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## Well-Child Care Clinical Practice Redesign at a Community Health Center: Provider and Staff Perspectives

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### Abstract

**Background**—Community health centers (CHCs) are a key element of the health care safety net for underserved children. They may be an ideal setting to create well-child care (WCC) clinical practice redesign to drastically improve WCC delivery.

**Objective**—To examine the perspectives of clinical and administrative staff at a large, multisite urban CHC on alternative ways to deliver WCC services for low-income children aged 0 to 3 years.

**Methods**—Eight semistructured interviews were conducted with 4 pediatric teams (each consisting of 1 pediatrician and 2 medical assistants) and 4 CHC executive/administrative staff (Medical Director, COO, CEO, and Nurse Supervisor). Discussions were recorded, transcribed, and analyzed using the constant comparative method of qualitative analysis. Salient themes included WCC delivery challenges and endorsed WCC clinical practice redesign solutions.

**Results**—The 3 main WCC delivery challenges included long wait times due to insurance verification and intake paperwork, lack of time for parent education and sick visits due to WCC visit volume, and absence of a system to encourage physicians to use non-face-to-face communication with parents. To address WCC delivery challenges, CHC providers and administrators endorsed several options for clinical practice redesign in their setting. These included use of a health educator in a team-based model of care, a previsit tool for screening and

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surveillance, Web site health education, a structured system for non–face-to-face (eg, phone) parent communication, and group visits.

**Conclusion**—CHC-specific strategies for WCC clinical practice redesign endorsed by a large, multisite safety net clinic may lead to more efficient, effective, and family-centered WCC for low-income populations.

### Keywords

preventive care; community health centers; children; primary care; qualitative methods

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## Introduction

Preventive care visits, also known as “well-child care” (WCC), are fundamental to pediatric primary care.<sup>1</sup> These visits are critical for families with limited resources; they may be the only opportunity before a child reaches pre-school to address developmental, behavioral, and health issues. Evidence suggests that our current WCC delivery system does not adequately meet parents’ needs, particularly in low-income and minority populations.<sup>2–6</sup> Through WCC clinical practice redesign, WCC can be restructured to more effectively deliver care.

Community health centers (CHCs), a key element of the health care safety net for the most underserved patients, may represent an ideal setting to design and test care delivery innovations.<sup>7,8</sup> CHCs have a unique payment structure that provides flexibility to experiment and innovate, and they provide primary care to a large proportion of children in low-income communities.<sup>9</sup> In 2012, CHCs served an estimated 21 million patients with 32% younger than 18 years. Under the Affordable Care Act and its provisions for CHC expansion, the number of patients served by CHCs is estimated to double by 2015 and reach 50 million by 2019.<sup>10</sup>

As part of a larger study to create a new model for the delivery of WCC to low-income children in partnership with an urban CHC, our aim was to examine the perspectives of CHC clinical staff and administration on alternative ways to deliver and structure WCC services for low-income families with young children.

## Methods

We focus on WCC from 0 to 3 years of age, when visits are most frequent and similar in content domains and structure.<sup>1</sup>

### Recruitment and Data Collection

Over a 6-month period from October 2010 to March 2011, we conducted 6 interviews at a Federally Qualified Health Center in Los Angeles, California, that serves more than 20000 unique patients annually. Group interviews were conducted with 3 pediatric teams consisting of a pediatrician and 2 medical assistants (MAs), and one-on-one individual interviews were conducted with the Chief Executive Officer (CEO), Chief Operating Officer (COO), Medical Director, and Supervising Registered Nurse for Quality Management

(Quality Management RN). Parents and payers related to this CHC were interviewed as part of another study; results are published elsewhere.<sup>3,11</sup> The study was approved by the University of California Los Angeles Institutional Review Board.

Interview questions were selected to parallel the following topics covered in previous studies on stakeholder views on WCC redesign: (a) problems with current care and (b) alternative providers, formats, and locations that could improve WCC.<sup>3,11,12</sup> We used probes that included detailed descriptions of practice redesign tools from the literature, including group visits, phone services, previsit tools, and retail-based clinics for acute care.<sup>13–17</sup> Open discussions of diverse views were encouraged; a full discussion guide is available on request.

