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Planting the Seeds of Collaboration: A Pilot for School - Clinic Partnerships During Pediatric Clerkship

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Abstract:	Although pediatricians and family physicians often refer children to Early Intervention (EI) and provide support and information to families, medical school training that provides information about special education policy and procedures is often limited. We piloted a program whereby medical students, during their pediatric clerkship, observed school classrooms that included young children with disabilities. Visit impact was measured through assessments of perceived competency and a written reflection. Students showed perceived competency growth across all areas measured. Written reflections demonstrated understanding of special education practices and collaborative opportunities. These findings suggest that incorporating experiential learning through facilitated school visits is a way to enhance the learning experience of medical students on topics essential to supporting children with disabilities and their families.

Planting the Seeds of Collaboration. Addressing the Need for Improved School - Clinic Partnerships During Pediatric Clerkship

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Abstract

Although pediatricians and family physicians often refer children to Early Intervention (EI) and provide support and information to families, medical school training that provides information about special education policy and procedures is often limited. We piloted a program whereby medical students, during their pediatric clerkship, observed school classrooms that included young children with disabilities. Visit impact was measured through assessments of perceived competency and a written reflection. Students showed perceived competency growth across all areas measured. Written reflections demonstrated understanding of special education practices and collaborative opportunities. These findings suggest that incorporating experiential learning through facilitated school visits is a way to enhance the learning experience of medical students on topics essential to supporting children with disabilities and their families.

Key words

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Planting the Seeds of Collaboration: A Pilot to Address the Need for Improved School - Clinic Partnerships During Pediatric Clerkship

The World Health Organization (WHO) (World Health Organization, 2010) calls for physicians to be prepared to treat individuals with disabilities. Likewise, the American Academy of Pediatrics (AAP) (Adams et al., 2013) recommends that physicians learn about special education policies and procedures in order to support children with disabilities and their families. The challenge facing the academic medical community is how to integrate content highly recommended by both the AAP and WHO into an already-full curriculum and garner student attention while addressing essential pediatric competencies.

The multi-dimensional aspect of caring for children with disabilities and providing support for their families requires pediatricians and family practitioners to have a knowledge base of not only disability criteria for the purpose of diagnosis, but also an understanding of available services and special education practices to promote the well-being of all children in the educational setting as well as in health care (Lipkin et al., 2015). Medical clinicians are often the first to recognize developmental delays and disabilities in young children and routinely refer children who exhibit delays for further evaluation through Early Intervention (EI) and/or other medical specialists. Physicians help families understand the findings of evaluation reports and the implications of a diagnosis (Adams et al., 2013; Hastings et al., 2014). Once a child is diagnosed, the physician may recommend specific interventions (such as physical therapy) (Carlon et al., 2013) and/or be responsible for prescribing medication (e.g., Adderall) (Williams et al., 2004), which requires doctors to closely monitor the child's response through parent and

school reports. Finally, physicians are expected to monitor child intellectual and social development during well-child visits by asking about school and therapeutic progress.

Several studies have emphasized the importance of physicians' quality of care for children with disabilities and their families, particularly during the critical early childhood years when most children are diagnosed and begin to receive therapeutic interventions. In their study of parents' experiences around their children's disability diagnosis, Graungaard and Skov, (2006) found that parents' experiences and coping were "strongly influenced by the nature of the diagnostic process" (p. 299) and that critical features of the experience were the timeliness of the diagnosis, the doctor's perceptions of the child, and the need for communication. In addition, Carlon et al. (2015) noted that parents of young children often rely on physicians to recommend therapeutic interventions. Finally, Galil et al. (2005), found that parental satisfaction with therapy was highly correlated with physician collaboration.

