

# What Makes a School Nurse Program Successful? Cost Savings, Health Benefits or Grades? A Demonstration Project in the San Jose Unified School District

Eunice Rodriguez, Dr.PH<sup>1</sup>, Ashini Srivastava, MBBS, MPH<sup>1</sup>, Melinda Landau, RN, MSN<sup>2</sup>  
<sup>1</sup>Department of Pediatrics, School Health Evaluation, Stanford University  
<sup>2</sup>San Jose Unified School District, Health and Family Support Programs  
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## Background

According to the Centers for Disease Control (CDC), rates of chronic health conditions among school-age children have almost doubled from 12.8% to 26.6% in the past two decades, with obesity (17%), asthma (9.5%), behavioral problems (13-20%) being the most prevalent. This has adverse effects not only on the children's long term health, but also on their academic performance and school attendance. While school nurses could facilitate positive health outcomes for children, the state of California with a ratio of 1 nurse for every 2,200 students has one of the lowest nurse to student ratios in the nation.



School nurse examining a child

## Methodology and Evaluation

Using a **mixed methods, quasi-experimental study design**, four schools with added full-time nurses (demonstration schools) were compared with five schools with part-time nurses (comparison schools).

### Data sources

- Electronic school records
- Nurse monitoring tools
- Teacher and administrator surveys
- Parent phone surveys, focus groups, interviews, and written questionnaires

### Case Management

- 100% follow up of students identified with asthma in demonstration schools (2008-12)

### Community Health Connections

- Referrals to school clinics (SHCSCC)
- Health education presentations for students, parents and teachers by SHCSCC
- Encouraging & supervising follow-up care
- Referring parents to community resources
- Connecting families to care providers
- Helping families locate health insurance resources

### Care Coordination

- 96% students in demonstration schools were evaluated by a vision specialist after referral for vision problems. See Figure 1.
- 100% students in demonstration schools were evaluated by specialist after referral for hearing problems.
- H1N1 vaccination offered to all SJUSD schools in 2010

## Selected Outcomes

### Cost savings

- Cost savings of \$ 48,518.62 in average daily attendance (ADA) funding for the district due to reduced absenteeism due to illness in 2008-09 in demonstration schools.
- Parents reported less emergency room (ER) visits for asthma in 2010-11 (13.6% in demonstration versus 23.3% in comparison schools)
- Parents reported fewer visits to ER for all causes in 2011-12 (9.8% in demonstration versus 11.3% in comparison schools)

### Health Benefits

- Absences due to illness were 18% to 10% lower in demonstration schools between 2008-10. It was at the same level when comparison schools with higher SES were added in 2011-12.
- Absences due to illness in students with asthma showed the same pattern.

### Grades

- The percentage of students with asthma or other physical conditions performing at the advanced or proficient level in English and Language Arts (ELA) tests increased 2-5% more in demonstration schools. See Figure 2.

## Conclusion

- The presence of full-time nurses contributed towards continued availability of preventive services and care coordination.
- Dissemination of monitoring tools and presence of nurses benefitted the whole school district from 2010-2013 (including expansion of immunization program).
- Students with chronic health conditions closed the academic gap in ELA by scoring advanced or proficient level at the same rate as students with no health conditions.
- Most teachers felt having a full time nurse helped them teach more effectively.
- Parents gave overwhelming support to the full time nurses at their school.
- Overall, the program was successful, yet challenges remain in the allocation of resources as different constituencies are prone to value specific outcomes over the others. In order for this program to be sustainable, school authorities need to look at the holistic benefits of providing full time nurses to schools with vulnerable populations.

### Acknowledgements

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For more information, contact:  
 Eunice Rodriguez at [er23@stanford.edu](mailto:er23@stanford.edu)

## Follow-up of Student Health Screenings

Figure 1. Students with vision problems examined by a specialist after nurse screening and referral

