CALIFORNIA SCHOOL-BASED HEALTH ALLIANCE
Putting Health Care Where Kids Are

Key Performance Measures for School-Based Health Centers

As health care reform continues to take shape and additional provisions of the Affordable Care Act are implemented, there is an increasing demand for greater accountability from health care providers, including school-based health centers (SBHCs). Practically, this has meant a greater focus on gathering, measuring, and reporting data to demonstrate the ability of health care providers to reduce costs and produce positive health outcomes.

Additionally, each of the major models of care associated with health care reform, i.e. the Patient Centered Medical Home, the Triple Aim, and Accountable Care Organizations emphasize the need for health care providers to actively track and measure performance indicators in order to demonstrate the effectiveness, efficiency, and quality of the services provided.[1] In order to respond to this increased level of scrutiny, it is important that SBHCs ensure they are able to provide data that shows their unique impact within the health care system and more importantly to the health of their patients.

Beyond the purposes of accountability, measuring performance is fundamentally about quality improvement. There is a great deal of anecdotal evidence that suggests SBHCs would perform extremely well in particular areas, e.g. ensuring their patients receive annual well-child exams or are up to date on their immunization schedule. However, there is insufficient data to show how well SBHCs perform in comparison to other health care providers, including other SBHCs. Selecting performance measures that align with what other health care providers are currently measuring can help SBHCs determine how well they are doing and in what areas they need to improve. It can also help demonstrate the value of school-based health care.

In recognition of the current demands for health care reform implementation and the shift toward improved measurement, accountability and comparability across health centers, the California School-Based Health Alliance, in partnership with BTW *informing change*, and with funding provided by the Blue Shield of California Foundation, has developed this resource guide on key performance measures for SBHCs.

With this resource, we aim to assist SBHCs in: 1) demonstrating their value to a range of audiences (federal and state government, Federally Qualified Health Centers, school districts, funders, and the public), 2) continuously improving their performance, and 3) sustaining their operations. To achieve these goals, we recommend a selection of key measures reflecting multiple aspects of high performance.

[1] For more information on Patient Centered Medical Home recognition requirements and recommendations for SBHCs, please refer to CSHA's report "Patient-Centered Medical Home: How Are California School-Based Health Centers Relating to This New Model of Care?"

This document contains recommended measures for strong SBHC operations, high-quality care, healthy behaviors, and positive health outcomes. We include a description of specific indicators, calculations for these measures, a brief rationale for each measure, and related data sources for similar indicators when available. See the list of related data sources at the end of this document. Please note that patient satisfaction and academic outcomes are under consideration but are not included in this document. In addition, demographic characteristics and service utilization data are not included, though your SBHC should already be collecting these types of data.

This resource was developed by reviewing performance measures commonly used by community health centers and then prioritizing and customizing them for SBHCs. The measures in this document were reviewed by a number of SBHC personnel to maximize relevance and feasibility.

While your SBHC may not be in the position to collect all of these measures now, we urge you to move toward a more complete and robust set of measurements over time. In particular, we urge you to go beyond the measurement of services your clinic provides to capture outcomes and change at multiple levels (e.g., in SBHC operations, patient health behaviors, patient health outcomes).

We value your input about this resource and its usefulness. Please contact Juan Taizan at 510-350-3290 or jtaizan@schoolhealthcenters.org with questions or comments.

