

Presenter Disclosures

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- (1) The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

No relationships to disclose



Clinical Quality Improvement for a SBHC Network: Sticky Questions and Hard Lessons

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Objectives

- Review and discuss quality improvement indicators
- Describe quality improvement interventions
- Gauge effectiveness of interventions and discuss barriers to adherence



Outline

- 1) Introduction and background of School Health Connection (SHC) program
- 2) Description of chart audits and indicators
 - Break 1
- 3) Results of initial chart audits
- 4) Description of interventions during academic year
- 5) Results of second chart audits
 - Break 2
- 6) Impact of Continual Quality Improvements (CQI) activities
- 7) Lessons Learned
- 8) Discussion



SHC System Goals

- Create system that integrates with community health providers
- Develop organizational model to sustain the systems of SBHCs
- Development of system-wide Electronic Medical Record / Patient Management System (EMR/PMS):
 - Improve reimbursement
 - Promote quality of care
 - Provide data for evaluation and fundraising
- Provide technical assistance



SBHC HIT Project

- Robert Wood Johnson Foundation and W.K. Kellogg funded project
- Implement EHRs in 10 SBHCs
- 3 Year timeline (February 2008- January 2011)
- Ancillary project to School Health Connection Program
- Funded to improve access & quality of care in New Orleans post-Katrina



Current State of SHC

- 7 SBHCs
 - 3 in Orleans
 - 3 in Jefferson
 - 1 in St. Bernard
- 6916 children enrolled and 21,281* encounters in 2008 – 2009
- 5 more SBHCs will be open and operational in the next several months in Orleans and Jefferson Parishes

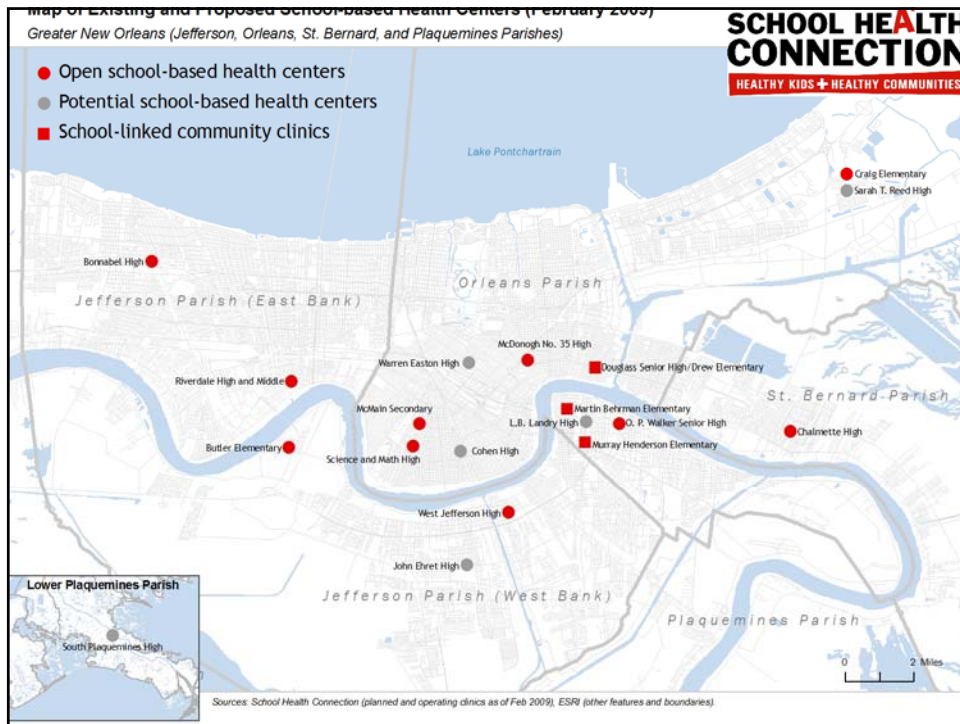
*only includes encounters from 6 SBHCs



Clinics and Sponsors

Medical Sponsor	Clinic	Schools Served
LSUHSC	McMain	McMain Secondary
	Science & Math	Science & Math High School
		Greene
		Ashe
MCLNO	O. Perry Walker	OPW High School
Tulane	Cohen	Cohen High School
Methodist	Chalmette	Chalmette High School
		Chalmette Middle School
JPSB	Bonnabel	Bonnabel High School
	West Jefferson	West Jefferson High School
	Butler	Butler Elementary
		Pitre Elementary
		Westwego Elementary
		Worley Middle
	Riverdale	Riverdale High School
		Riverdale Middle School





Why CQI in a Network?

