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Use of Competency-Based Self-Assessments and the MCH Navigator for MCH Workforce Development: Three States' Experiences

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Abstract Workforce development is a priority across many state Maternal and Child Health (MCH) Title V programs. Three case studies were conducted to explore varied state implementations of MCH workforce development initiatives. Three states utilized the online MCH Navigator resource to support orientation and ongoing professional development for staff and other partners. Key informant interviews and surveys were utilized to gather staff feedback on practical aspects of the project and to ascertain lessons learned by state MCH leadership during project implementation. Staff impressions of the MCH Navigator were generally positive. Staff reported that Navigator modules were useful to their current work and that completion of the modules resulted in expanded knowledge in key MCH competency areas and contributed to their professional development. Many indicated that they would recommend use of the Navigator to colleagues. State leaders found that utilization of introductory training sessions or the Navigator's online orientation modules were helpful in acclimating staff to the Navigator, although some staff still experienced minor technical challenges. State leaders across all three sites reported the value of pre-existing tools on the Navigator site, including core competency self-assessments and orientation bundles; the leaders also noted that the Navigator represents a useful and thorough resource that can be integrated into state efforts to enhance professional development for MCH staff. The significant variation between the three states' implementations demonstrates the flexibility of the Navigator, highlighting its utility to meet state-specific needs.

Keywords Workforce development · Title V · Professional development · Education · Training

Introduction

A focus on workforce development is common among state Maternal and Child Health (MCH) Title V programs. In the 2010–2015 cycle of the Title V Needs Assessment, 30 of 59 states and territories included a state priority need related to Workforce Development [1.] In the MCH Title V Block Grant FY2011 Annual Reports/FY2013 Applications, 35 states listed a state performance measure related to workforce development [2].

States' interest in MCH workforce development is justified given the current context of state public health agencies. In a 2011 survey, the Association of State and Territorial Health Officials (ASTHO) noted that 27 % of the public health workforce is eligible for retirement by FY2014 and that on average, state health agencies are only recruiting for 15 % of vacant positions [3.] These data indicate the imperative for workforce development, yet a 2008 assessment of the MCH workforce noted that substantial barriers existed to workforce development among state MCH staff. Barriers identified included: lack of

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financial or logistical support for training, travel restrictions, and cost of trainings [4.]

Tools exist to support state MCH leadership in building workforce competency. After an inclusive and iterative developmental process, in 2009 the MCH Leadership Competencies Workgroup published "MCH Leadership Competencies Version 3.0", articulating twelve key competencies necessary for MCH leaders [5.] A similar set of competencies was developed for public health professionals by the Council on Linkages Between Academic and Public Health Practice; these competencies outline key competency areas for public health staff needed to ensure the delivery of essential public health services [6.] Both of these resources can help focus states on the critical components needed in a workforce development initiative.

The MCH Navigator, an online portal for accessing content related to the MCH Leadership Competencies, was launched in 2012 to support professional development for staff working in MCH program areas [7.] The Navigator provides access to an ever-growing set of webinars, presentations, articles, etc. that link to the MCH Leadership Competencies. A crosswalk developed in 2013 links the Public Health Core Competencies to content in the Navigator. The nature of the Navigator's distance learning setup allows for access by MCH or other public health staff at anytime from anywhere with an internet location and at no cost.

In this paper, we describe the results of three state-level MCH pilot initiatives to build Title V workforce competencies among state and local MCH workers. We utilized a case study approach to review the three projects, outlining the unique aspects of each state's implementation including barriers and facilitators to success. Key informant interviews and surveys were used to obtain feedback from staff participating in the pilots. The case study approach has been used in similar situations for gathering qualitative data on practical aspects of program implementation and lessons learned [8.] Based on a synthesis of findings across the three states, we discuss implications for other states that may be exploring strategies for implementing competency-based self-assessments and MCH Navigator modules into their workforce development activities.

The Maryland Experience

In Maryland, the responsibilities for state-level MCH monitoring and programs are coordinated by the MCH Bureau within the Department of Health and Mental Hygiene (DHMH). A specific goal for states receiving federal MCH Title V funding is to implement family-centered, community-based systems of coordinated care for children and youth with special health care needs (CYSHCN). The Office for Genetics and People with Special Health Care Needs (OGPSHCN) at DHMH is responsible for improving systems of care for Maryland CYSHCN.