However, studies have shown that children are often not diagnosed and referred for EI (Emerson et al., 2016; Lipkin, 2020; Sices et al., 2004) and preschool special education (Hastings et al., 2014) in a timely fashion. Many researchers (Emerson et al. 2016; Oswald et al., 2017) have examined the diagnosis and referral of children with autism spectrum disorder (ASD) specifically. In their study of parent perspectives of the diagnosis and referral process, Oswald et al. (2017) found that children with ASD were diagnosed later than children with other developmental delays despite parents reporting concerns earlier. They also found that often parents reported concerns to their health care provider, but the health professional said nothing was wrong/the behavior was normal or, that the child might "grow out of it'" (Oswald et al., 2017, p.158). Emerson et al. (2014) also reported that children who are African American are often referred to EI even later than children who are White.

Parents in many studies also reported that physicians' responses during and after diagnosis were problematic. Several studies found that of parents of children with intellectual disabilities reported that medical personnel often discussed their children's development from a deficit perspective, without considering the whole child (Lalvani, 2008; Bhattacharya & Sidebotham, 2000). In addition, Sansosti et al. (2016) found that, in their discussion of the diagnosis and referral process, parents of children with ASD reported that physicians were uninformed about available interventions and ASD in general.

These concerns were echoed by several studies that examined physicians' confidence, training, and skills in many areas of care for children with disabilities. Physicians reported a lack of updated training on developmental screening tools (Moore et al., 2017), a lack of confidence recognizing developmental delays (Williams et al., 2004) and behaviors associated with ASD (Crais et al., 2014). Physicians further described being reluctant to refer children with a range of possible developmental delays and preferring to "wait and see" (Sices et al., 2004), and not having knowledge of the referral process for EI (ages 0-3) (Moore et al., 2017) or preschool (ages 3-5) (Hastings et al., 2014). Finally, several studies have shown that physicians expressed the need for more knowledge of special education laws and service delivery (Shah et al., 2013; Sheppard & Vitalone-Raccaro, 2016).

Moore et al. (2017) found that medical providers who reported having more confidence in discussing screening results with parents and more knowledge about the referral process were more likely to refer children with potential disabilities to EI. Similarly, Self et al. (2015) explained, "respondents who received preprofessional training in the areas of ASD screening, diagnosis, and treatment in their medical school or residency were more likely to report that they screened children for ASD than did respondents reporting a lack of training in ASD" in their

survey of physicians' ASD screening procedures (p. 199). The recommendations of the authors of all of these studies included the need for additional training in screening and diagnosis, referrals, EI, and special education law and practices for physicians.

Disability as a Topic in Medical Training

Although the AAP and the WHO call for increased attention to the needs of people with disabilities by clinicians, there is evidence that the training for doctors in the area of special education is limited (Shah et al., 2013) and often based upon their training during residency (mentor) experience (Sheppard & Vitalone- Raccaro, 2016). Few medical school programs have specifically targeted this need (Kirschner & Curry, 2009). Typically, when programs included the topic of disability into their undergraduate medical training, they did so through classroom instruction (Ryan & Scior, 2014), activities where students interacted with people with disabilities through panel presentations (Havercamp et al., 2013; Sheppard et al., 2017) or in a clinical setting (Karl et al., 2016; Ryan & Scior, 2014; Symons et al., 2014; Woodward et al., 2012). Most programs nested disability related content or activities into Psychiatry or Family Medicine courses or clerkships. Researchers who examined the impact of these programs typically measured students' attitudes toward individuals with disabilities (Havercamp et al., 2016; Ioerger et al., 2019; Karl et al., 2013; Ryan & Scior, 2014). Examples of programs with components that were not classroom or clinic-based included ones where pediatric residents learned to use screening tools (Bauer et al., 2009), medical students completed community-based activities for people with disabilities (Havercamp et al., 2016), and two interventions where medical students were placed at schools for children with significant disabilities (Jones & Donald, 2007; Whitehall et al., 2015). However, both school programs were time intensive, taking two weeks or more.

