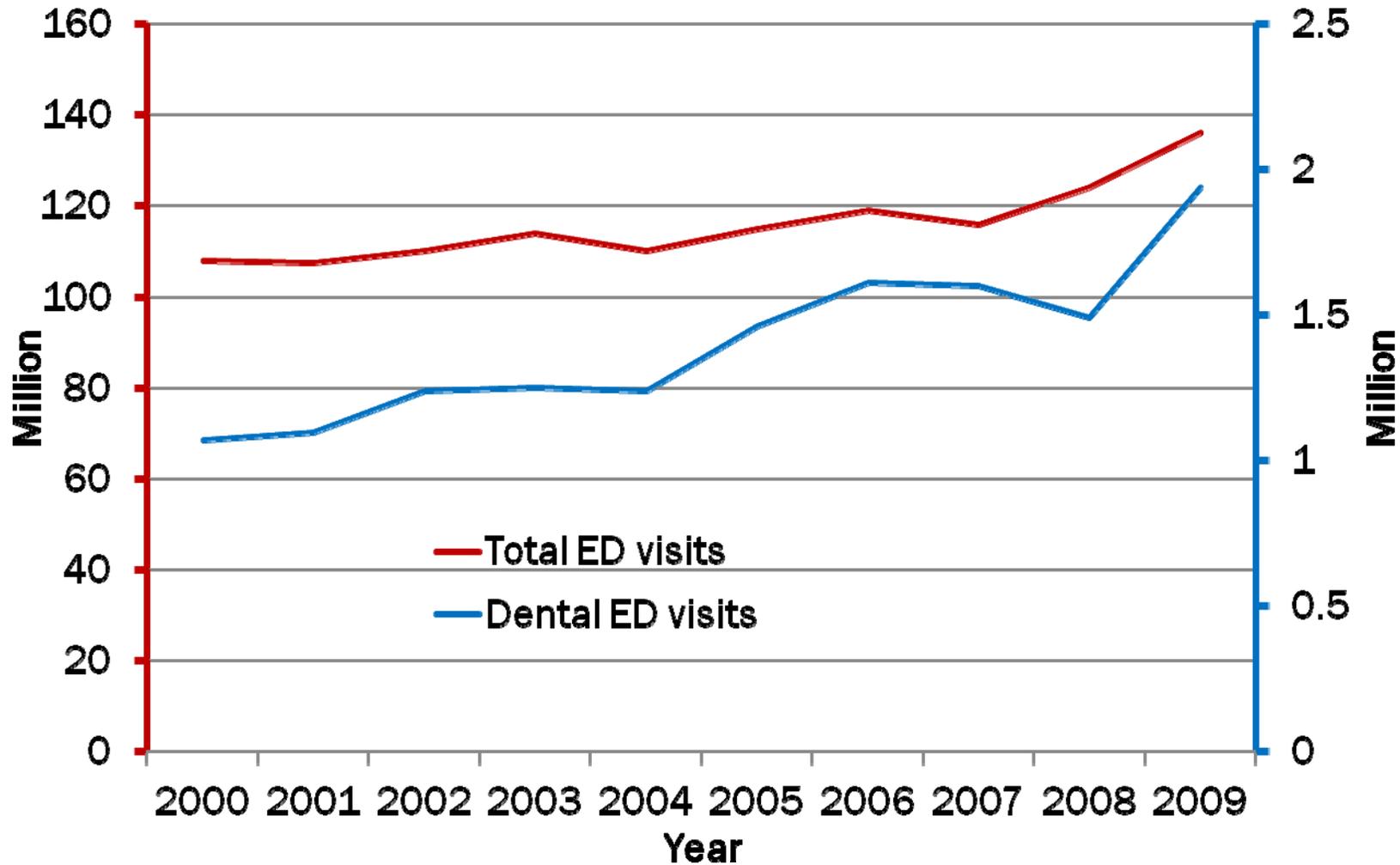
Methods: Variables



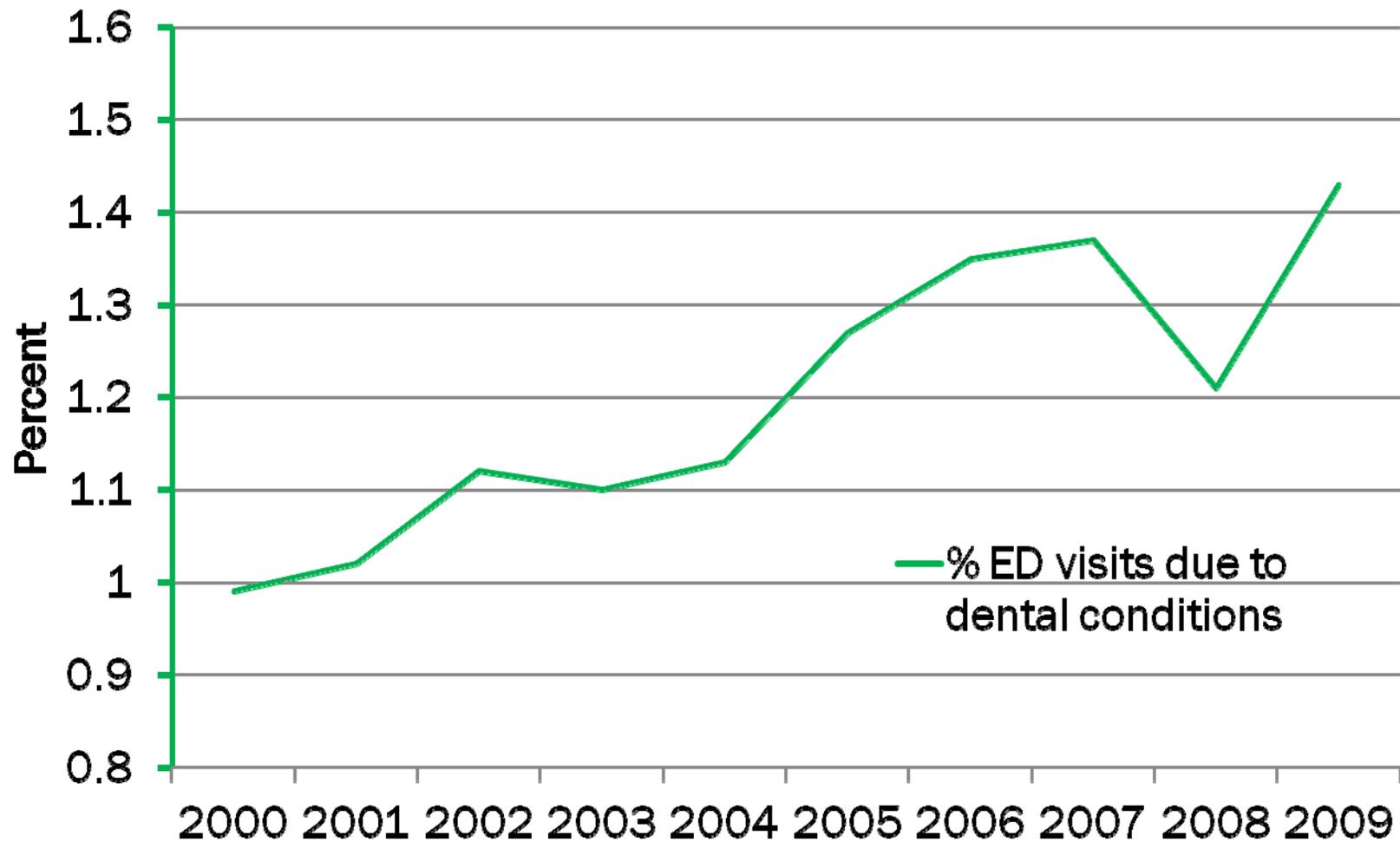
Results: Trends over 10 years