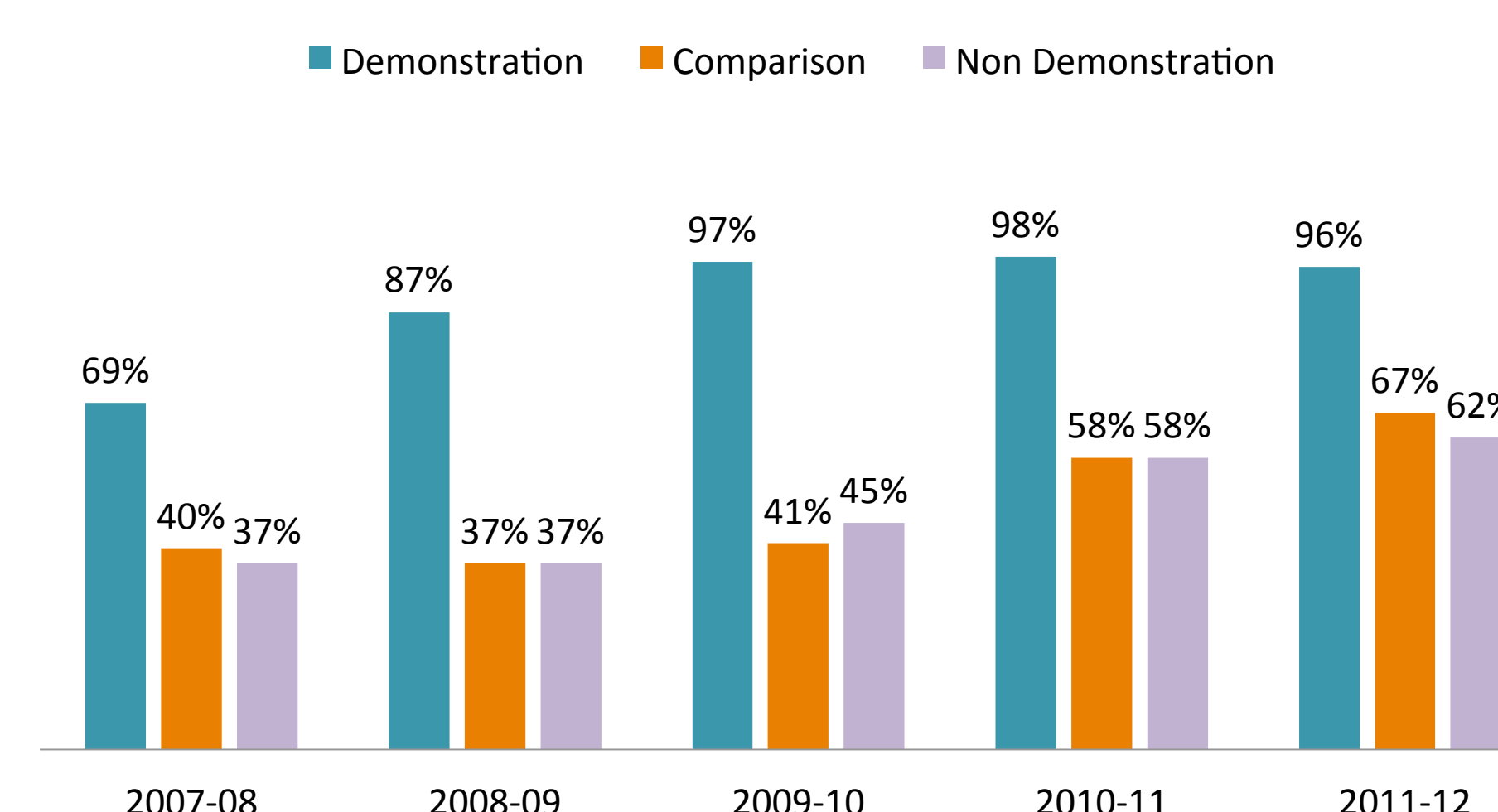
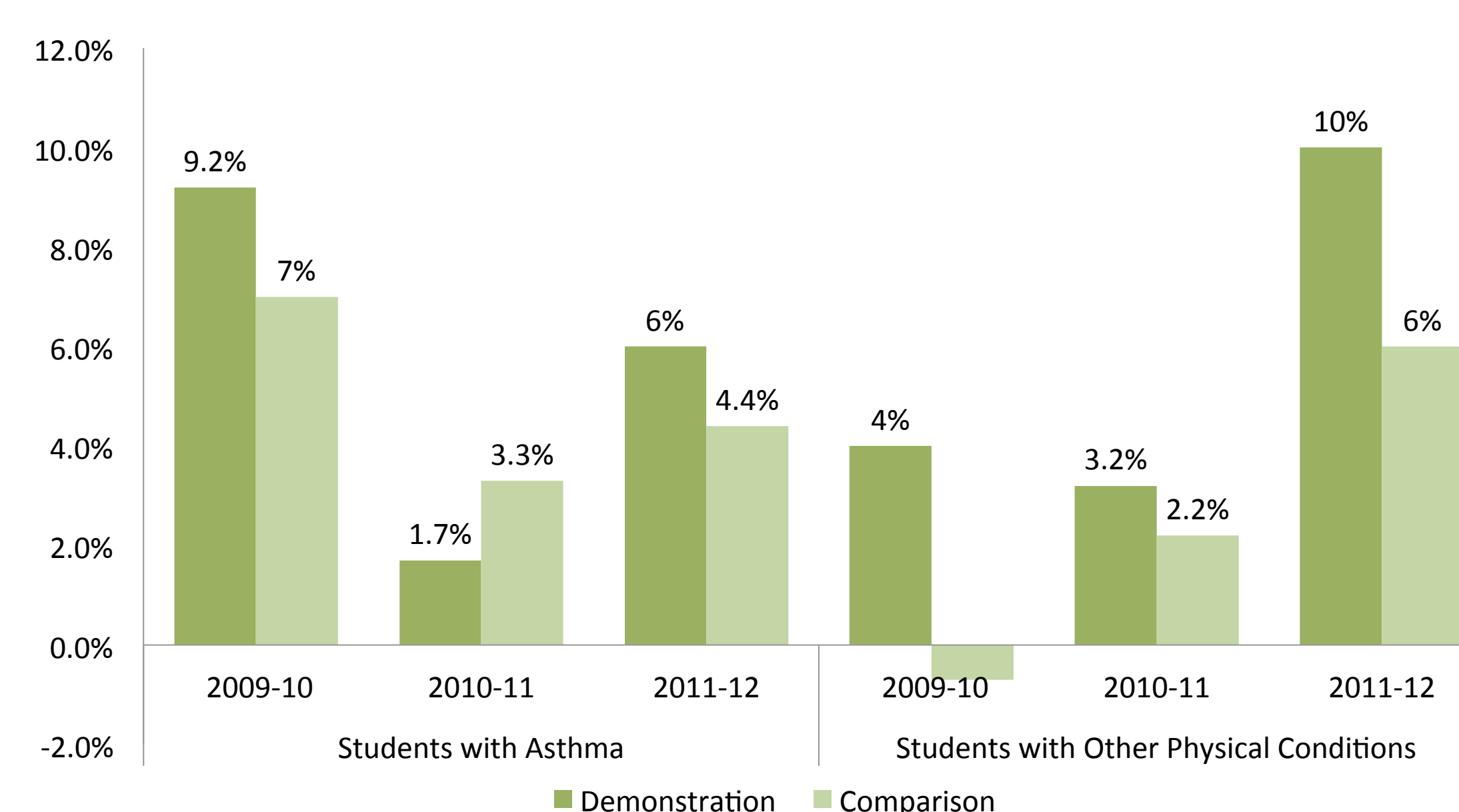