Purpose of the Study

In order to address the need for physicians to be better prepared to treat individuals with disabilities, work with their patients' families, and collaborate with school personnel, the authors introduced facilitated school visits during the pediatric clerkship. The research questions for this project were: Is it feasible to incorporate school visits in the pediatric clerkship "Miscellaneous Week," and what is the impact of school visits on medical students' understanding of child development and interprofessional skills?

Our primary measure of outcomes was perceived competence in primary pediatric competencies. Perceived competence, although not a direct measure, is critical when viewed in the context of Bandura's (1977) Social Learning Theory. Bandura wrote that "efficacy expectations are a major determinant of people's choice of activities, how much effort they will expend, and of how long they will sustain effort in dealing with stressful situations"(p. 194). As medical students embark on their careers as physicians, we assert that having self-efficacy in the areas of supporting children with disabilities and collaborating with families and school personnel will increase the likelihood that they will pursue these activities when in practice. This assertion is supported by the findings of Sheppard and Vitalone-Racarro (2016) who found that physicians who had more information about the special education process and interventions were more likely to collaborate with school personnel in their support of children with disabilities and their families.

Method

Description of the Program

Students at this school of osteopathic medicine complete a month-long pediatric clerkship in their third year of medical training. During one week of this clerkship, entitled "Miscellaneous

Week," students observe in additional (non-clinical) settings. The students spend one full day in a setting. Over the course of the week, they visit approximately two to three settings. The setting options prior to the intervention were (a) a program that supported children and families who have experienced abuse, neglect and violence, (b) a neonatal intensive care unit, and (c) a pediatric allergist's office. We introduced a visit to public schools to observe classrooms that provided services to students with disabilities to the Miscellaneous Week options. The students had first been exposed to topics related to the needs of children with disabilities and their families and special education law and practices during the 2nd year Pediatrics course (Sheppard et al., 2017; Vitalone-Raccaro et al., 2019). This study received IRB approval and incentives for participation were not provided.

Timeline

As a preliminary step, we conducted school visits during the end of an academic year with a small number of students. We found, through initial data collection (these data were not included in the analysis presented here) and anecdotal data, that the program could be implemented logistically and was viewed positively by medical students, the teachers and administrators in the schools, and the researchers (who conducted the visits). Full implementation occurred the following academic year between July and June with medical students visiting the schools each week as the school calendar allowed (e.g., we did not conduct school visits during public school breaks, or on snow days).

Setting and Intervention

The visits were conducted in a large, economically (40% of students identified as economically disadvantaged), and racially diverse public school district (52.8% of students identified as White, 24.3% as African American, 12.3% as Hispanic/Latino and 5.2% as Asian).

The medical students visited the school in dyads. The school visit schedule consisted of a half hour meeting with a school administrator and a professor of special education (the first and/or second author) to discuss the goals of the school-based program, review special education practices, and highlight areas where physician- school personnel collaboration could improve. This meeting was followed by visits to eight classrooms (across four schools) over the course of the school day (the classrooms themselves sometimes varied depending on the daily schedule). The classrooms visited included:

- Five pre-kindergarten classrooms
    - One integrated (students with developmental delays/disabilities and those without)
    - Four self-contained (only students with identified disabilities)
        - Two classrooms for students with various disabilities
        - One classroom for students with ASD
        - One classroom for students with Emotional Behavior Disorders
- Three Kindergarten -1st combined grade classrooms
    - All self -contained (only students with identified disabilities)
        - One classroom for students with various disabilities
        - One classroom for students with ASD
        - One classroom for students with Emotional Behavior Disorders
- One 3rd - 5th grade combined grade classroom for students with ASD

The classrooms represented a continuum of placement options from self-contained (those with only students with disabilities) to integrated (those with both students with disabilities and students without disabilities). The needs of the students served in those classrooms included, but

were not limited to, ASD, intellectual disability, multiple disabilities, speech and language delay, and emotional behavioral disorder. The schedule was designed so that medical students could observe academic periods (reading, morning meeting, math), unstructured time (recess, snack) and a small group session with a speech and language therapist during lunch. Medical students viewed examples of augmentative and alternative communication supports, data collection tools, behavioral intervention strategies, home-school communication tools, and academic materials. Most of the classrooms supported early childhood aged students. However, we wanted the medical students to see older children with ASD (the 3rd-5th grade classroom) as well in order to discuss the communication, behavioral, and academic gains that many of these students had made since attending the early childhood program.