- Louisiana OPH / Adolescent School Health Program requires all OPH/ASHP funded SBHCs to follow their standards.
- We developed programmatic standards within SHC to ensure that our SBHCs were approaching key issues in a standardized way according to best practices.
- These standards are also used to inform EMR development, training, and implementation.

Indicators and Methodology

- Charts were reviewed for adherence to CQI measures based on best practice guidelines set by LA OPH / ASHP and NASBHC
- CQI measures in health risk areas:
 - Creation of detailed asthma action plan
 - BMI
 - Hypertension
 - Alcohol Use
 - Tobacco Use
 - Sexual Activity



Indicators and Methodology

- Asthma Action Plan (**Handout 1**)
 - Presence of a detailed asthma action plan
 - Green, yellow, and red zones
 - Peak flow values, medication dose and frequency
 - Rescue medication with dose and frequency



Indicators and Methodology

- Body Mass Index (BMI) (**Comprehensive Physical, Handout 2**)
 - Documentation of a BMI within the last calendar year
 - At risk for overweight, overweight, or obese
 - Documentation of counseling and a treatment plan if necessary



Test, BrandonFour, 18 Y, M | Sel | Info | Hub

DOB: 01/04/1991

Allergies Billing Alert

Wt: 185 lbs. Ins: BCBS of
Appt(L): 01/08/09 Acc Bal: \$0.00
Language: Guar: BrandonFour
Translator: No Gr Bal: \$0.00

CLICK TO EDIT SECURE NOTES ADV

Medical Summary | Alerts | Labs | DI | Procedures | Growth Chart | Immunization | Encounters | Patient Docs | Flowsheets | Notes

SF Rel Bulleted Encounters 11/17/2008

Objective:

Vitals:
Temp 101.3, Pain 5, RR 16, HR 75, BP 118/75, Ht 72, Wt 185, BMI 25.09

Past Results:

Examination:

Physical Examination:

GAPS TEST
Tobacco Use Tobacco Use Yes, Amount 1ppd.

HEENT
Eyes: unremarkable. Ears: unremarkable. Nose: mucoid discharge, post nasal drip. Sinuses: frontal sinus tenderness. Throat: throat culture taken, tonsillar enlargement, yellow post-nasal drainage. Lips: dry.

CHEST
Shape and expansion: normal. Breath sounds normal.

HEART
Rhythm: regular. Heart sounds: normal.

Overview History OS Labs

- Advance Directive
- Problem List
- Current Medications
penicillin V potassium 125 mg/5 mL powder for reconstitution
Tamiflu 75 mg capsule
- Allergies
N.K.D.A
- Immunization

Indicators and Methodology

- Hypertension
 - Presence of Blood Pressure (BP) measurement at physical
 - Height percentage for age at the 90th percentile or greater (pediatric tables) or BP>120/80, considered to be above normal BP
 - Presence of best practices:
 - BP re-measured at that or following visit
 - BP measured outside of the doctor's office visit
 - Hypertension screening form filled out (Handout 3)
 - BP measured at every clinic visit



Indicators and Methodology

- Alcohol Use (GAPS, Handout 4)
 - Presence of risk assessment within the last calendar year
 - Ask if any past/present alcohol use
 - Use determined
 - Documentation of counseling
 - Documentation of intervention plan, referral, documented alcohol cessation if risk for abuse is ascertained



Indicators and Methodology

- Tobacco Use
 - Presence of risk assessment within last calendar year
 - Ask about past and current use
 - Use determined
 - Documentation of counseling
 - Ask, Advise, Assess, Assist, Arrange



Indicators and Methodology

- Sexual Activity
 - Presence of risk assessment
 - Sexual activity determined
 - STD screening completed?
 - Document testing recommendation
 - Screening / treatment if tested
 - Referrals as needed
 - Documentation of risk reduction counseling
 - If female and appropriate:
 - Documentation of Pap performed