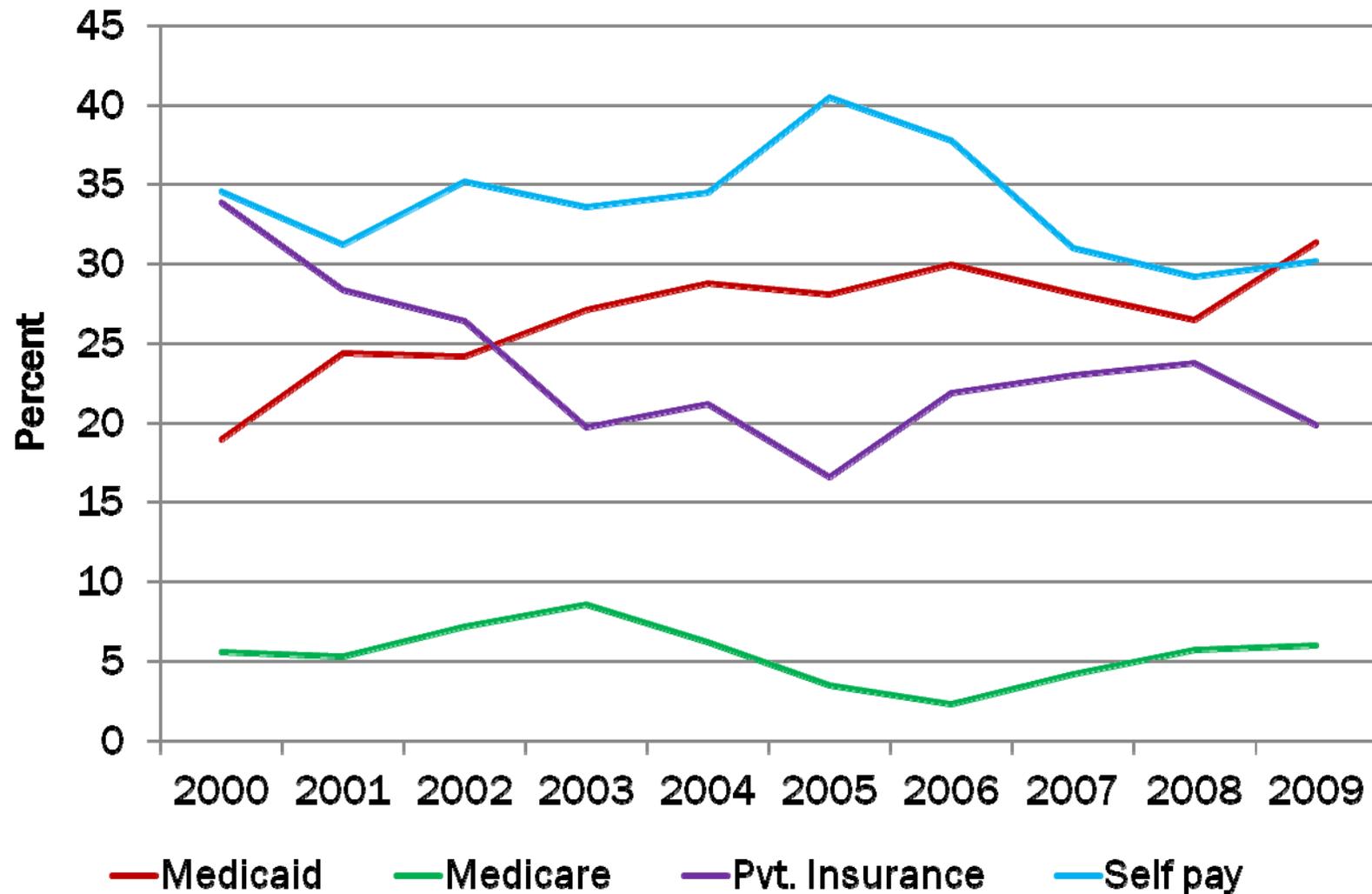
Results: Trends over 10 years



Results: Trends in ED dental visit