A fundamental aspect of the school visits was that a professor of special education accompanied the medical students throughout the course of the day to facilitate the experiential learning and help the medical students make meaning out of what they were observing and experiencing. The special education professor would (a) cue medical students on what to look for, (b) narrate what was being observed so as to create a context for understanding, (c) answer questions, and when appropriate, (d) model interactions with students in the classrooms.

Participants

The participants (N = 66) were randomly selected from a class of third-year medical students from one school of osteopathic medicine in the Northeast United States. The class demographics were: 49% female and 51% male, 44.5% White/Caucasian, 36% Asian, 6.4% African American, 9.6% Hispanic/Latino, 2.4% identified as more than one race/ethnicity, and .6% did not report. The 66 students were assigned school visits as a part of Miscellaneous Week.

Attending the school visits was mandatory for assigned students, but completing the assessments for the research project was not.

Procedure

The students were provided with a link to a pre-assessment (Qualtrics online survey platform was used) one week prior to their Miscellaneous Week with directions to complete it before beginning their placement. At the conclusion of the pediatric clerkship, students were asked to complete a post-assessment that matched the pre-assessment. They were also asked to complete an additional, separate, post-assessment that consisted five short-answer questions. Completion of the pre- and post-assessments was voluntary. In order to match pre and post data on the assessments, students provided the last 4 digits of their phone numbers. We were able to match the pre- and post-assessment scores of 32 students. An additional 12 students who completed the school visits completed the post-assessment for a total of 44 (a 66% completion rate). There were 37 students who completed at least one of the short answer questions.

Tools

Perception survey

The survey asked participants to rate their perceived competency in seven pediatric topics related to diagnosis (identifying typical and atypical characteristics), communication with children and parents (discussing health and wellness), and collaboration with school, community, and other medical personnel. These competencies were aligned with those articulated by The American Board of Pediatrics (ABP), with a focus on Competency 1: *Patient Care,* Competency 4: *Interpersonal and Communication Skills,* and Competency 6: *Systems Based Practice* (retrieved from APB.org, 2018). We chose not to ask disability or school visit specific questions because we wanted to measure impact more generally to demonstrate, as a first step, that the

intervention was a natural and appropriate addition to Miscellaneous Week and would positively impact students' growth across competencies. Response options were presented in a Likert format ranging from 1-4 with 1 being "not at all competent" and 4 being "very competent." The participants were not asked to provide demographic information.

Short Answer Responses

The short answer questions were designed to evaluate student learning in Competency 4: *Interpersonal and Communication Skills* and Competency 6: *Systems Based Practice.* The five questions asked for specific examples of how students would discuss health and school with their patients and their patients' parents and to identify challenges to effective communication. Students were also asked how and why they would collaborate with other professionals (medical, school and community agencies) to support families.

Teacher Perceptions

The PreK-12 teachers whose classrooms students visited were asked to provide feedback about the program. They were provided with a questionnaire that asked about the impact of the program on them as teachers and on their students, the challenges of the program implementation, if they had any suggestions for improvement and if they would participate in the program again. These were distributed directly to the teachers by the researchers and returned by hand or via email.

Data Analysis

Perception survey

All responses to the pre- and post-assessment of perceptions were entered into SPSS. The first round of analysis examined the mean and standard deviations of the Likert scores for each question. Then, using a paired-sample t-test, we analyzed the pre- and post-test results of

individual students (using their matched pre- and post-assessment responses) to determine if there were significant differences between the start and the end of the intervention. We examined each survey question separately.