### Qualitative Analysis

All 6 sessions were digitally recorded, transcribed, and imported into qualitative data management software (Atlas.ti 6.0). Three members of the research team read samples of the transcribed text and created codes for key points within the text. Through an iterative process, these codes were used to create a codebook. Two experienced coders independently and consecutively coded the full transcripts, discussing discrepancies and modifying the codebook. To measure coder consistency, we calculated Cohen's  $\kappa$  using all of the quotes from the major code categories.<sup>18</sup> Kappa scores ranged from 85% to 86%, suggesting excellent consistency.<sup>18–20</sup>

We performed thematic analysis of the 294 unique quotations covering the topics mentioned above. The analysis was based in grounded theory and performed using the constant comparative method of qualitative analysis.<sup>21</sup> We identified salient themes, or specific concepts and ideas that emerged from the quotes within each topic, that were discussed by respondents in at least half of all interview sessions.

## Results

Thematic analysis of CHC views rendered 8 themes in 2 categories: 3 WCC delivery challenges in the CHC (themes 1–3) and 5 solutions to address these challenges (themes 4–8).

### Well-Child Care Delivery Challenges

Respondents identified three main WCC delivery challenges (Table 1).

**Theme 1: Delays due to insurance and intake paperwork**—Participants reported clinic delays for WCC visits secondary to insurance verification and clinic-specific well-child visit paperwork. Loss or lack of insurance among patients often prevents the clinic from providing timely WCC. Some parents have trouble reading the forms, and the paperwork detracts from the visit.

**Theme 2: Lack of time for parent education and sick visits due to WCC visit volume**—A second major theme in interviews was the lack of time for providers to educate parents, largely due to an overwhelming WCC visit volume. Participants reported that

difficulty accommodating sick visits heightened this sense of time constraint during WCC visits. Respondents also reported that although current WCC visit scheduling allowed for enough time to cover select anticipatory guidance topics, it did not allow for sufficient time to address all necessary age-specific anticipatory guidance topics and parent concerns.

**Theme 3: No system to encourage physicians to use non–face-to-face communication methods with parents**—The third major theme that arose during discussions about current challenges was the lack of a system to encourage non–face-to-face communication with parents, particularly via telephone.

### Well-Child Care Clinical Practice Redesign Solutions

Respondents supported 5 main practice redesign solutions to address the major WCC delivery challenges above (Table 2).

**Theme 4: Integrate parent visit preparation into a previsit tool**—To address the problem of time constraints and delays due to WCC paperwork, clinic providers and administrators endorsed the use of a computer-based previsit tool to engage parents before their well-child visit either through a computer at home or in the clinic waiting room.

**Theme 5: Designate a scheduled time for non–face-to-face communication with parents**—Participants also endorsed a structured system for physician telephone communication with parents outside of the typical in-person visit during usual clinic hours. Participants expressed a need for more efficient triage of acute care concerns during clinic hours; this would help the clinic to meet the need for WCC visits without being overwhelmed with nonurgent acute care visits that could be handled over the phone. Participants suggested set times for physicians to call back parents with acute care concerns and more efficient triage by nonphysician staff. Participants wanted to use non–face-to-face visits via phone to decrease the number of unnecessary visits to the clinic.

**Theme 6: Facilitate parent education and guidance in WCC delivery through group visits**—Provider teams and administrators enthusiastically supported group visits as an alternative format for WCC that has the potential to alleviate time constraints of the usual one-on-one visit model and encourage parent participation and bonding.

In group WCC, 6 to 8 parents with children of the same age discuss behavioral and developmental concerns with a pediatric clinician or health educator in a session that is much longer than an individual visit.<sup>22</sup>

Participants also discussed ways to make group visits feasible in their CHC setting, including designating a conference room for the visit, offering group visits in Spanish, and scheduling the visits to ensure an “efficiency point” to balance group dynamics and visit volume.

**Theme 7: Employ a health educator in a team-based model of WCC**—Participants also endorsed an MD-supervised team-based model of WCC incorporating an MA and a health educator. Physicians, MAs, and administrators agreed that a pediatric

health educator who focuses on health promotion topics, particularly obesity prevention, with low-income parents would augment the quality of WCC.

