

# Screening Deficiencies for Lead Poisoning



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Southern Indiana Pediatrics

# Summary

- Southern Indiana Pediatrics (SIP)
- Lead Study at SIP
- Relationship between Elevated Blood Lead Levels and Lead Screening Questionnaire
- Future of Lead Screening at SIP
- Lead in Monroe County, IN

# Southern Indiana Pediatrics

- Established in 1995
- Four offices:
  - Bloomington (West)
  - Bloomington (East)
  - Ellettsville
  - Bedford
- 15 Physicians, 5 Nurse Practitioners
- Open 365 days a year

# Southern Indiana Pediatrics

- One of the largest and most experienced pediatric practices in the state
- Practice of the Year (2003)
  - Physicians Practice Journal
- SIP is committed to care for sick children and to promote health through immunizations, well child care and community education.

# Southern Indiana Pediatrics

- Patient Population
  - 40,000 active patients
  - 10,000+ visits per month
  - 42% Medicaid

# Southern Indiana Pediatrics Lead Study

- Standard of care for lead screening: use a lead questionnaire looking for high risk living environments that might put children at risk of lead exposure.
- SIP physicians not seeing a correlation.
- General premise: Children who are poor and live in older housing were at highest risk.
- Lead recalls for toys, and child related products used by all socioeconomic groups.
- SIP challenges the conventional practice and screen all patients by doing lead levels AND lead risk questionnaires to see if a correlation existed.

# Southern Indiana Pediatrics Lead Study

- Data collected from October 2007-June 2008
  - Child's age
  - Gender
  - Medicaid status
  - Lead questionnaire responses
  - BLL
- Patients were screened and tested at 9 months and 2 years

# Lead Screening Questionnaire

- Lead Exposure History

- 1. Is your child living or has lived in, or regularly visited, a house or child care center built before 1978?

Yes

No

- 2. Does your child have a sibling or a playmate who has or did have lead poisoning?

Yes

No

# Lead Screening Questionnaire

- 3. Does your child frequently come in contact with an adult who works in an industry or has a hobby that uses lead (battery factory, steel smelter, stained glass)?

Yes

No

# Lead Screening Questionnaire

- 4.) Is your child (A) a recent immigrant, (B) a member of a minority, and/or (C) enrolled in Hoosier Healthwise?