Figure 2. Percentage improvement in students with chronic health conditions scoring "Advanced or Proficient" on CST ELA in Demonstration and Comparison Schools 2009-12



## Project Description & Goals

### Project Description

The Nurse Demonstration project (2007-13) placed full-time nurses in four San Jose Unified School District (SJUSD) schools, and recruited a nurse practitioner at School Health Clinics of Santa Clara County (SHCSCC) to coordinate student healthcare.

### Project Goals

- Improve access to primary care and prevention services for students in kindergarten through 8th grade, with a special emphasis on chronic conditions.
- Facilitate establishment of a medical home for students who don't have one.

## Student Demographic Profile: 2011-12

	Demonstration Schools	Comparison Schools
<b>Number of students</b>	2,785	3,445
Students in Free & Reduced Lunch program	83.3%	68.2%
Hispanic or Latino Students	81.1%	70.2%
<b>Students with Chronic Conditions</b>		
- Asthma	10.4%	9.8%
- Neurodevelopmental	3.4%	3.8%
- Other Physical	9.8%	10.5%
- No Chronic Condition	76.4%	75.9%
<b>Families with Health Insurance</b>		
- Public Health Insurance	93%	96%
- Private Health Insurance	63%	49%
	30%	47%

## Community Partners

We partnered with **San Jose Unified School District (SJUSD)** and **School Health Clinics of Santa Clara County (SHCSCC)** to evaluate the Nurse Demonstration project.



School nurse administering medication to child with asthma