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Indicator Name	Description	Calculation	Rationale	Related Data Sources
Strong SBHC Operations				
1. Capacity				
a) Ratio of Non-billable to billable visits	Measure of capacity to provide reimbursable services	Numerator: Number of non-billable visits Denominator: Number of billable visits	SBHCs can determine provider capacity as well as potential impact on sustainability related to billing revenue	• OSHPD (Revenue and utilization by payment source)
b) Patient visits	Measure of capacity to provide services	Number of clinic visits across all patients by encounters	SBHCs can determine overall clinical capacity and utilization	• OSHPD (Total number of encounters) • UDS (Total number of visits)
c) Number of visits by visit type	Measure of capacity to provide services, by specific type of visit	Number of each type of visit provided at the health center (e.g., first aid, physicals, sexually transmitted infections screening, etc.)	SBHCs can use measure to determine staffing needs based on service utilization	• OSHPD (Encounters by principal service) • UDS (Selected diagnoses and services rendered)
d) Unduplicated patients	Measure of capacity to provide services, by individual patients	Number of unique patients	Measures SBHC penetration on campus or community and growth in utilization; important in determining if SBHC is provider of choice	• OSHPD (Total number of patients) • UDS (Total patients)
2. Efficiency				
a) Patient visits per productive hour	Measure of provider productivity	Numerator: Number of billable visits Denominator: Number of productive hours[2]	Productivity is increasing being examined by the state and federal government. Many SBHCs aim for 2 patients per hour	
b) Staff to provider ratio	Measure of staffing support to maximize efficiency	Numerator: Number of FTE staff Denominator: Number of FTE providers	In conjunction with capacity and productivity, this indicator can help	• OSHPD (Number of salaried FTE primary care providers; Number of salaried FTE clinical support staff)

[2] Productive hours refers to hours providers are on-site and seeing patients; this excludes other work such as administration and grant writing

Indicator Name	Description	Calculation	Rationale	Related Data Sources
			SBHCs determine staffing strategy and impact on service delivery	• UDS (Staffing and utilization)
3. Sustainability				
a) Operating margin or net margin	Measure of revenues available to cover operating expenses for direct services	Net revenue – net operation expenses	Measures cost effectiveness. Cost control is important to health care reform and the Triple Aim[3]	• OSHPD (Net from operations)
b) Revenue mix	Measure of income sources by category	Numerator: Revenue by category: • Contributions/fundraising • Grants/contract revenue (exclude capital grants) • Net patient service revenue • Other operating revenue Denominator: Total revenue	Allows SBHC to identify areas for revenue growth	• OSHPD (Income statement) • UDS (Patient-related revenue; Other revenue)
High-Quality Care				
1. Access & Timeliness				
a) Accessibility timeliness	Time elapsed before patient is able to access services	Average of third next available appointment by type of visit[4]	Improving access to care is a standard of the PCMH model; access also impacts patient satisfaction	
b) Advanced access	Percentage of same-day appointments scheduled	Numerator: Number of appointments scheduled for the same day that a patient calls or visits requesting an appointment Denominator: Number of scheduled appointments	Availability of appointments when needed is a standard of the PCMH model; enhanced access also impacts patient	

[3] For more information on the Triple Aim: http://www.ihi.org/offerings/Initiatives/TripleAim/Pages/default.aspx
[4] For more information on calculating the third next available appointment: http://www.ihi.org/knowledge/Pages/Measures/ThirdNextAvailableAppointment.aspx.

Indicator Name	Description	Calculation	Rationale	Related Data Sources
			satisfaction	
c) Patient cycle time	Time patient spends at visit from check-in to check-out	Time patient completes appointment- Time patient checks in to the health center	Length of time a patient spends at an appointment impacts satisfaction; length of time students spend out of class and in the SBHC is an important measure for school administrators	
2. Coordination & Continuity				
a) Care coordination	Percentage of patients connected to additional care services	Numerator: Number of patients with chart documented follow-up for the following care: • Non urgent primary care • Non urgent specialty care • Mental health care • Oral health care • Enabling services (e.g., case management, health education, youth development programs) Denominator: Number of patients referred for follow-up care	Measuring care coordination ensures patients are connected to the services they need and improves the quality of care; it can also help the SBHC demonstrate the diversity of services provided; care coordination is also a standard of the PCMH model	
b) Emergency care coordination	Rate of emergency department visits	Numerator: Number of emergency department visits per patient per year Denominator: All patients up to 19 years of age	Measures SBHC ability to lower costs associated with emergency department visits; demonstrates SBHC role as primary care provider	• CHIPRA (Ambulatory care: emergency department visits)
	Percentage of patients who received post-emergency care follow-up visits	Numerator: Number of patients that received a follow-up visit ≤48 hours of discharge from an emergency department, hospital or mental health facility Denominator: Number of patients who required an emergency department visit for physical or mental health care	Demonstrates SBHC role as primary care provider; demonstrates enhanced patient care coordination	• CHIPRA (Follow-up after hospitalization for mental illness; Ambulatory care: emergency department visits) • HEDIS ACO (Follow-up after hospitalization for mental illness)