**Theme 8: Use the clinic Web site for health education**—While some participants expressed concerns that parents may not be able to access Internet-based educational materials because of lack of Internet access, respondents largely supported the use of the CHC organization Web site to share vetted Web site links and/ or WCC health information with parents.

## Discussion

These findings represent, to our knowledge, the first published data describing an in-depth view of safety net provider and administrator perspectives on WCC clinical practice redesign for young children aged 0 to 3 years. CHC providers and staff endorsed clinical practice redesign solutions including using a previsit tool, group visits, and integration of a health educator into a team-based model of WCC to address fundamental inadequacies in the clinic's WCC system.

Many of these clinical practice redesign solutions have been previously described and studied as a part of WCC.<sup>17,23–25</sup> Internet-based previsit screening tools have been shown to be an effective means of increasing the number of health topics discussed, parent health knowledge, and prevention-related changes that parents made at home.<sup>16,26–29</sup> Group visits have been endorsed by low-income parents in previous studies, and there is evidence that group WCC is at least as effective in providing care as individual WCC, and may be more efficient.<sup>3,17</sup> Finally, evidence suggests that a team-based strategy for WCC including nonmedical professionals such as health educators can improve receipt of services and enhance parenting practices.<sup>30</sup>

Our findings must be interpreted within the context of this study's limitations. Our findings may not be generalizable to other settings or to older children. Participants provided their own perspectives, which may not have been based on evidence of effectiveness.

With CHC expansion on the horizon,<sup>31</sup> it will be critical to understand how WCC practice redesign can be implemented from an organizational perspective to design more efficient, effective, and family-centered WCC for low-income populations.

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## References

1. Hagan, JF.; Shaw, JS.; Duncan, P., editors. Guidelines for Health Supervision of Infants, Children, and Adolescents. 3rd ed.. Elk Grove Village, IL: American Academy of Pediatrics; 2008.

