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RESEARCH-TO-PRACTICE SUMMARY

Practical Implications for Site Based Well Child Visits in Head Start

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Children in poverty are at greater risk for developmental and health problems and face significant barriers in accessing routine preventive healthcare. Evidence based guidelines recommend stricter adherence to the schedule of well-child care to promote early identification and treatment. Literature indicates that well-child visits in school settings make a difference among low-income children with unmet preventive healthcare needs. This study describes the implementation of a well-child visit program in a Head Start site with enrollments of children living in poverty. The comparison study design measured the aggregate percentage of children up to date with well-child visits against historical pre-data. There were clinical increases in the proportion of children up to date with the site-based intervention. Implications support the establishment of school-based health centers in Head Start sites that provides well-child visits as well as illness management.

Keywords: school based clinic; school based health center; nurse practitioner; preschool; head start; low-income children; well-child care; preventive pediatric health

When compared to all children, children in poverty face significant barriers in accessing preventive care that includes regular assessment of growth, health, and development alongside early diagnosis and treatment (American Academy of Pediatrics, 2013). At least 11.4 million children in the U.S., or 16% of all children, do not see a health care provider for an annual preventive well child visit due to issues involving health care access (Data Resource Center for Child and Adolescent Health, 2012). Lack of insurance, insurance coverage gaps and transportation are among these barriers.

In 2012, the poverty rate for children under age 6 was 24.4%, or 5.8 million kids (U.S. Census Bureau, 2013). Compared with the health of higher income peers, low-income families experience higher rates of infant mortality, and their children evidence slower childhood growth, poorer nutrition, and more frequent and severe chronic diseases such as asthma (Child Trends, 2012). They also have lower immunization rates, increased obesity, and obesity-related complications (American Academy of Pediatrics, 2013). Due to the increased health risks

associated with poverty, the American Academy of Pediatrics (2000) and the Agency for Healthcare Research and Quality (2011) have developed evidenced based guidelines that recommend stricter adherence to an age specific schedule of preventive visits for youth in low-income families.

Head Start's enrollments are comprised mainly of children from families living at or below the federal poverty level. In an effort to address health disparities among children in poverty and promote early identification and treatment, all Head Start sites are mandated to ensure at least 90% of enrolled children are up to date on the age specific schedule of preventive well-child care (U.S. Department of Health and Human Services, 2009).

Research has shown that site based well-child visits provided in school settings, such as Head Start, can make a difference in access to care among low income children with unmet preventive healthcare needs. Silberberg and Cantor (2008) conducted an observational case study among four elementary schools with a high level of unmet health needs among low-income children. The study demonstrated that school-based visits significantly improved health service utilization, yet only among the neediest children. A similar comparison study by Wade, Mansour, Line, Huentelman and Keller (2008) concluded that the school based model of health care delivery demonstrated statistically significant improvement of student reported quality of life among elementary and middle school students. More influence was found on children that generally have impeded access to care, specifically those without private health insurance, and those with lower household income levels.

Transferrable models for site based well-child care come from school based or school linked health centers in which services are shaped to meet the needs of the setting. School based health services can encompass a full or limited range of healthcare depending on the unique needs of the population. The essential component is having a designated area that is devoted to service provision. Once the specific services and space have been determined, consideration must be given to required administrative approvals, hours of availability, supplies, equipment, and staffing (Illinois Maternal and Child Health Coalition, 2013).

OUR STUDY

This quality improvement study introduced a site based well-child program at a Southeastern U.S. Head Start location in order to increase the percentage of enrolled children who were up to date with the American Academy of Pediatrics' age specific preventive visit guidelines. The study site operates a large Head Start program that has encountered challenges in meeting the 90% mandate. A root cause analysis determined that parents faced a number of barriers in accessing preventive healthcare for their children that mirror the obstacles noted at the national level. The site specific barriers included lack of health insurance, inability to pay out of pocket, and lack of transportation (S. Yellock, personal communication, February 11, 2013).

Site-based preventive visits were made available at the start of the school year. The preventive visit was performed by a volunteer nurse practitioner with available appointments two weekday evenings every month in 2 hour blocks of time. Some appointments were offered on one Saturday morning each month to accommodate parent work schedules.