Indicator Name	Description	Calculation	Rationale	Related Data Sources
c) Empanelment	Percentage of patient visits with assigned provider	Numerator: Number of visits with patient seeing assigned provider Denominator: Number of visits for all patients	Measures ability of SBHCs to provide continuity of care between patient and provider	
Healthy Behaviors				
1. Alcohol, Tobacco, & Other Drug Use (ATOD)				
a) ATOD cessation	Percentage of patients engaged in ATOD cessation activities	Numerator: Number of patients from the denominator that have successfully enrolled in cessation activities to reduce or quit alcohol, tobacco or other drug use Denominator: Number of patients who are users of alcohol, tobacco or other drugs and have received charted advice to quit	ATOD screening and initiation of treatment is a federal clinical quality measure; risk assessments are an element of the PCMHC model; demonstrates care coordination related to PCMH model	• EHRIP (Initiation and engagement of alcohol and other drug dependence treatment; Smoking and tobacco use cessation, medical assistance) • HEDIS ACO (Initiation and engagement of alcohol and other drug dependence treatment) • UDS (Selected diagnostic tests/screening/preventive services)
	Percentage of patients that reduce ATOD use	Numerator: Number of patients from the denominator that report a reduction in ATOD use 6 months and 1 year after initial visit Denominator: Number of patients who are users of alcohol, tobacco or other drugs and have received charted advice to quit	Measuring patient cessation moves SBHCs away from focusing on process measures to performance outcomes	
2. Chronic Disease				
a) Medication management	Percentage of patients successfully managing medication to control chronic disease	Numerator: Number of patients from the denominator that are using appropriate medication to manage chronic disease Denominator: Number of patients diagnosed with asthma OR Number of patients diagnosed	Federal clinical quality measure to demonstrate performance	• EHRIP (Use of appropriate medications for asthma) • HEDIS ACO (Use of appropriate medications for people with asthma)

Indicator Name	Description	Calculation	Rationale	Related Data Sources
		with diabetes		
b) Nutrition education	Percentage of patients that access nutrition education	Numerator: Number of patients with chart documented counseling on nutrition and physical activity Denominator: Number of patients diagnosed with diabetes OR Number of patients that have a body mass index (BMI) –for-age ≥85th percentile	Federal clinical quality measure to demonstrate performance	
c) Physical activity	Percentage of patients that increase physical activity	Numerator: Number of patients from the denominator that report at least 60 minutes of physical activity a day[5] Denominator: Number of patients diagnosed with diabetes OR Number of patients that have a BMI-for-age ≥85th percentile	The recommendation for physical activity is based on AAP guidelines; documenting the SBHCs impact on physical activity behaviors can demonstrate performance outcomes related to risk reduction	
3. General Preventive Behaviors				
a) Accessing timely and appropriate immunizations	Percentage of patients current on their immunization schedule	Numerator: Number of patients that are fully immunized by their 2nd and 13th birthday[6] Denominator: Number of patients who turn 2 or 13 years of age, respectively, during the measurement year	Providing immunizations are an important clinical measure at all levels; SBHCs often provide this critical preventative service but do not measure specific to their site; immunizations is an important measure for school districts	• CHIPRA (Childhood immunization status) • EHRIP (Childhood immunization status) • HEDIS ACO (Childhood immunization status; Immunizations for adolescents) • UDS (Childhood immunization)
b) Accessing timely and appropriate well-child exams	Percentage of patients that receive an annual well-child exam	Numerator: Number of patients 3–19 years of age who received an annual well-child exam Denominator: Number of patients 3–19 years of age	SBHCs often provide this critical preventative service but do not measure specific to their site; well-child exams is	• CHIPRA (Well-child visits in the 3rd, 4th, 5th and 6th years of life; Adolescent well-care visit)

[5] For more information on physical activity recommendations by the American Association of Pediatrics: http://brightfutures.aap.org/pdfs/Guidelines_PDF/18-Adolescence.pdf

[6] Related data sources define patients as having continuous enrollment for 12 months prior to the 2nd and 13th birthday.