Yes

No

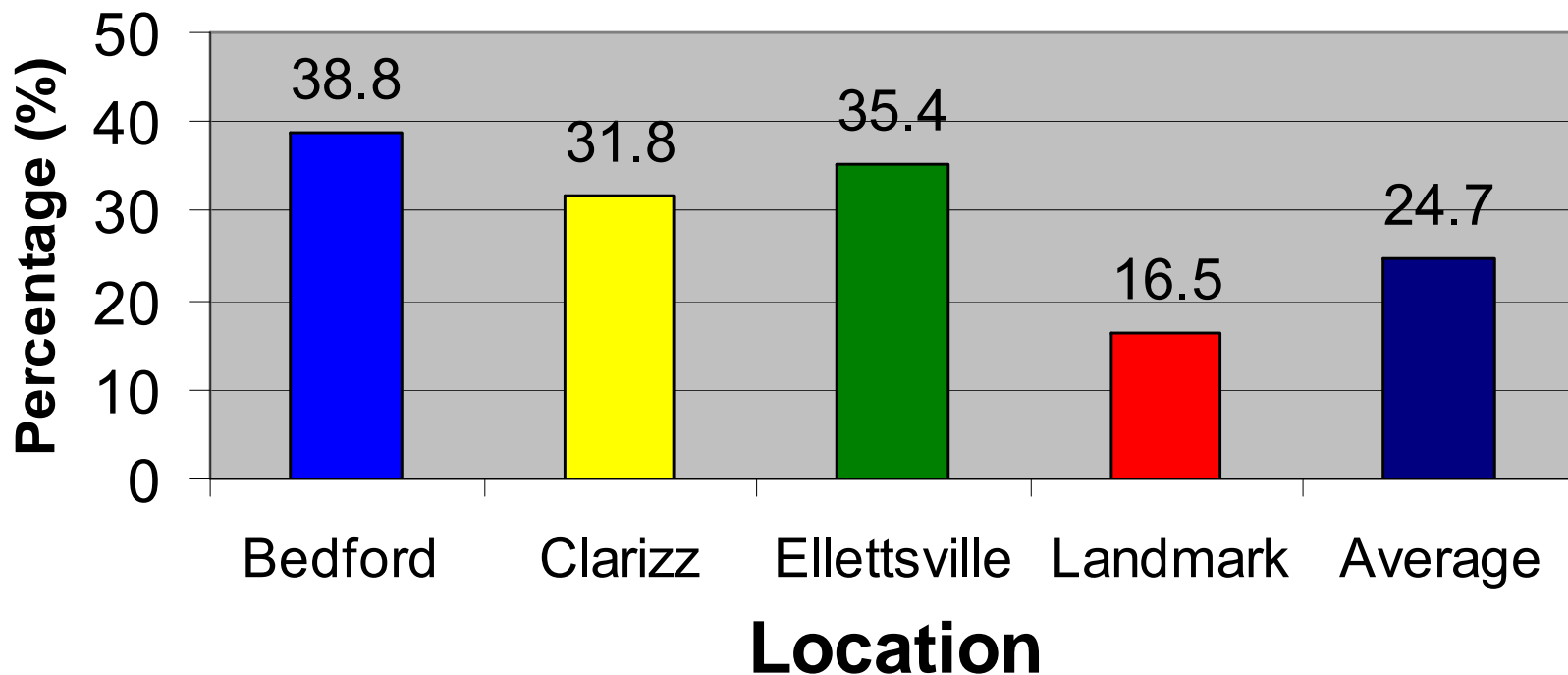
- 5.) Does anyone in your family use ethnic or folk remedies or cosmetics?