Short Answer Responses

The short answer responses were downloaded into SPSS, then to tables in MSWord, and analyzed by the first two authors. Thematic analysis was first used (Braun & Clarke, 2006) to capture important references to key pediatric competencies by individual question then across the entire data set of short-answer responses. The realist method of thematic analysis to "report[s] experiences, meanings and the reality of participants" (p.81) was applied in an effort to account for how the context of Miscellaneous Week placement impinged on those meanings. Further we used theoretical thematic analysis as we were coding for a specific research question (the impact of the school visits).

Teacher Feedback

Teacher feedback was considered in the context of research question one to determine the on-going feasibility of the program and impact on the PreK-12 students and teachers. We received four teacher responses. All teachers reported that they would be willing to participate in the program again. Two PreK-12 teachers reported a benefit of the program as having their PreK-12 students become more comfortable with doctors (we always introduced the medical students as future doctors). Three teachers reported the opportunity to share information about their PreK-12 students as a benefit of the program. Some reported that the PreK-12 students were initially distracted by the medical student visits, but eventually became used to them. Suggestions for improving the program included having the medical students come at different times of the day to see a wider variety of activities, providing more opportunities for the medical

students to interact with the PreK-12 students, and having the medical students come with prepared questions.

Results

Perception of Competency

Students reported perceived competency across each pediatric area both before and after Miscellaneous Week (Table 1). The responses showed that the means for students' perceived competency in all areas were below competent (a rating of three) in all areas prior to the Miscellaneous Week and, with the exception of *Collaborating with Community Partners* (*m*=2.98), at or above competent after Miscellaneous Week. The matched pairs (n=32) showed significant change ($P < .01$) in all perceived competency areas (Table 2), with the greatest areas of growth ($P < .001$) for *Discussing Health and Wellness with Children* (t= 9.280) and *Discussing Health and Wellness with Parents* (t=9.204). Students also reported significant ($P < .001$) increased perceived competency in areas of *Knowledge of Typical Child Development* (t=7.992), *Able to Identify Markers of Atypical Development* (t=7.878) and *Collaborating with School Partners* (t=4.130).

Short Answer Response

For the first question, ***Write two questions to ask parents that specifically target the educational experiences of children***, students' responses reflected two themes, academic and social. The questions that addressed academics included ones focused on grades, a child's favorite subject, and if there were areas of academic struggle. Most students also included a question that addressed the social aspects of school (friends, potential bullying) and possible indicators of challenges such as challenging behavior at home or at school. Several students

proposed questions about communication with teachers. One asked, "Are you having regular conversations with the teacher?"

In response to the second question, ***During a well-child visit, doctors may talk directly to children about their health. List three factors that might impact this interaction and identify one strategy for addressing each factor,*** the students reported that trust is a key component to a discussion with a child and that children may be shy or uncomfortable. Many reported that children may be uncomfortable answering questions in front of their parents. Several students described how to support children with a limited vocabulary, speech and language issues, or attention issues. They detailed ways, such as using more simple words, drawing diagrams, and working with parents to improve communication and health literacy overall.

> *Need to use appropriate language levels for younger patients or those with developmental disabilities; style of learning- ID the child's style of learning so you can approach them in that manner, i.e. drawing a picture vs. giving them something to read.*

For the question, ***Identify two instances in which a doctor would benefit from communicating with a patient's school? Explain why,*** students mentioned instances where there was a suspected disability (most frequently ADHD) as a reason for communicating with schools. Additionally, students mentioned advocating for appropriate services for students, and monitoring medicine use/ side effects. However, a primary theme that emerged was collaboration. This was evidenced in language that described shared information, team work, and physicians learning from teachers beyond diagnosis.

> *The physician would benefit from communicating with a patient's school when coordinating in-school assistance. Physicians, as well as parents, may have*

recommendations for aid in school. However, it would be beneficial to communicate with the patient's school directly to see what accommodations are possible

For the question, ***Write one take away concept and one lingering question,*** the students discussed physician-school collaboration in a detailed manor and included accurate terminology. Students identified specific special education programs and practices (EI, inclusion, data collection).