Indicator Name	Description	Calculation	Rationale	Related Data Sources
			an important measure for school districts	
4. Mental Health				
a) Management of mental health conditions	Percentage of patients adhering to a documented mental health follow-up plan	Numerator: Number of patients adhering to a documented mental health follow-up plan Denominator: Number of patients diagnosed with a mental health condition using a standardized tool	Care coordination and closed-loop tracking of referrals is a key element of the PCMH model; depression diagnosis and treatment is a clinical quality measure in adults; behavioral health assessment and integration is an area of strength for many SBHCs	
5. Oral health				
a) Dental care	Percentage of patients engaged in preventative oral health care: brushing	Numerator: Number of patients from the denominator that report brushing teeth twice a day Denominator: Number of patients seen by a dental provider	Access to preventative dental care services is a CHIPRA measure; Measuring patient practices moves SBHCs away from focusing on process measures to performance outcomes	CHIPRA (Percentage of eligible patients that receive preventative dental services)
	Percentage of patients engaged in preventative oral health care: flossing	Numerator: Number of patients from the denominator that report dental flossing once a day Denominator: Number of patients seen by a dental provider		CHIPRA (Percentage of eligible patients that receive preventative dental services)
6. Reproductive Health				
a) Birth control use	Percentage of female patients 12–18 years old regularly using a hormonal birth control method	Numerator: Number of patients from the denominator with self-reported and chart-documented regular use of a hormonal birth control method Denominator: Number of sexually active female patients 12–18 years old who have had a visit with a medical provider during the current year	Many SBHCs prescribe birth control but do not measure outcomes	

Indicator Name	Description	Calculation	Rationale	Related Data Sources
b) Condom use	Percentage of patients regularly using condoms to prevent sexually transmitted infections and pregnancy	Numerator: Number of patients from the denominator with self-reported and chart-documented regular use of condoms Denominator: Number of sexually active patients 12–18 years old who have had a visit with a medical provider during the current year	related patient adherence; area of strength for SBHCs	
Positive Health Outcomes				
1. Alcohol, Tobacco and Other Drug Use (ATOD)				
a) ATOD rates	Percentage of patients who are users of alcohol, tobacco or other drugs	Numerator: Number of screened patients who identify as users of alcohol, tobacco or other drugs Denominator: Number of patients screened for alcohol, tobacco or other drug use	ATOD screening is a federal clinical quality measure; risk assessments are an element of the PCMHC model	• UDS (Tobacco use assessment)
2. Chronic disease				
a) Asthma rates	Percentage of patients with asthma	Numerator: Number of screened patients who have been diagnosed with persistent mild, moderate or severe asthma Denominator: Number of patients screened for asthma	Important federal indicator for measuring health disparities in communities; SBHCs can develop strategies to address community health needs; important indicator for school districts	• UDS (Selected diagnoses and services rendered)
b) Diabetes rates	Percentage of patients with diabetes	Numerator: Number of screened patients who have been diagnosed with diabetes Denominator: Number of patients screened for diabetes	Important federal indicator for measuring health disparities in communities; SBHCs can develop strategies to address community health needs; important indicator for school districts	• UDS (Selected diagnoses and services rendered)