Yes

No

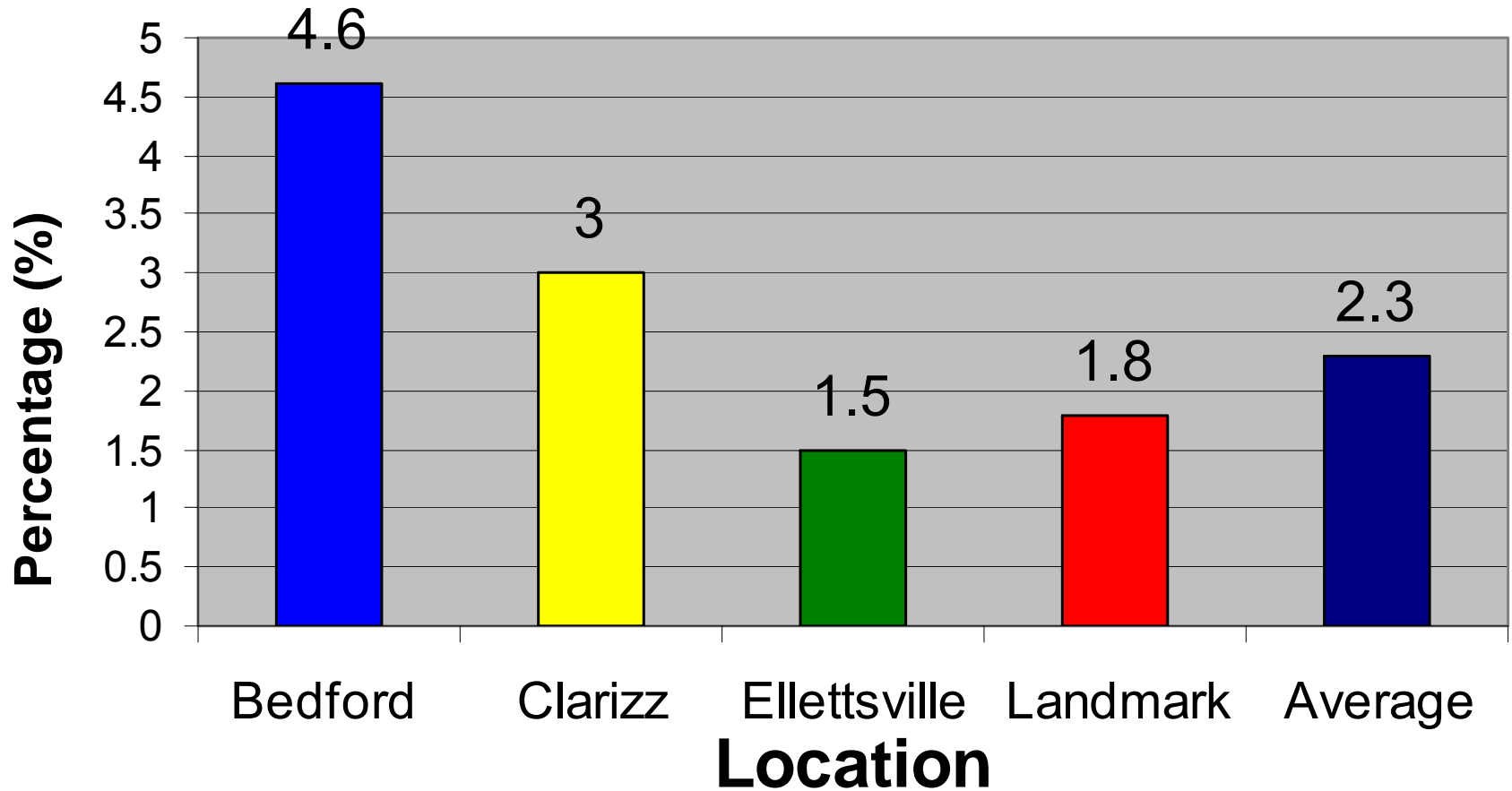
# Results

## Percentage of Patients with Positive Lead Screening Questionnaires vs. Practice Location



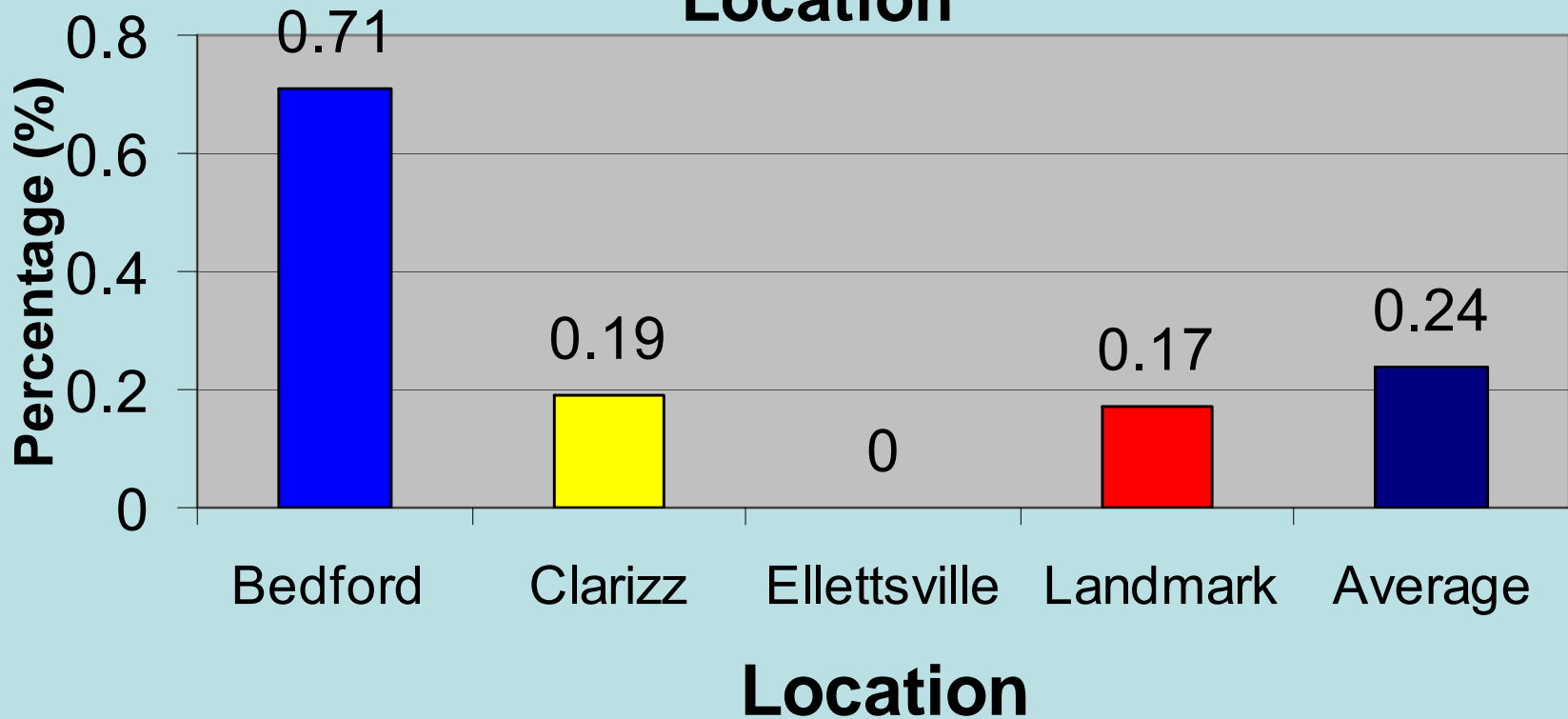
# Results

**Percentage of Patients with Elevated BLLs (> 5  $\mu\text{g}/\text{dL}$ ) vs. Practice Location**



# Results

## Percentage of Patients with Highly Elevated BLLs (> 10 $\mu\text{g}/\text{dL}$ ) vs. Practice Location



# Results

- There was no correlation between the lead screening questionnaire and elevated BLL.
- 53.1% of patients with elevated BLLs ( $> 5 \mu\text{g}/\text{dL}$ ) were on Medicaid
- Of the 49 patients with elevated BLLs ( $> 5 \mu\text{g}/\text{dL}$ ), only 23 (47%) answered positively to the lead screening questionnaire; hence, the other 26 with elevated BLLs were not considered at risk for lead contamination according to the questionnaire

# Future of Lead Testing at SIP

- Discontinuation of screening questionnaire
- The results did not support selective testing and SIP instead changed our policy to test all children.
- Working with Dr. Duwve at the State Department of Health to clarify the state regulation that also requires testing at kindergarten age, which is not common practice in pediatrics.

# 2009 SIP Lead Testing

Federal/State Requirement: 100%

Best Peer Rate: 91%

Average Peer Rate: 41%

- Provider #1: 76%
- Provider #2: 66%
- Provider #3: 79%
- Provider #4: 78%
- Provider #5: 81%