2. Halfon N, Inkelas M, Mistry R, Olson LM. Satisfaction with health care for young children. *Pediatrics*. 2004; 113:1965–1972. [PubMed: 15173468]
3. Coker TR, Chung PJ, Cowgill BO, Chen L, Rodriguez MA. Low-income parents' views on the redesign of well-child care. *Pediatrics*. 2009; 124:194–204. [PubMed: 19564300]
4. Bethell C, Reuland CH, Halfon N, Schor EL. Measuring the quality of preventive and developmental services for young children: national estimates and patterns of clinicians' performance. *Pediatrics*. 2004; 113:1973–1983. [PubMed: 15173469]
5. Olson LM, Inkelas M, Halfon N, Schuster M, O'Connor KG. Overview of the content of health supervision for young children: reports from parents and pediatricians. *Pediatrics*. 2004; 113:1907–1916. [PubMed: 15173461]
6. Leatherman, S.; McCarthy, D. *Quality of Health Care for Children and Adolescents: A Chartbook*. New York, NY: The Commonwealth Fund; 2004.
7. Shi L, Lebrun LA, Hung LM, Zhu J, Tsai J. US primary care delivery after the Health Center Growth Initiative: comparison of health centers, hospital outpatient departments, and physicians' offices. *J Ambul Care Manage*. 2012; 35:60–74. [PubMed: 22156956]
8. Forrest CB, Whelan EM. Primary care safety-net delivery sites in the United States: a comparison of community health centers, hospital outpatient departments, and physicians' offices. *JAMA*. 2000; 284:2077–2083. [PubMed: 11042756]
9. National Association of Community Health Centers. *Update on implementation of the FQHC Prospective Payment System in the States*. Bethesda, MD: National Association of Community Health Centers; 2012.
10. Health Resources and Services Administration. [Accessed November 5, 2013] *The Affordable Care Act and health centers*. 2012. <http://bphc.hrsa.gov/about/healthcenterfactsheet.pdf>.
11. Coker TR, DuPlessis HM, Davoudpour R, Moreno C, Rodriguez MA, Chung PJ. Well-child care practice redesign for low-income children: the perspectives of health plans, medical groups, and state agencies. *Acad Pediatr*. 2012; 12:43–52. [PubMed: 22075467]
12. Coker T, Casalino LP, Alexander GC, Lantos J. Should our well-child care system be redesigned? A national survey of pediatricians. *Pediatrics*. 2006; 118:1852–1857. [PubMed: 17079554]
13. Osborn LM. Group well-child care. *Clin Perinatol*. 1985; 12:355–365. [PubMed: 4017408]
14. Oda DS, Heilbron DC, Taylor HJ. A preventive child health program: the effect of telephone and home visits by public health nurses. *Am J Public Health*. 1995; 85:854–855. [PubMed: 7762725]
15. AAP principles concerning retail-based clinics. *Pediatrics*. 2006; 118:2561–2562. [PubMed: 17142546]
16. Jones R. The role of health kiosks in 2009: literature and informant review. *Int J Environ Res Public Health*. 2009; 6:1818–1855. [PubMed: 19578463]
17. Coker TR, Windon A, Moreno C, Schuster MA, Chung PJ. Well-child care clinical practice redesign for young children: a systematic review of strategies and tools. *Pediatrics*. 2013; 131(suppl 1):S5–S25. [PubMed: 23457149]
18. Cohen J. A coefficient of agreement for nominal scales. *Educ Psychol Meas*. 1960; 20:37–46.
19. Landis JR, Koch GG. The measurement of observer agreement for categorical data. *Biometrics*. 1977; 33:159–174. [PubMed: 843571]
20. Bakeman, R.; Gottman, JM. *Observing Interaction: An Introduction to Sequential Analysis*. New York, NY: Cambridge University Press; 1986.
21. Miles, MB.; Huberman, AM. *Qualitative Data Analysis: An Expanded Sourcebook*. 2nd ed.. Thousand Oaks, CA: Sage; 1994.
22. Osborn LM, Woolley FR. Use of groups in well child care. *Pediatrics*. 1981; 67:701–706. [PubMed: 7254999]
23. Bergman DA, Beck A, Rahm AK. The use of Internet-based technology to tailor well-child care encounters. *Pediatrics*. 2009; 124:e37–e43. [PubMed: 19564267]
24. Bergman, D.; Plsek, P.; Saunders, M. *A High-Performing System for Well-Child Care: A Vision for the Future*. New York, NY: The Commonwealth Fund; 2006.
25. Tanner JL, Stein MT, Olson LM, Frintner MP, Radecki L. Reflections on well-child care practice: a national study of pediatric clinicians. *Pediatrics*. 2009; 124:849–857. [PubMed: 19706587]

26. McDonald EM, Solomon B, Shields W, et al. Evaluation of kiosk-based tailoring to promote household safety behaviors in an urban pediatric primary care practice. *Patient Educ Couns.* 2005; 58:168–181. [PubMed: 16009293]
27. Gielen AC, McKenzie LB, McDonald EM, et al. Using a computer kiosk to promote child safety: results of a randomized, controlled trial in an urban pediatric emergency department. *Pediatrics.* 2007; 120:330–339. [PubMed: 17671059]
28. Sanghavi DM. Taking well-child care into the 21st century: a novel, effective method for improving parent knowledge using computerized tutorials. *Arch Pediatr Adolesc Med.* 2005; 159:482–485. [PubMed: 15867124]
29. Christakis DA, Zimmerman FJ, Rivara FP, Ebel B. Improving pediatric prevention via the internet: a randomized, controlled trial. *Pediatrics.* 2006; 118:1157–1166. [PubMed: 16951011]
30. Piotrowski CC, Talavera GA, Mayer JA. Healthy Steps: a systematic review of a preventive practice-based model of pediatric care. *J Dev Behav Pediatr.* 2009; 30:91–103. [PubMed: 19218851]
31. Kaiser Commission on Medicaid and the Uninsured. Community health centers: opportunities and challenges of health reform. 2010 <http://www.nhchc.org/wp-content/uploads/2011/09/KaiserCHCsandhealthreformAug2010.pdf>.