This project did not intend to serve as a medical home for participants, but as a safety net for children without continuous accessible medical care who were due for a single well-child

visit. Every parent-child dyad was referred for support and guidance in accessing resources and navigating the health care system in order to address and overcome access barriers.

KEY FINDINGS

Well-Child Compliance Rates

The proportion of children that were up to date with well-child care at the beginning of both school years was nearly equal at 14% in 2012 and 13% in 2013. During August through December 2012, there was a slight and steady percentage increase each month (August, 14%; September, 18%; October, 29%; November, 44%, December, 85%). During the same time period in 2013, there was an 84% increase in August through October with a 28% loss in November followed by recovery of the prior gain in December (August 13%; September 80%; October 97%; November 69%; December 97%).

Health Conditions Identified

A number of health conditions were identified during the well-child visits. The most common diagnosis was seasonal allergies found among 30% of children. Twenty-seven percent needed immunizations, and 22% had asthma. The remaining other 22 medical ailments included: insect dermatitis (1), anemia (1), lymphadenopathy (1), umbilical hernia (1), developmental delay (1), heart murmur (3), upper respiratory infection (5), hives (1), peanut allergy (1), speech delay (2), visible dental decay (1), rash (1), behavioral concerns (1), ear-wax impaction (1), and enlarged tonsils (1). Of note is the observation that of the n=37 children, only 5 (14%) had no health conditions identified. Twelve children (32%) had one detected illness, and 20 (54%) had anywhere from two to four co-occurring health ailments.

Treatments and Referrals

Of the 32 children identified with a medical diagnosis, 13 received treatment only, 3 received referral only, and 16 received both treatment and referral. Treatment only was provided mostly for children with acute illnesses such as viral upper respiratory infections, rash, and ear wax impaction. Referrals only were made to the local health department for past due immunizations, and for dental services due to visible tooth decay. Children that received a combination of treatments and referrals were for diagnoses that required ongoing medical treatment and management such as asthma, anemia, heart murmur, developmental delay, and food allergy. Most of the children with chronic ongoing medical diagnoses were already known to the Head Start staff, thus the healthcare provider’s role entailed reinforcing established management plans, and ensuring appropriate documentation so that Head Start staff could follow through and make certain health needs were being fully addressed.

Parent Satisfaction

The response rate for parent satisfaction surveys was 70% (n=26). Extremely satisfied received the highest rating among all 5 survey measures (Figure 2). Overall care was the survey item that received the highest percentage of extreme satisfaction (80%), and was followed by convenience of on-site services (77%). There was more satisfaction with ease in obtaining follow up information (73%) as compared to the convenience of hours offered (69%). Ease of making an appointment had the lowest percentage in regards to parent satisfaction (62%). One respondent indicated extreme dissatisfaction in all aspects of parent satisfaction.

Thirty percent of parents wrote comments in the section of the survey for additional feedback and suggestions. Quality of service was the most common theme and was observed in 8 of the 11 surveys. Parents used terms such as "A+ service", "helpful", "informative", and "great". Customer service attributes were described in 45% of the returned surveys with words to describe the health care team as "kind", "gentle", "nice", "friendly", and "professional". Terms specific to thankfulness and appreciation were written in 5 of the 11 parent surveys. One parent suggested "have(-ing) someone there on a day to day basis".

Staff Satisfaction

Eighty-three percent (n=20) of the health and family services staff responded to the staff satisfaction survey. Convenience of on-site services received the highest proportion of extreme satisfaction (60%) among all the staff satisfaction measures (Figure 3). Ease of making appointments had a 25% extreme satisfaction rate followed by an equal frequency distribution among very satisfied (35%) and satisfied (35%). Fifteen percent of staff was extremely satisfied with the ease of receiving follow up information, and this was the only measure where staff responded in all five satisfaction categories. Twenty-five percent of staff was very satisfied, and a total of 20% were either very or extremely dissatisfied. In regards to overall experience, no staff member reported being either dissatisfied or extremely dissatisfied. Thirty-five percent were extremely satisfied, 30% were very satisfied, and 35% were satisfied. Nine staff members, or 38%, wrote comments on the staff satisfaction survey. Two described the site based well-child program as an asset by describing it as "a beneficial service" and "great resource". Two others spoke to their satisfaction indicating they were "pleased" and "extremely satisfied" with the service, while two staff members commented on the convenience of site based preventive visits. Three suggestions were made. The first was that each center "have well-child check-ups…here at school", the second was that "lead hemoglobin checks" be provided on-site, and the last suggestion was that there be a "more timely response in receiving completed exam forms (i.e. documentation) after well-child visits."