ED dental visits: Insurance status

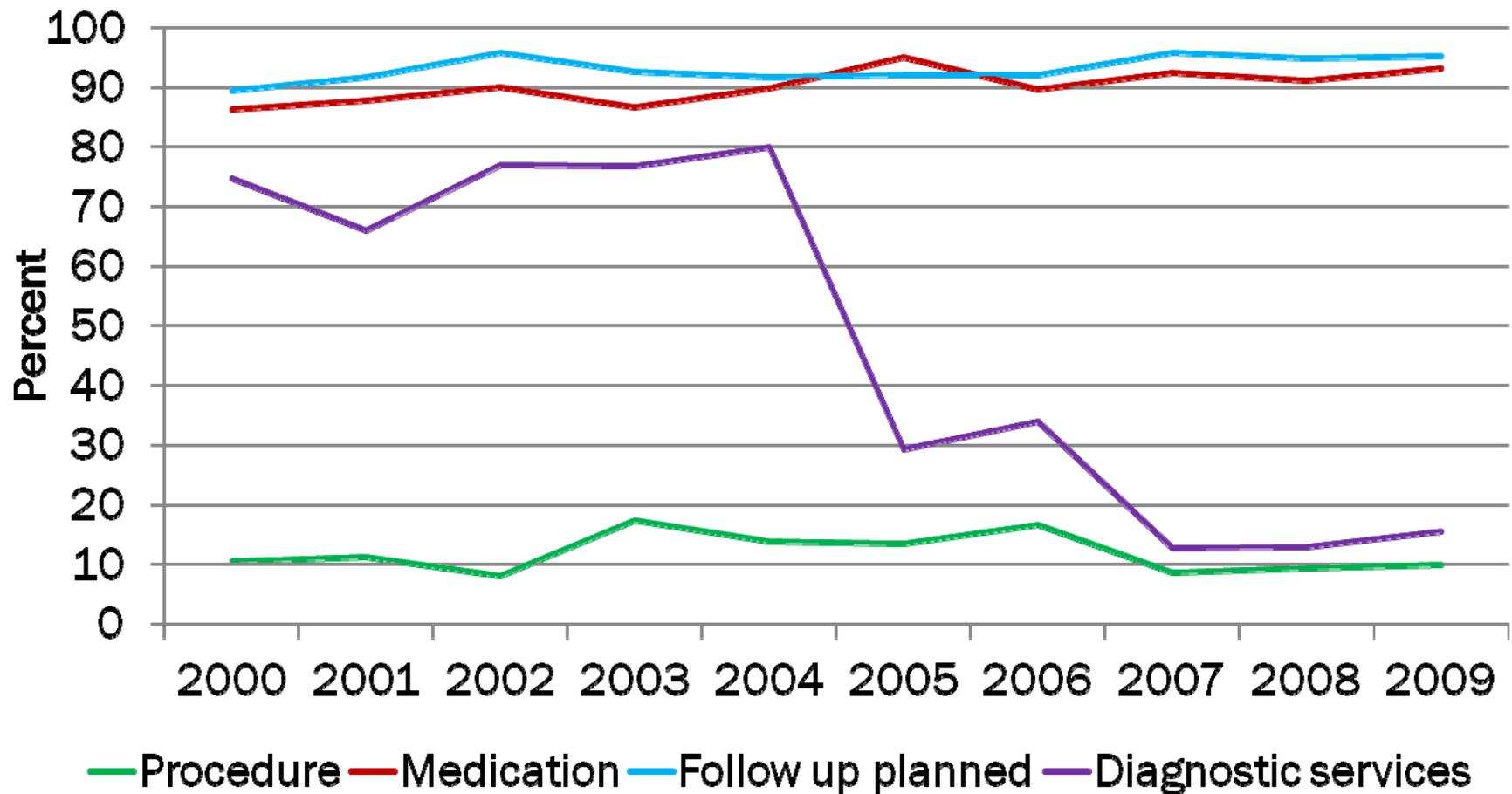


Results: Visit Characteristics

Reasons for visit	%
Toothache	64.66
Facial Pain	6.91
Dental Abscess	3.21
Symptoms related to teeth/ gums	2.82
Mouth pain/ burning/ soreness	2.37
Edema	2.16
Earache	2.10