In 2010, OGPSHCN underwent an organizational restructuring in response to the changing needs of Maryland's CYSHCN as identified by the state's 2010 Title V Needs Assessment and to concerns expressed by a diverse and established group of CYSHCN stakeholders about the state's ability to meet the needs of CYSHCN. The restructuring was undertaken by a committee appointed by DHMH leadership, consisting of OGPSHCN and DHMH staff and community stakeholders, including parents of Maryland CYSHCN. Recommendations were made regarding new funding and programmatic priorities in relation to the latest data and findings on the health and well-being of Maryland's CYSHCN and their families. It was clear that addressing priorities would require a greater focus on infrastructure building services for Maryland CYSHCN.

In 2011, an Infrastructure and Systems Development Unit was created within OGPSHCN. This unit focuses on systems building around family-professional partnerships, medical homes, adequate insurance and financing; early and continuous screening; easy to use community-based services; and youth health care transition for Maryland CYSHCN, their families, and providers. At the time the unit was formed, many of its research and program staff were relatively or completely new to the MCH field. Professional development was necessary to gain an understanding of the purpose, history, and current practices of Title V and MCH and for skills building in specific content areas. DHMH did not have a formal workforce or professional development program for MCH staff, and due to significant budget constraints there was little funding available for paid staff development opportunities.

In the absence of a formal state MCH training mechanism, the unit leader developed individualized training checklists for staff, relying exclusively on free web-based and in-person offerings. The majority of the content used in the checklists came from the MCH Navigator. Navigator content was customized for each staff member by the unit leader; each checklist contained similar core content, with other content tailored to specific roles and jobs within the unit. Table 1 shows a sample checklist. These checklists have been used by the unit's special grants project coordinator, medical homes coordinator, health care transition coordinator, research assistant, interns and volunteers. As of January 2014, 100 % (n = 10) of this unit's members, including interns, completed training checklists.

All checklists, regardless of the specific position being trained, incorporated modules from one specific MCH Navigator Learning Resource: MCH 101. The breadth and depth of topics covered within this Resource, including the

Table 1 Sample training checklist for new staff member (Medical Home Coordinator) with links to MCH Navigator modules

Item:	Date completed
MCH Navigator (http://www.mchnavigator.org/ Trainings	
MCH (Maternal and Child Health) 101: MCH Populations, Mission and Principles: Overview Category	
• Overview Category	
○ Principles of Public Health: PH 101 ○ (Registration to Pacific Public Health Training Center is required to access. After login, click on "Principles of Public Health (PH101)" and then click on the specific topic tutorial your wish to view. PDF slides are available.)	
○ MCH Primer: An Angle on MCH Systems (20 minutes)	
○ Systems Thinking for Maternal and Child Health: Application in Practice (90 minutes)	
• CYSHCN	
○ Improving the System of Services for Children and Youth with Special Health Care Needs (90 minutes)	
• Family-Centered Care	
○ Family Advocacy and Involvement in Title V Programs (90 minutes)	
○ Increasing Meaningful Partnerships between Families and MCH Partnerships (30 minutes)	
• Health Disparities	
○ Eliminating Health Disparities and Achieving Equity: a Framework for Advancing the Health, Safety and Well-Being of Adolescents (90 minutes)	
• Medical Home	
○ Every Child Deserves a Medical Home (20 minutes)	
○ Medical Home (2 parts; 83 minutes)	
• Title V History and Legislation:	
○ Maternal and Child Health Title V Programs Audio: (Part 1) ; (Part 2) Slides: Part 1 and Part 2 (52 minutes)	
• Maternal and Child Health Title V Programs (45 minutes)	
• MCHB History, Vision, Mission, Strategic Plan, and MCHB Partnership of Investment (60 minutes)	
• Healthy People 2020: the Next Generation of MCH-related Focus Areas (To access the presentation, click on "Archive" (above the "Overview" section) and then click on "Full Multimedia Archive of the Live Program.")	
• HRSA Webcast	
• MCHB Webcast on Medical Homes for Children	
National Center for Medical Home Implementation Website (http://www.medicalhomeinfo.org):	
• Review/explore each tab	

history of Title V; MCH/Title V population, mission and principles; MCH/Title V implementation; population health; and accountability provide a strong foundation for understanding and further professional development. Once unit staff became familiar with the Navigator and the conceptual foundations of MCH, they began to identify areas in which they wanted to learn more. After accruing more on the job experience, they added additional training modules to their checklists and also repeated certain modules. For each Navigator training that staff participated in, the unit leader asked them to respond in writing to three focus questions: (1) what are the key points from the training?; (2) what points from the training are relevant or useful for our work in OGPSHCN?; and (3) are there any action items you should pursue because of what you learned from this training? Staff were then able to incorporate what they had learned from the Navigator trainings into their programs and the work of the unit.