SUMMARY AND RECOMMENDATIONS

The study demonstrated a clinical increase with improved well-child compliance rates. The Year 1 December 84% compliance rate with no intervention increased to 97% at December Year 2 with intervention. This 13% increase was of practical importance in sustaining the momentum and meeting the 90% compliance rate goal at the end of the school year in May.

The focus of this study was well-child visits, yet the study reinforced the recommendation that any Head Start program implementing school based services should tailor the services based on individual program needs. The Head Start program had needs beyond those of well-child care for which such services were not offered, three services in particular.

The first was treatment of acute ailments as multiple times during project implementation the nurse practitioner was asked if sick children could be seen although this was not within the scope of the study. Within the first four months of the program year there were 126 children that had at least one or more occurrences of 3 day consecutive absences due to illness (I. Cuthrell, personal communication, March 12, 2014).

The second service need was for immunizations. Twenty-seven percent of the children seen in the site based well-child program needed immunizations. Additionally, according to the tracking system, only 30% of all the children enrolled at Head Start were up to date with immunizations at the end of project implementation in December (S. Yellock, personal communication, March 12, 2014).

Lastly, 22% of the children seen in the well-child program had asthma, and program wide there were 66 children had asthma diagnoses with no asthma care plan noted in the tracking system (S. Yellock, personal communication, March 12, 2014). This substantiates the need for school based healthcare aimed at the treatment and management of asthma.

The appointment scheduling process is also pivotal with school based healthcare. Setting up an appointment should be efficient for both staff and parents as this directly impacts the perception and ease of making an appointment. With this study, parents communicated with family advocates to schedule an appointment. Family advocates then contacted health staff who then contacted the nurse practitioner who then confirmed the slot or responded back with an alternative time. This cumbersome process reflected in the lower satisfaction scores among parents and staff in regards to ease of making appointments. Much like a medical office, there should be a straight line process where parents speak to one person who can look at the schedule and make an appointment.

Additionally, a “straight line” process must be in place for getting documentation of the well-child visit to the family advocate staff person that is responsible for ensuring all enrolled children have proof of being up to date with well-child visits. During implementation, the documentation was given to health staff at the end of the visit, and health staff forwarded the completed form to the family advocate. Yet, there was often a lag in response time and the family advocate often did not know if the child kept the appointment or not. The family advocate had the charge of ensuring each child had documentation of a well-child visit on file before being enrolled, or within 30 days following enrollment as mandated by the Division of Child Development (North Carolina General Statute Chapter 110, 2014). Not having the documentation in a timely fashion impedes the decision making process about whether a child is permitted to attend, and could’ve resulted in unwarranted absences. This reflected in staff’s satisfaction with the east of receiving follow up information which was the only survey item where respondents selected items in all five satisfaction choices.

In this study, a nurse practitioner performed the well-child visit, yet the option exists for registered nurses to perform a Health Check screening visit that meets well-child visit requirements. The North Carolina General Statute Chapter 110-91(1) (2014) states that a required health assessment can be done by a public health nurse meeting the department’s standards for the Early, Periodic Screening, Diagnosis and Treatment program. Under this statute, registered nurses may complete the Child Health Training Program that is a standardized

curriculum that focuses on the American Academy of Pediatrics age specific and evidenced based guidelines entitled Bright Futures. Once certified, registered nurses are able to perform a comprehensive history and complete physical assessment that includes all the required components of the well-child visit and is billable under Medicaid (University of North Carolina Gillings School of Global Public Health, 2014). In such a scenario, a registered nurse could triage and screen children and refer those with identified or suspected health conditions to be seen and evaluated by a consulting nurse practitioner, physician assistant, or physician.