Diagnosis	%
Unspecified disorder of teeth	50.99
Periapical abscess	19.02
Dental caries, unspecified	12.11
Acute apical periodontitis	3.87
Acquired unspecified absence of teeth	2.31

Visit Characteristics



Results: Final Model

		Odds Ratio	95% Confidence Interval	
Ethnicity	Hispanic or Latino	1.00		
	Non Hispanic or Latino	1.55*	1.32	1.81
Age	Under 1 year	1.00		
	1-17 years	9.09*	3.23	25.56
	18-44 years	40.83*	14.65	113.78
	45-64 years	18.87*	6.71	53.06
	65-84 years	2.88	0.90	9.17
	85+ years	3.66*	1.09	12.30
Source of Payment	Private Insurance	1.00		
	Medicaid	2.26*	1.97	2.58
	Medicare	1.48*	1.10	1.99
	Self Pay	2.77*	2.41	3.21
	Other	1.15	0.81	1.65
	Blank/Unknown	2.12*	1.67	2.69
Day of week	Not a Weekend	1.00		
	Weekend	1.23*	1.11	1.36

		Odds Ratio	95% Confidence Interval	
Hospital Metro area	MSA	1.00		
	Non MSA	1.28*	1.06	1.56
Region	South	1.00		
	Northeast	1.30*	1.20	1.53
	Midwest	1.07	0.90	1.27
	West	1.03	0.84	1.26
Pain	None	1.00		
	Mild	2.35*	1.76	3.15
	Moderate	4.00*	3.15	5.07
	Severe	4.49*	3.47	5.83
Immediacy	<15 minutes	1.00		
	15-60 minutes	1.52*	1.20	1.94
	1-2 hours	2.72*	2.14	3.47
	2-24 hours	4.45*	3.50	5.83
	Unknown/Blank/No Triage	2.47*	1.98	3.09

Conclusions

- ✎ ED visits for dental conditions are increasing over the ten years examined.
- ✎ Adults, without private insurance, especially Medicaid and uninsureds are most likely to present to EDs for dental conditions.
- ✎ Many such patients present with severe pain, however they are triaged as less urgent by the ED staff.
- ✎ Vast majority of such visits lead to prescription for a medication and referral for follow up. However, very few result in any medical procedure.

Limitations & Challenges

- ∞ No patient identifiers, hence cannot adjust for repeat visits
- ∞ No economic variables are available
- ∞ Recoding variables to get a uniform dataset for 10 years
- ∞ Lost some information as it was not available for all 10 years

Future Directions

- ∞ Reasons behind parents' decision to seek care at ED for their child's health problem.
- ∞ Multi state analysis: Effect of Medicaid adult dental policy on ED dental visits and costs.
- ∞ Dental care patterns post ED dental visit.

Questions?



Results

Year	Total ED visits		Dental ED visits		% Dental ED visits
	Unweighted n	Weighted N (Million)	Unweighted n	Weighted N (Million)	
2000	25622	108	247	1.07	0.99
2001	34546	107.5	362	1.095	1.02
2002	37337	110	385	1.24	1.12
2003	40253	114	449	1.25	1.1
2004	36589	110	398	1.24	1.13
2005	33605	115	405	1.46	1.27
2006	35849	119	453	1.61	1.35
2007	35490	116	464	1.6	1.37
2008	34134	124	420	1.49	1.21
2009	34942	136	489	1.94	1.43
Total	348367	1159.5	4072	13.99	1.2

Methods

- ☞ Data source: National Hospital Ambulatory Medical Care Survey- ED (CDC)
- ☞ Time period: 2000-2009
- ☞ Utilization and provision of hospital ED services
- ☞ Four-stage probability sampling design → nationally representative sample of ED visits.
- ☞ ~ 500 hospitals