Early intervention is key to better outcomes when it comes to a child with learning disabilities. What extra steps can be taken to allow parents bridge the gap between summer and start of a new year at school to discourage regression of skills acquired throughout a school year in IEP?"

Finally, students asked pertinent questions regarding the challenges of effective collaboration.

One take away concept is developing effective communication between all parties involved in patient care. I feel that an interdisciplinary approach to patient care is extremely beneficial to patients; however, consistent up to date communication is key to avoid avoidable errors. One lingering question is how to best offer effective communication between physician and school environment given the often hectic schedules of both school personnel and physician?

Discussion

Physicians play a key role in the screening, referral, diagnosis, and progress monitoring of children with disabilities. Studies of parents of children with disabilities report on the importance of physicians (most often pediatricians) being responsive to parents' concerns, providing resources and information about special education services, and having positive perceptions of children with disabilities. However, many studies have also found that

pediatricians and family physicians lack confidence in providing these supports to families. We provided 3rd year medical students the opportunity to visit schools accompanied by special education faculty during their pediatric clerkship as a part of a multi-year curriculum to address gaps in knowledge and skills in the area of identifying and treating children with disabilities and knowing about special education laws and services (Adams et al., 2013; Lipkin et al., 2015; Shah et al., 2013; Sheppard & Vitalone- Raccaro, 2016). The program was designed to link didactic and experiential learning (Ogrinc et al., 2003).

Our findings suggest that the addition of experiential learning through facilitated school visits to classrooms that provide educational services for children with disabilities can enrich the pediatric clerkship and can improve medical students' perceived competence in, as well as deepen their understanding of, critical pediatric areas. The perceived competence of students who completed school visits during Miscellaneous Week showed significant growth in (a) discussing health and wellness with children and parents, (b) identifying typical and atypical child development, and (c) collaborating with school partners. Further, students provided detailed short answer responses that reflected specific knowledge of special education services and a deep understanding of collaboration. We hypothesize that the school visits and the presence of a professor of special education who accompanied medical students throughout the course of their visits, acting as preceptors, created a powerful learning experience.

The ability to effectively communicate with parents of children with disabilities is a critical skill for physicians for diagnosis (Oswald et al., 2017), for timely referral to EI (Jimenez et al., 2012), and for families' overall satisfaction with services (Galil et al., 2006). The finding that students perceived themselves as competent to identify marker of atypical development is important for early diagnosis. Self et al. (2016), in their study of physicians' screening

procedures for ASD, found that, "The respondents who reportedly screened for ASD expressed higher confidence in their ability to recognize early warning signs of ASD and in their knowledge of diagnostic criteria and empirically supported interventions than nonscreeners" (p. 200). This outcome is particularly important when discussed in the context of the later identification of ASD in children from diverse racial groups (Emerson, 2014).

The qualitative findings demonstrated the positive impact of the multi-year program. Students highlighted the need for physicians to advocate for special education services for their patients with disabilities and demonstrated a depth of understanding of the benefits of a collaborative relationship. When referencing special education supports and services, the students provided details (such as data collection and EI) about how special education is implemented and identified specific challenges to effective collaboration. Students acknowledged the importance of communicating with school personnel and characterized effective collaboration rather than simply stating the need to communicate data.

This program moved away from measuring attitudes about disability to a discussion of necessary pediatric competencies in treating all children, some of whom will have disabilities (APB.org retrieved, 2018). This was an effort to frame supporting children with disabilities as a necessary skill for all clinicians and not just a specialized practice. Enhancing experiential learning during pediatric clerkship to include a focus on treating children with disabilities utilizing community-based partnerships was shown in this study to be a plausible first step toward a larger-scale solution to integrate this content into the medical school curriculum. We believe that the increased knowledge and self-efficacy of future clinicians, as supported by Bandura's (1977) Social Learning Theory, will positively affect their choices and motivation when supporting children with disabilities and their families. Our hope is that such improved

perceived competency and depth of understanding will result in future physicians who are more likely to identify markers of atypical development in their young patients and better able to collaborate with, and support families through diagnosis, referral and progress monitoring.