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**Tumaini R. Coker** is assistant professor of pediatrics at Mattel Children's Hospital UCLA and the David Geffen School of Medicine at UCLA. Dr. Coker's research has focused on delivery system redesign for child and adolescent preventive health services, as well as racial/ethnic and socioeconomic disparities in health and health care.

**Table 1**

**Well-Child Care (WCC) Delivery Challenges.**

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**Participants identified 3 significant challenges in WCC delivery current care at their community clinics:**

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*Theme 1: Delays due to insurance and intake paperwork*

“We get delayed—you know, sometimes, because of the insurance ... [parents] don’t pick up the [insurance] form or it doesn’t go through. Then there’s a huge delay for us to get the parents in [from the waiting room].”

“It’s the paperwork. It just gets overwhelming. ... [Parents] just find this like a hopeless thing.”

“... Sometimes you get these parents that bring two kids at a time—new kids ... You get like six, seven papers for each child to fill out—it’s a lot of writing. Yeah, a lot of writing.”

*Theme 2: Lack of time for parent education and sick visits due to WCC visit volume*

“You know, we have so many people assigned to us, and we try to get them in. And I just hear a lot of the pediatricians feel overwhelmed and burned out doing 10 new physicals a day.”

“And also like they schedule like sometimes five physicals in a row. And that’s really bad because the doctor—I mean she has to be in a rush.”

“Sometimes we get so bombarded with physicals... someone will walk in wanting to be seen because their child has a fever ... [and] they have to sit and wait and hope that someone doesn’t show up for their appointment ... in order to be seen.”

*Theme 3: No system to encourage physicians to use non–face-to-face communication methods with parents*

“[The clinic phone line is] staffed by—you know, lay people without any real medical knowledge. And they get difficult calls. You know—‘My kid has a fever for two days. Should I bring them in? Or should I take them to urgent care. Or should I take them to an emergency department?’ And they do their best, but they’re really not qualified or trained to answer those kinds of questions.”

“That has been a huge gap—is going through the phone line. And sometimes—again—[patients are] being brought for appointments, and in fact they just really need to talk to you to get some clarification. And now we’ve made them haul their kid in ... for nothing.”

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**Table 2**

**Well-Child Care (WCC) Practice Redesign Solutions.**

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**Participants identified redesign solutions that addressed the WCC delivery challenge themes.**

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*Theme 4:* Integrate parent visit preparation into a previsit tool

“A questionnaire for the parents to fill out beforehand would be more helpful. Instead of the doctor trying to ask [these questions] during the visit ... parents [would also] have time to reflect and think.”

“I think that [a previsit tool] would be nice to adapt so that [parents] can start thinking and then bring those questions up.”

*Theme 5:* Designate a scheduled time for non–face-to-face communication with parents

“To get [parents through] to the doctor—and then the docs actually have a blocked time for answering all these things. Now—that would be good.”

“Certainly in triaging we have a need [for a phone line].”

*Theme 6:* Facilitate parent education and guidance in WCC delivery through group visits

“I can definitely see [group visits] working ... I mean ... it’s efficient.”

“Yeah, the first kind of thing that pops in my head though is that—yeah ... [a group visit] would work.”

“Cause I think there’s a lot of benefit to [group visits]. I mean that whole bonding [element].”

“And many years ago I use to run some of those classes and it did become a group where they shared—you know, ‘This is what I do ... ’ ‘How do you handle that? ... ’ ‘Oh, cook it like this.’ You know, and they became very close—the patients.”

*Theme 7:* Employ a health educator in a team-based model of WCC

“If we had a health educator and a provider and an MA [medical assistant] ... the health educator does the preventive component, and then [the patient] gets segued to the provider.”

“During their whole visit, what’s taking the bulk of their time ... to try to explain [anticipatory guidance topics] ... [Pediatricians] wish—you know, they have more time to or someone else would to explain to the patients ... [a] health care-educator can help.”

*Theme 8:* Use the clinic Web site for health education

“We can have [education materials] up on the website ... a pediatrics area where it broke down ... where your kids should be developmentally—some of the anticipatory guidance ... Maybe even ... describe what the shots are for and that, ‘No, there is no mercury in them’.”

Dissenting view: “One of the issues here was lack of Internet service in our patient population ... Or they just don’t know how to use it ... ”

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