Part 1 Interventions

- Continual Medical Education (CME) Lectures, Sept. 2007 - March 2008:
 - Adolescent Hypertension: Screening, Diagnosis, and Treatment
 - Asthma: Diagnosis and Management
 - Motivational Interviewing
 - Teen Driving
 - Smoking Cessation



Indicators and Methodology

- Round 1 Methodology:
 - Tool developed to determine (Handout 5)
 - How closely providers adhere program “Best Practices” (based on compilation of state and national standards)
 - Ascertain patient health status
 - Chart reviews
 - At least 10 comprehensive physical exams / school
 - As many asthma charts as possible / school



Indicators and Methodology

- Round 2 Methodology:
 - Paper charts as prior
 - Electronic charts review
 - Reviewed by series of EMR “registry queries”
 - At least 10 comprehensive physical exams / school
 - » Code v20.2
 - As many asthma charts as possible / school
 - » Codes 493.90, 493.91, 493.92, 493.20, 493.21, 493.22



Electronic Chart Pull Example

- BMI:
 - Query all patients registered at School X SBHC and run subset for ICD v20.2 (comprehensive physical)
 - Select every 3rd patient
 - Go to each patient’s hub
 - Go through Encounters to check for BMI
 - Note: BMI is automatically calculated and plotted on growth chart when height and weight are recorded in vitals, which should be completed at each physical health visit



Break 1

<10 minutes



Round 1 Chart Review Results

SBHC	# of Schools Served	# of Charts Reviewed	# of Asthma Charts Reviewed
SBHC U	1	10	5
SBHC V	1	11	10
SBHC W	1	10	3
SBHC X	1	11	6
SBHC Y	1	10	6
SBHC Z	2	10, 10	6, 0



Round 1 Chart Review Results

- BMI (N=72)
 - 63.9% BMI growth chart up-to-date
 - 93.0% BMI calculated
 - 57.1% counseled: BMI > 85th % (N=28)
- Hypertension (N=72)
 - 18.1% blood pressure measured at every visit



Round 1 Chart Review Results

- Tobacco (N=72)
 - 93.0% asked if any past use
 - 93.0% asked if any present use
 - 8.0% of those asked about either past or present use were counseled
- Alcohol (N=72)
 - 94.0% asked if past or present use
 - 10.0% of those asked about use were counseled



Round 1 Chart Review Results

- STD (N=57)
 - 79.2% asked if sexually active
 - 66.7% sexually active (N=15) were counseled
 - 16.7% counseled on risk reduction regardless of status
- Asthma (N=38)
 - 42.1% had a completed asthma action plan



Part 2 Interventions

- CME lectures – (April 2008 – March 2009)
 - Review of Adolescent Hypertension: Screening, Diagnosis, and Treatment
 - STD Testing for Gonorrhea and Chlamydia
 - Male GU
- EMR - eClinical Works EMR and PM
 - 7 SBHCs within the SHC network
- Data dissemination
 - Performance feedback
 - Discussion of results and issues, ways to improve and systemize documentation
 - Forum to share between sites



Round 2 Chart Review Results

SBHC	# Schools	# Charts Reviewed	# Asthma Charts Reviewed
SBHC W	1	9	14
SBHC X	3	8	11
SBHC Y	1	11	8
SBHC Z	2	20	9



Round 2 Chart Review Results

- BMI
 - 89.6% BMI growth chart up to date
 - 97.9% BMI calculated
 - 10.5% counseled: BMI >85th %
- Hypertension
 - 94.1% blood pressure measured at every visit



Round 2 Chart Review Results

- Tobacco
 - 75.0% asked about past use
 - 83.3% asked about present use
 - 52.8% of past users (N=36) received counseling
 - 50.0% of present users (N=40) received counseling
- Alcohol
 - 79.2% asked about past / present use
 - 35.4% who were asked (N=38) were counseled



Round 2 Chart Review Results

- STD
 - 89.6% asked if sexually active
 - 94.7% of sexually active (N=19) counseled
 - 60.4% counseled on risk reduction regardless of status
- Asthma
 - 60.8% had a completed asthma action plan



Results Comparison

- 2009 vs. 2008
 - Overall, documentation of counseling increased
- EMR 2009 vs. Paper-based 2008
 - Increase in documentation of counseling
 - Decreases in unexpected areas such as asking about risk behaviors
 - Providers may need more training on where to specifically document indicators