While OGPSHCN has not conducted a formal evaluation or assessment of their use of the MCH Navigator for professional development, they have reflected upon its use. Through informal training evaluations within the unit, all staff, volunteers and interns reported that the Navigator contributed significantly to their knowledge and professional development in MCH and Title V. They found that answering the three focus questions added to the relevancy

Table 1 continued

Item:	Date completed
• Webinars (http://www.medicalhomeinfo.org/training/webinars.aspx)	
○ June 30, 2010	
○ November 30, 2010	
○ June 30, 2011	
• Building Your Medical Home Toolkit	
○ Toolkit Video Tutorial	
○ There are 6 parts of the toolkit – you have to register to use them – create a free user account and then check out each of the 6 parts.	
• Continuing Medical Education (CME) Opportunities (not sure if you can take any of these webinars without paying for CMEs, but if you can listen/watch them without paying, please do! Just use the link above and then scroll to each one, there are links for the presentations and audio/video):	
○ The Role of Preventive and Acute Care in the Medical Home (April 27, 2011)	
○ The Role of the Medical Home in Chronic Care Management (May 10, 2011) ○ Faculty	
○ The Role of the Medical Home in Care of Children and Youth with Complex Chronic Conditions (June 2, 2011)	
○ Patient-and Family-Centered Care in the Medical Home (June 28, 2011)	
AMCHP 2013 Conference Workshop Recorded Session:	
○ Medical Home Part 1: Parent Professional Partnerships in Medical Homes and Health Reform; Part 2: Transition, Families and Youth-Essential in the Medical Home Neighborhood (can be found here: http://learning.mchb.hrsa.gov/conferencearchives/amchp2013/ but looks like direct link to presentation is down)	
AMCHP 2012 Conference Workshop Recorded Session:	
○ Roles for State Title V Programs in Building Systems of Care for Children and Youth with Autism Spectrum Disorder and Other Developmental Disabilities: Lessons Learned	
AMCHP 2011 Conference Workshop Recorded Sessions:	
○ The Future is Bright for Medical Home: Prevention and Quality in the Context of Medical Home	
○ Child Health Improvement Partnerships: Benefits for MCH Programs (scroll down from top of page)	

Prepared by Maryland's office for genetics and people with special health care needs (http://phpa.dhmh.maryland.gov/genetics)
Revised March 2014

of each of the trainings, and contributed to program planning and implementation within the unit. Several unit staff are parents of CYSHCN and expressed that while they had a deep understanding of the consumer perspective in MCH, participating in the Navigator modules gave them the broad public health, MCH policy and implementation perspective that they had been lacking. The unit leader found the Navigator to be a high-quality resource that is easy to access and use, and noted significant gains in staff's comfort level with and knowledge of MCH content areas. Everyone in the unit appreciated the self-directed nature and flexibility of the Navigator; trainings are accessible any time and from any location where there is internet access.

The Oklahoma Experience

In 2008, the Oklahoma Legislature in looking towards the future and the need to improve the health status of Oklahomans passed Senate Joint Resolution (SJR) 41. SJR-41 directed the State Board of Health to prepare a report that outlined a plan to improve the physical, social, and mental well being of all people in Oklahoma through a high-functioning public health system. The Oklahoma Health Improvement Plan (OHIP), released in late 2009, emphasizes the need to have a well-prepared work force as part of the outcomes toward improving the health and well being of Oklahomans. An identified concern is a public health

workforce eligible for retirement in the near future that will take with it years of experience and expertise.

The Oklahoma MCH Title V Program (OKMCH) has seen the impact of this concern in recent years with long-term state and local staff taking advantage of retirement. With these staff changes, understanding and expertise in MCH national and state policy, practices, and health issues have been lost. Individuals being hired into OKMCH have diverse backgrounds and education; many with minimal public health experience, and most with no MCH experience. It has been noted that new staff, if not engaged quickly in understanding MCH and how the work (their work) is significant in impacting public health, become disinterested and seek other job opportunities within a short timeframe. In looking to positively impact its changing work force, OKMCH is focusing on how to assure staff development is an integrated and continual process, rather than relying on the past practice of scheduled staff trainings two to three times a year. The MCH Navigator is a valuable asset in this work.