Indicator Name	Description	Calculation	Rationale	Related Data Sources
c) Obesity	Percentage of obese patients	Numerator: Number of patients from the denominator who have been diagnosed as obese (i.e., a BMI-for-age ≥85th percentile) Denominator: Number of patients who had a visit with a medical provider and their BMI documented	Important federal indicator for measuring health disparities in communities; SBHCs can develop strategies to address community health needs; important indicator for school districts	• UDS (Selected diagnoses and services rendered)
3. Mental health				
a) Mental health conditions	Percentage of patients with a mental health diagnosis	Numerator: Number of patients who have been diagnosed with a mental health condition (e.g., depression, trauma-related condition) using a standardized tool Denominator: Number of patients screened for a mental health condition using a standardized tool	Important federal indicator for measuring health disparities in communities; SBHCs can develop strategies to address community health needs; important indicator for school districts	• UDS (Selected diagnoses and services rendered)
4. Oral health				
a) Dental services	Percentage of patients with tooth decay	Numerator: Number of screened patients diagnosed with mild or severe tooth decay Denominator: Number of patients who received a dental screening	Important federal indicator for measuring health disparities in communities; SBHCs can develop strategies to address community health needs; important indicator for school districts	CHIPRA (Percentage of eligible patients that receive dental treatment services)
5. Reproductive Health				
a) Sexually transmitted infections (STI)	Percentage of patients diagnosed with an STI	Numerator: Number of sexually active patients 12–18 years old diagnosed with an STI Denominator: Number of sexually active	Important federal indicator for measuring health disparities in women; STI screening	• CHIPRA (Chlamydia screening) • EHRIP (Chlamydia screening for women)

Indicator Name	Description	Calculation	Rationale	Related Data Sources
		patients 12–18 years old screened for an STI	for the entire community is an area of strength for many SBHCs to share	• HEDIS ACO (Chlamydia screening in women) • OSHPD (HIV Testing) • UDS (Selected diagnoses and services rendered; Selected diagnostic tests/screening/ preventive services)
b) Teen pregnancy	Percentage of patients with a positive pregnancy test	Numerator: Number of patients from the denominator with a positive pregnancy test Denominator: Number of sexually active female patients 12–18 years old screened for pregnancy	There is no standard measurement for teen pregnancy other than teen birth rates; teen pregnancy prevention is an area of reported strength of SBHCs, but very few measure impact on outcomes	

Related Data Sources

This list includes a number of data sources with performance measures relevant for community health centers and SBHCs. Your health center may already be collecting and reporting on these measures for various purposes. This list of data sources is not exhaustive and the measures included in these sources may not correspond exactly to those recommended in this document (some capture similar constructs but with a different calculation).

1. **CHIPRA:** Children's Health Insurance Program Reauthorization Act of 2009 from Centers for Medicaid and Medicare Services. Initial Core Set of Children's Quality Measures for Voluntary Reporting. http://downloads.cms.gov/cmsgov/archived-downloads/SMDL/downloads/SHO11001.pdf

2. **EHRIP:** EHR Incentive Program from Centers from Medicaid and Medicare Services. EHR Incentive Program 2011-2012 Eligible Professional Clinical Quality Measures. http://www.cms.gov/regulations-and-Guidance/legislation/ehrincentiveprograms/downloads/CQM_EPs_2012_02_02.pdf

3. **HEDIS:** Healthcare Effectiveness Data and Information Set from National Committee for Quality Assurance. Accountable Care Organization Core (ACO) measures: HEDIS 2013 Technical Specifications for ACO Measurement. http://www.ncqa.org/Portals/0/HEDISQM/HEDIS2013/ACO_Core_Measure_List_9.6.12.pdf

4. **OSHPD:** Office of Statewide Health Planning & Development. Utilization Report of Primary Care Clinics – 2012. http://www.oshpd.ca.gov/HID/ALIRTS/Text_pdf_files/PC_SC_Form_Inst/pcfrm12.pdf

5. **OSHPD:** Office of Statewide Health Planning & Development. Utilization Report of Primary Care Clinics – 2012. http://www.oshpd.ca.gov/HID/ALIRTS/Text_pdf_files/PC_SC_Form_Inst/pcfrm12.pdf