Limitations

This study represents the outcomes from one medical school and for that reason, the results cannot be generalized. In addition, perceived competency is based upon student perception rather than actual capabilities. Also, our original participant sample was all third-year students. However, students often attended more than one placement during the Miscellaneous Week, yet could only indicate one placement on the survey instrument. This resulted in two challenges to the analysis. The first is that we could not use these responses of students who indicated that they visited a site other than a school for comparison, because they could have also visited a school. Secondly, we could not account for the impact of other placements in addition to the school visit. To address this issue, future measure should allow participants to indicate any and all Miscellaneous Week placements allowing for comparisons between, and determining impacts of, other placements. We were disappointed that there was not a higher percentage of survey participants for the pre- and post-assessment and future measures should include combining surveys (the perception survey and the short answers survey were separate Qualtrics links) and offering incentives for participation.

Finally, a key component of this study is the special education faculty member acting as a preceptor during the school visits. We recognize that medical education programs may not have affiliations with teacher preparation programs which would limit access to special education faculty and PreK-12 school access. However, outreach to establish collaborative partnerships

could be conducted with any local district and undergraduate or graduate teacher preparation program.

Future directions

In the United States, 17% of children are diagnosed with a developmental disability (Zablotsky et al., 2019). We believe that caring for children with disabilities (which includes learning about special education and related services) needs to become embedded throughout the pediatric medical training program though didactic and experiential learning opportunities to prepare future clinicians to care for all of their patients. Adding school visits during the pediatric clerkship was an efficient and impactful way to provide such a learning opportunity.

We are exploring ways to make school visits available to all medical students during their pediatric rotation. In addition, due to the hypothesis that the facilitated visits enhanced perceived competence, efforts will be made to ensure that other experiential learning components in the curriculum follow this model of interdisciplinary collaboration. Finally, we are hoping to provide additional targeted instruction in areas such as the transition to adulthood, positive behavioral intervention strategies, and the use of developmental screening tools and how to discuss the results of those screens with parents.

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Table 1. Student Pre and Post Assessment Scores of Perceived Competency

	Knowledge of Typical Child Development		**Able to Identify Markers of Atypical Child Development**		**Discussing Health and Wellness with Children**		**Discussing Health and Wellness with Parents**		**Collaborating with Other Medical Personnel**		**Collaborating with School Partners**		**Collaborating with Community Partners**	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Pre Assessment														
School Matched (N=32)	2.19	.535	2.13	.491	1.97	.595	2.25	.714	2.88	.871	2.44	1.08	2.47	.950
Post Assessment														
School Total (Matched + Unmatched) (N=44)	3.07	.501	3.07	.545	3.07	.625	3.12	.538	3.28	.585	3.07	.695	2.98	.698
School Matched (N=32)	3.06	.435	3.09	.530	3.16	.574	3.16	.448	3.28	.523	3.06	.669	2.88	.707

Table 2. Student Change in Perceived Competence as Measured Before and After Miscellaneous Week (*n*=32)

Competencies	Paired Samples Test				
	M	*SD*	*df*	*T*	*Sig.*
Knowledge of Typical Child Development	.933	.640	29	7.992	.001
Able to Identify Markers of Atypical Child Development	1.033	.718	29	7.878	.001
Discussing Health and Wellness with Children	1.233	.728	29	9.280	.001
Discussing Health and Wellness with Parents	1.03	.6150	29	9.204	.001
Collaborating with Other Medical Personnel	.433	.858	29	2.765	.010
Collaborating with School Partners	.667	.884	29	4.130	.001
Collaborating with Community Partners	.467	.730	29	3.500	.002