As of 2 years ago, the MCH Navigator serves as a primary resource to orient new OKMCH state office staff. The new employee checklist used by supervisors lists MCH 101 as a requirement. Participation in this learning experience provides new staff with a foundation of MCH history and also introduces the MCH Navigator and the variety of educational opportunities provided through this training portal. Since implemented, 100 % of new OKMCH state office staff (N = 9) have completed MCH 101. Follow-up with staff indicates it is an activity they found useful, would participate in again, found applicable to their work, and would encourage other staff to complete, even the more seasoned staff.

At the same time the MCH Navigator was added to the new employee orientation, all state office OKMCH staff received an orientation to the MCH Navigator. Supervisors and staff are encouraged to utilize the MCH Navigator as a staff development resource as performance measures and related activities are identified for staffs' required annual Performance Management Process (PMP). The self-assessment tool found on the MCH Navigator has been completed by all OKMCH Senior Leadership staff. Each chose a minimum of two competencies on which to focus this year. Learning opportunities within each identified competency are being completed with a minimum of three key points from each learning opportunity being identified. The relevancy of the key points to staff's work are being explored in individual discussions with the Director of OKMCH. The staff discussions indicate they are finding the experience to be productive and will help them to effectively carry out their job responsibilities.

As the MCH Navigator has been enhanced, steps have also been taken in Oklahoma to provide information to staff of county health departments and OKMCH contractors on the benefits and use of the training portal, including how the MCH Navigator can be a resource for teaching new and existing staff about MCH, developing core public health competencies, and engaging staff in understanding their role in MCH and the broader public health picture. Follow-up discussions with county health department staff are focused on demonstrating the use of the MCH Navigator as part of ongoing staff development and its integration into the staff development plan of the PMP. OKMCH contractors are also going to be expected to use and orient new staff to the MCH Navigator.

As part of assuring high quality services and use of quality improvement processes, OKMCH Comprehensive Program Reviews are conducted at each county health department every 3 years with technical assistance visits accomplished during the interim years. These reviews utilize tools that address infrastructure services, population-based services, enabling services, and direct health care services. Contractors receive onsite visits during the year to assure success in meeting the terms of their contracts. OKMCH staff are currently reviewing the procedures for these activities to identify opportunities to promote utilization of the MCH Navigator in follow-up recommendations provided to the directors of the county health departments and contract agencies.

The Tennessee Experience

Tennessee MCH (TNMCH) programming is led by program staff housed in the Department of Health's Central Office in Nashville as well as regional staff housed in thirteen regions throughout the state serving both rural and metropolitan areas. For many years, Tennessee's public health workforce had been focused and trained on direct clinical services. No structured training plan had been in place since the late 1980′s. The changing MCH landscape along with staff requests for additional training in public health basics and leadership necessitated a focus on TNMCH workforce development. More recent focused efforts included topic-specific training for home visitors and technical assistance conference calls focused on core program areas and MCH priority measures. However, no formal workforce development program existed for TNMCH staff and little dedicated time or funding had been allocated for TNMCH workforce development. Despite these challenges, several key recent developments supported the interest in workforce development. Robust partnerships with health resources and services

administration (HRSA) grantees provided expertise in adult learning strategies and content-specific expertise (such as cultural competency). Additionally, the establishment of the state's first and only public health training center at East Tennessee State University supported broader Departmental efforts related to public health workforce development.

Tennessee MCH (TNMCH) stakeholders identified workforce development as one of seven state priorities in the 2010 Title V Needs Assessment. Throughout FY2011-12, Title V leadership further defined the state performance measure related to the workforce development priority to be: the number of TNMCH staff in the Central Office and Regional Offices who have completed a core competency self-assessment and at least one relevant module in the MCH Navigator. The measure was crafted in consultation with Central and Regional Office staff in order to gather formative feedback on the practicality of completing the self-assessment and Navigator modules.

The state Title V Director introduced the priority measure to Central Office staff during a Division-wide meeting in early 2013. Staff were provided with a brief introduction to the Council on Linkages Public Health Leadership Self-Assessment and the MCH Leadership Competency Self-Assessment, the MCH Navigator, and crosswalk tools developed by MCHB for guiding staff to specific Navigator modules based on their self-assessment findings. A similar introduction was provided to Regional TNMCH Leadership via conference call. Both self-assessment tools were offered because some staff in both settings have duties that are not exclusively related to MCH; addition of the Public Health Core Competency Self-Assessment offered an alternative for those staff whose job responsibilities were not solely focused on MCH programming.