Initiation of site based healthcare is an accomplishment with two feasible options for sustainability that build upon community partnerships. The first involves a framework wherein a local Federally Qualified Health Center (FQHC) provides outreach to Head Start with the specific goal of facilitating access to healthcare. FQHCs and Head Start serve similar, if not overlapping, populations, and both have complementary purposes. Both understand the role and value of the early screening, diagnosis, and treatment, and both are federally funded grant programs with many of the same grant requirements (Beckerman & Evans, 2011). The second possibility is a community-academic partnership wherein a local school of nursing at a higher institution of learning works to establish a nurse managed health center (NMHC) model. Through either a FQHC or a NMHC, the Affordable Care Act has specific provisions authorizing federal grants for operations and construction of school based health centers. Not only can such collaboration enhance compliance with well-child care, but there is also the opportunity to prevent consecutive absences for acute illness (rash, fever, etc.), promote immunization rates, and ensure care planning and treatment for chronic conditions including asthma. All of the aforementioned are key indicators for the Program Information Report that all Head Start sites submit annually to the Office of Head Start. Also, under health care reform, a larger portion of children may have health insurance which presents the opportunity for third party reimbursement through Medicaid or commercial insurance for site based services (Holmes, 2010).

Direction for future study may include expanding the study to span a full school year and measuring the compliance of other key health indicators such as treatment of chronic conditions, immunization rates, and dental exams. The option also exists to study school based healthcare in the context of illness related absences to assess the impact on absenteeism as poor attendance is linked to overall lower academic achievement and end-of-grade failure (Kerr et al., 2012). Experimentation with site based healthcare in Head Start could occur by having control and intervention sites in programs with multiple locations. The opportunity also exists to explore other variables that impact compliance rates with well-child care particularly the level of staff support provided to parents navigating the health care system. Further analysis could entail recording multiple barriers that parents face versus only recording one primary barrier.

The study aim was to increase the proportion of compliance with the age specific schedule of well-child care to 95%. The compliance rate at December Year 1, with no intervention, was 84% which was along the upper end of the measure. In Year 2, with intervention, the rate of compliance at the end of December was 97%. The Year 1 84% starting point teeters on ceiling effect as the score is near the highest possible value prior to intervention. This constrains the amount of upward change possible and reduces the variability needed to support statistical analyses.

In a program of with 1,072 children, a priori sample size estimation using G*Power software suggested a minimum sample size of 192 children to find a significant difference based on an estimated effect size of 0.10, $\alpha = 0.05$ and 80% power (Faul, Erdfelder, Lang & Buchner, 2007). Approximately half of the sample, 96 children, would've been randomly selected from

historical surveillance in Year 1 without intervention, and the remaining half from Year 2 with the site based intervention. In this study the sample size (n=37) was not large enough to perform tests of statistical significance, thus it is not known to what extent the increase in compliance is attributed to chance given the overall historical trend.

Head Start staff used a variety of methods to engage parents and recruit participants. These methods included face to face contact, phone calls and letters sent home with children. The study did not employ a script or defined recruitment steps and instead relied on historical processes when identifying children who were behind with well child visits. It is likely that such variability impacted participation and ultimately sample size.

Access to the site based well-child visits could have been further promoted by having the nurse practitioner on site during morning and afternoon hours. Expanding the hours offered to include daytime appointments may have allowed for more access that may have also increased the sample size therein permitting statistical analyses. The evening and weekend hours may have served as an access to care barrier for some families. In retrospect, it would have been insightful to capture data about how many children were offered a site based visit yet declined to make an appointment and why, as well as how many children did not keep an appointment due to the hours services were offered.

In conclusion, school based healthcare plays a central role in increasing access among the medically underserved (Clark & Jones, 1997). It also supports the view that alternative methods must be identified and implemented to ensure the provision of preventive pediatric health care services (Kataoka-Yahiro & Munet-Vilaro, 2002). The Early Head Start National Resource Center and the Head Start Bureau have recommended the utilization of community partnerships with local healthcare providers for preventive health services, and have encouraged Head Start programs to collaborate with a local clinic willing to donate well-child exams to families with no means to pay (Early Head Start National Resource Center, 2004). Results of this study reveal that site based healthcare in a Head Start program through community partnerships is feasible and has the potential to improve access to care by addressing the gap between literature and practice and placing school based health centers at Head Start programs.

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