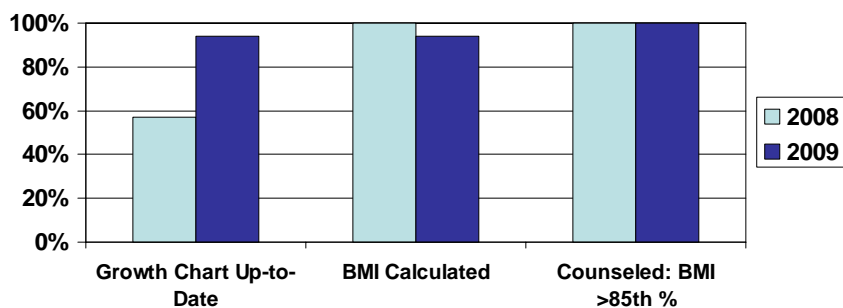


EMR vs. Paper-based Comparison

- only comparing 2 schools



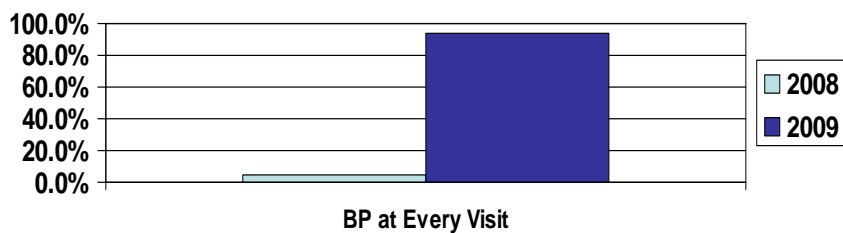
BMI



- BMI – Growth Chart documentation increased in 2009

SCHOOL HEALTH CONNECTION
HEALTHY KIDS + HEALTHY COMMUNITIES

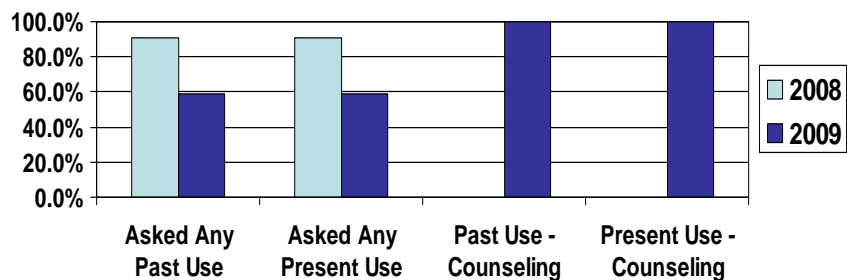
Hypertension



- Hypertension – BP measured at every visit increased in 2009

SCHOOL HEALTH CONNECTION
HEALTHY KIDS + HEALTHY COMMUNITIES

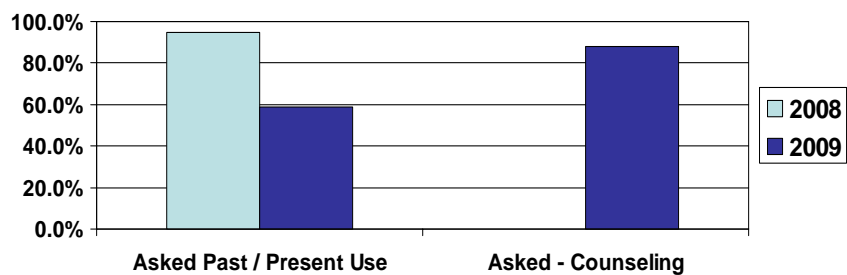
Tobacco



- Tobacco – Decrease in documentation of asking, increase in documentation of counseling

SCHOOL HEALTH CONNECTION
HEALTHY KIDS + HEALTHY COMMUNITIES

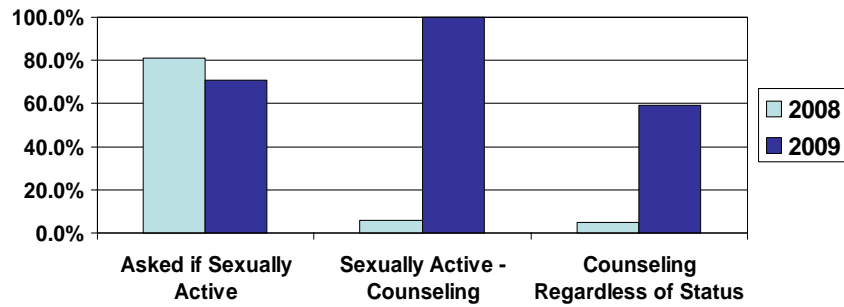
Alcohol



- Alcohol – Decrease in documentation of asking, increase in documentation of counseling