In the first year of the performance measure, 134 staff (70 in the Central Office and 64 in Regional Offices) completed a self-assessment and at least one relevant module in the MCH Navigator. A brief online qualitative survey was made available at the end of the year; 125 staff (93 %) responded to the survey.

Most staff (90 %) reported completing the MCH Leadership Competency Self-Assessment. Two-thirds of respondents reported that the self-assessment required 30–90 min to complete; of note, an additional 21 % reported taking longer than 90 min. Staff who completed the MCH Leadership Competency Self-Assessment reported spending longer on the self-assessment than their colleagues who completed the Public Health Core Competency Self-Assessment (50 % vs. 8 %, respectively, spending more than 1 h). Staff also reported less difficulty with the Public Health Core Competency Self-Assessment compared to the MCH Leadership Competency Self-Assessment (75 % describing the assessment as "somewhat" or "very" easy vs. 42 %, respectively).

Staff were asked to report the competencies they identified as most needing improvement in the needs assessment. Among those who completed the Public Health Core Competency Self-Assessment, the most commonly reported competencies were "Analytical/Assessment" and "Policy Development/Program Planning," while "MCH Knowledge Base," "Communication," and "Policy and Advocacy" were most commonly identified among staff completing the MCH leadership Competency Self-Assessment.

Among staff completing a Navigator module, 19 % reported completing two modules and 23 % reported completing three or more modules. The majority (76 %) indicated that they found it "somewhat" or "very" easy to find relevant modules for completion. Most respondents (69 %) felt that the module lengths were "just about right," with 30 % reporting that the modules were too long and only 1 % reporting that the modules were too short. Regarding complexity of the modules, 81 % of staff responded "just about right," with 18 % responding that the modules were "too complex" and 1 % responding "too simple."

Sixty-six percent of staff indicated they were "somewhat" or "very" likely to recommend the self-assessment to colleagues; the likelihood of recommending varied by self-assessment, with 58 % of those completing the Public Health Core Competency Self-Assessment choosing "somewhat" or "very" likely compared to 66 % for those completing the MCH Leadership Competency Self-Assessment. Among staff completing modules in the MCH Navigator, 75 % indicated that they would be "somewhat" or "very" likely to recommend the MCH Navigator to a colleague.

Lessons Learned

In Maryland, staff experienced some inconvenience regarding the need to have multiple usernames and passwords to electronically access various trainings through the Navigator, and the need for certain media players to watch and/or listen to some trainings, so users should be prepared for those technical challenges. Oklahoma found that it is important to demonstrate the training portal during onsite visits or through video trainings on how to utilize the portal and encourage staff to explore; it is critical to simplify staff's impression of the complexity of the portal and/or their hesitancy to use by engaging staff already using the portal to share with others how they have used the portal and what they have found of benefit. Tennessee program

leaders found that, while some planning and coordination was required at the state level, the pre-packaged nature of the self-assessments and the Navigator modules facilitated the easy implementation of this performance measure. Existing resources such as the crosswalk for connecting self-assessment findings with Navigator modules and the Navigator introduction videos further facilitated the introduction of the performance measure to staff. These resources were particularly helpful for staff housed at the regional level and who were not able to interact directly with senior MCH leadership in the Central Office. In Tennessee, the most frequently-reported concern throughout the process was the length of the MCH Leadership Competency Self-Assessment. Despite this concern, two-thirds of staff completing it reported being likely to recommend the tool to colleagues. The MCH Navigator was generally popular among staff, with three-quarters responding that they were likely to recommend to colleagues.

While Maryland's experience with the Navigator has thus far been limited to leader-developed training checklists for new OGPSHCN staff and that staff's continued independent use of Navigator trainings, they plan to expand use with staff in other units and programs; to start using the built-in self-assessment tool; and to promote the use of the MCH Navigator within the larger MCH Bureau within DHMH and with CYSHCN contacts at local health departments throughout the state. OKMCH plans to continue to educate its staff and others, including outside partners doing MCH work, on the value of the MCH Navigator and encourage routine use for developing staff competency and capacity. TNMCH leadership plans to continue requiring completion of the self-assessment and Navigator modules as an ongoing performance measure.

