



Lucile Packard
Children's Hospital
at Stanford



Let's Put Healthcare Back Into Schools

A 5-year demonstration project
2007-2012

Evaluating the effect of full-time school nurses
on students' access to care, health status, and academic achievement



Partners

- San Jose Unified School District
- School Health Clinics of Santa Clara County
- Lucile Packard Children's Hospital at Stanford
- Lucile Packard Foundation for Children's Health
- Stanford University School of Medicine Dept. of Pediatrics and Center for Education in Family and Community Medicine

Overview

- 5-year demonstration project to evaluate what happens when schools have full-time school nurses
 - Two elementary, two middle schools selected, with similar-demographic control schools
- Total funding = \$2.65 million
 - Funding shared equally by LPCH and LPFCH
- Rigorous evaluation conducted by Stanford School of Medicine researchers



Goals

- Students in demonstration schools will have improved health care management. Those with chronic conditions (focus on asthma) will see improved health outcomes.
- Facilitate establishment of a medical home at the school health clinics for those who don't have one.
- Make the case for improved nurse/student ratios by rigorously measuring the effect of having full-time school nurses on students' health status, attendance, and academic achievement.



How Did This Project Come About?

- LPCH and LPFCH boards interested in working together on a large, multi-year project that would improve children's health status and could effect health policy.
- Scan of community needs yielded list of three possible focus areas.
- Putting healthcare back into schools selected because of access issues, student health status in low-income schools, and very high nurse/student ratios in local schools.



Project Design

- Project initially designed by hospital and Foundation leaders.
- CA governor had proposed putting a school health clinic in every school. Great idea, but very expensive!
- We asked: What if you put a nurse in every school and linked them formally to a school health clinic, one clinic per X number of students?
- 5 school health clinics in the central and south part of Santa Clara County already existed.



Project Design

- SJUSD selected because of
 - ✓ Large, diverse district with low nurse/student ratios
 - ✓ Two school health clinics within the district
 - ✓ Had management infrastructure to manage a project like this
 - ✓ They wanted to do it! It was a LOT of work.

What Was In This for SJUSD?

- New opportunity to expand and measure scope of nurse services to students/families
- Improve student attendance and academic performance
- Instill life-long health habits for chronic condition management
- Reduce hospitalization and acute care costs for families
- Intuitively, we knew this would work!



Five-year Budget

- 4 full-time nurses, employed by SJUSD: \$2,029,354
- .9 Nurse Practitioner employed by School Health Clinics of Santa Clara County: \$526,326
- DPH researcher and assistant, employed by Stanford University School of Medicine: \$94,000 (quasi experimental mixed methods study design)



Key Finding: Improved Accessing to Care

- Students with health insurance increased
- Students 2X as likely to visit a doctor after referral from nurse
- Full-time nurses relentlessly bird-dogged referrals for vision/hearing care, etc.
- Asthmatic students assessed, provided management plans, parents received education, staff education about asthma
- ER visits for asthmatic students reduced in demonstration schools



Key Finding: Reduced Illness Absences

- Difference between 2006-07 and 2008-09 years was .22 mean days absent due to illness between demonstration and comparison schools.
- \$48,519 in ADA funding in two years



Key Finding: Improved Academic Scores

- Year 3: Achievement gap eliminated between students with asthma and students reporting no chronic condition who scored advanced or proficient eliminated.
- This sustained in Year 4
- 50% of asthmatic students targeted with the intervention had significant gains in either math or ELA CST scores.
- Of students who made gains, average ELA gain was 70 points and average math gain was 45 points.
- Pediatric asthma is leading cause of school absenteeism and has been found to be associated with reading problems, grade repetition, learning disabilities and behavior problems.



Key Finding: Potential Societal Cost Savings

- Cost to parents in lost wages: estimated gain for parents of \$70,790 between 2006-2007 (before project) and 2008-2009 due to fewer student illness absences.
- Cost of ER visits: Cost per 1,000 students in demonstration project would have been \$39,764 v. \$70,027 in comparison schools.



Key Finding: Full-time Nurses Facilitate Linkages to Resources

- 144 health classes/events for parents, staff, students provided by SHCSCC.
- Breathe California Open Airways program
- PHD helped with H1N1 and Tdap vaccination clinics
- Free on-site eye exams and glasses for all students
- Health insurance enrollment events
- Free dental education and care for students and parents
- Diabetes and asthma education for staff, students, parents



Results Replicated in Additional Schools

- 1 principal used Title I funds to take her nurse to full-time
- Best practices from demonstration schools implemented at all district schools
- Data collection improved throughout district
- Based on year 1-3 data, 3 additional sites have full-time nurses due to leveraging funding.



Advocacy

- Project presented May 9 in Washington DC to Healthy Schools Campaign and Trust for America's Health *Health in Mind: Improving Education through Wellness* initiative.
- Results presented June 23 at national meeting of the National Association of School Nurses and received NASN's Community Supports School Nurses Award.
- *School Health: A Way to the Future?* Research in Political Sociology, V19. Emerald Books, 2011.
- *School Nurses' Role in Asthma Management, School Absenteeism, and Cost Savings: A Demonstration Project.* Pending publication



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