- Provider #6: 74%

# Lead in Monroe County, IN

- Monroe County Lead Coalition
  - Started in 2002 due to number of older homes in Monroe County
  - SIP: Lead screening on Medicaid 9 month olds and positive lead screening only.
  - In 2003, only 5% of Monroe County children under age 6 tested.
  - Raise awareness

# Lead in Monroe County, IN

- ISDH H.E.L.P. Grant (2005-2007)
  - Increase awareness
  - Lead testing machines for pediatricians
  - Community testing (749 children tested since 2002)
  - Home risk assessments using lead testing kits
  - Community billboards
- Healthy Homes
  - Home assessments that identify toxins
    - 2005: 3 home visits
    - 2010: 13 home visits so far

# Lead in Monroe County, IN

- Prevention
  - Any child with a BLL over 5 mg/dL is referred to a Lead Risk Assessor from Bloomington Hospital Community Health for a home assessment.
  - Old homes ≠ low SES
    - All subsidized housing lead free for 10 years.
    - Working with Bloomington Restoration Inc.
  - Working with community organizations to raise awareness

# Lead in Monroe County, IN

- Lead Recalls
  - Community project with Monroe County Public Library
  - Summer Reading Program toys tested positive for lead
  - Initiated national recall with the Consumer Product Safety Commission
- Lead Recall List serve
  - Raises awareness
  - Book of toys recalled

# Questions?

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