Quantitative evaluation by TNMCH staff indicated overall satisfaction with the process of self-assessment and completion of Navigator modules. Additional qualitative evaluation yielded insightful suggestions about the practicality of completing the self-assessments and modules, such as the desire for an online self-assessment and the need for more straightforward cataloguing of modules. This feedback will be helpful for future iterations of the tools. Evaluation of OKMCH staff use will also be explored to identify strategies for more effective use; the evaluation will assess how the training portal is being used, how often it is used beyond new employee orientation, and benefits derived from participation. Results will guide further development of the professional development plan.

These lessons learned from Maryland, Oklahoma and Tennessee suggest specific recommendations to states who may be considering adding self-assessments and/or use of the MCH Navigator to their workforce development activities: (1) Avoid reinventing something that has already been created-before creating new tools, explore and/or utilize existing tools available through the MCH Navigator; (2) Rather than creating all new workforce development activities, integrate use of the MCH Navigator into state programs' existing workforce development infrastructure, such as orientations, job plans, and professional development programs; (3) States should develop a strategy to evaluate the impact that using the MCH Navigator has on individual employees' professional development and aspirations as well as a program's workforce development activities—develop and include this evaluation plan prior to the start of the state's efforts.

Limitations

This report describes preliminary efforts at integrating use of the self-assessments and MCH Navigator modules into state MCH programs as part of workforce development activities. Additional effort will need to be made to look whether this has improved employee satisfaction or retention, enhanced employee competence in MCH Leadership or Public Health Core Competencies, and ultimately whether this has impacted MCH outcome or performance measures.

Examples from only three states are included here. The experiences of these states may not be entirely replicable in other states. However, the three states have different organizational structures and incorporated the self assessments and Navigator modules in varied ways; thus other states may be able to glean portions of these experiences that would be applicable in other states.

Conclusion

There is great need for focus on workforce development in state MCH programs. More than half of states and territories have state priorities related to workforce development, and high-quality, useful tools exist to support state MCH workforce development efforts. The experiences of Tennessee, Oklahoma and Maryland with competency-based self-assessments and the MCH Navigator suggest that these are valuable, time-saving and effective methods of professional and workforce development for MCH program staff at the state and local levels. States found that trainings available through the Navigator are enhanced when staff summarize and reflect upon what they have learned and how it can be applied to the MCH programs in which they work. Significant variation exists between state-to-state implementation, highlighting the flexibility of the resources for implementation based on state-specific needs.

Conflict of interest The authors have no conflicts of interests or corporate sponsors to disclose.

References

1. Title V information system (internet). Washington: maternal and child health bureau (cited 8 Sep 2013). Measurement and indicator data: State priority needs keyword search. Search for "workforce development". https://mchdata.hrsa.gov/tvisreports/ProgramData/PriorityNeedSearch2.aspx.
2. Title V information system (Internet). Washington: Maternal and child health bureau (cited 8 Sep 2013). State performance measures: Search by keyword/population. Search for "workforce development". https://mchdata.hrsa.gov/tvisreports/MeasurementData/StateMeasures/StateMeasureSearch.aspx?MeasureType=Performance&SearchType=Keywords.
3. ASTHO profile of state public health, volume two (Internet). (2011). Washington: Association of state and territorial health officials (cited 8 Sep 2013). http://www.astho.org/uploadedFiles/_Publications/Files/Survey_Research/ASTHO_State_Profiles_Single%5B1%5D%20lo%20res.pdf.
4. Grason, H., Kavanagh, L., Dooley, S., Partelow, J., Sharkey, A., Bradley, K. J., et al. (2012). Findings from an assessment of state title v workforce development needs. *Maternal and Child Health Journal, 16*, 7–20.
5. MCH leadership competencies (Internet). Washington: MCH training grantee network c2009–2012 (cited 8 Sep 2013). http://devleadership.mchtraining.net/mchlc_docs/mch_leadership_comp_3-0.pdf.
6. Public health foundation resources and tools (Internet). Washington: Public health foundation (cited 8 sep 2013). http://www.phf.org/resourcestools/pages/core_public_health_competencies.aspx.
7. MCH navigator (Internet). Washington: Maternal and child health Bureau c2011–2013 (cited 8 Sep 2013). http://navigator.mchtraining.net/?page_id=201.
8. Brand, A., Walker, D. K., Hargreaves, M., & Rosenbach, M. (2010). Intermediate outcomes, strategies, and challenges of eight healthy start projects. *Maternal and Child Health Journal, 14*, 654–665.