SCHOOL HEALTH CONNECTION
HEALTHY KIDS + HEALTHY COMMUNITIES

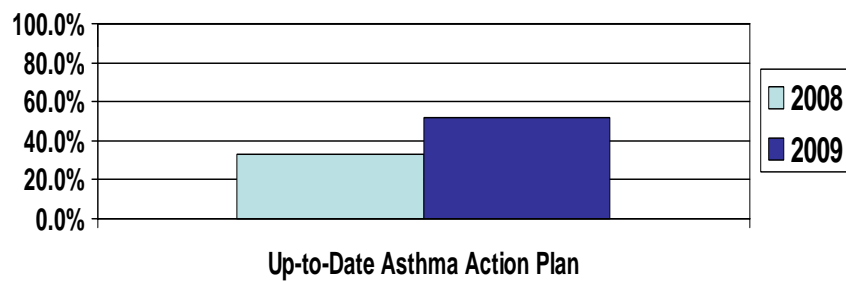
Sexual Activity



- Sexual Activity – increase in documentation of counseling

SCHOOL HEALTH CONNECTION
HEALTHY KIDS + HEALTHY COMMUNITIES

Asthma



- Asthma – Increase in completed up to date asthma action plan

SCHOOL HEALTH CONNECTION
HEALTHY KIDS + HEALTHY COMMUNITIES

Break 2

<10 minutes



Impact of CQI

- See change in documentation over time
- Impact of CQI and interventions in documentation of care
 - Informs the following activities:
 - CME
 - EMR
 - Data dissemination



Impact of CQI

- CME
 - Can influence what topics need to be covered according to SBHC staff needs
 - Ex: Adolescent Hypertension lecture conducted twice

Impact of CQI

- EMR
 - Inform customizations
 - More periodic spot-checks for quality
 - Highlight specific health issues
 - Can make changes more rapidly
 - Empowered / self-sufficient

Impact of CQI

- Data Dissemination
 - Clinic specific data to clinics and how each clinic compares to the aggregate
 - Aggregate data to Steering Committee
 - Funding reports



Hard Lessons Learned

- Across a network – different medical sponsors, different methods, different documentation styles
- EMR limitations and having realistic expectations of the EMR
- Working with OPH to relieve the need for double data entry – how affects CQI in the EMR
- Generating support and receiving buy-in from SBHC staff on why there is a need to modify documentation
- Providers set in their ways



Hard Lessons Learned

- Working across a network
 - Data sharing access
 - Different medical sponsors
 - Different methods of care delivery
 - Different documentation styles



Hard Lessons Learned

- Limitations of EMR
 - Reporting: lack clinical reporting and reports training
- Expectations of EMR
 - Replacing “chart pulls”
 - Improving documentation right away
- Demonstrating how to generate data to show clinical care delivered



Hard Lessons Learned

- Working with funders to relieve the need for double data entry
 - More opportunity for error
 - Labor intensive for clinic staff



Hard Lessons Learned

- Working with funders that also have clinical standards technical assistance
 - Collaborative
 - No intention of “stepping on toes”



Hard Lessons Learned

- Resistance to Change
 - Sponsors
 - Partial to own system
 - Want the SBHC to fit in neatly
 - School Administration
 - How to physically install EMR (internet connection)
 - Confidentiality issues of data sharing
 - Clinicians and staff
 - Want everything to look a certain way
 - Set in their ways



Hard Lessons Learned

- Fear of more work
 - Belief that the EMR will always take longer than paper-based charts
 - Belief that EMR changes best practices



Next Steps

- Do CQI on charting to see how staff are actually utilizing the EMR
- Further customization of EMR and modification of workflow to mitigate issues found throughout CQI process
 - Meet with clinic staff to discuss

Open Discussion

Thank You!

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