MID-LEVEL DEVELOPMENTAL AND BEHAVIORAL ASSESSMENTS:

Between Screening and Evaluation

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The Child Health and Development Institute of Connecticut (CHDI), a subsidiary of the Children's Fund of Connecticut, is a not-for-profit organization established to promote and maximize the healthy physical, behavioral, emotional, cognitive and social development of children throughout Connecticut. CHDI works to ensure that children in Connecticut, particularly those who are disadvantaged, will have access to and make use of a comprehensive, effective, community-based health and mental health care system.

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INTRODUCTION

In 2009 the Child Health and Development Institute of Connecticut (CHDI) published *A Framework for Child Health Services: Supporting the Healthy Development and School Readiness of Connecticut's Children*. This document articulates the full continuum of services, from primary care to highly specialized care, needed in a comprehensive system of child health services.[1] In the category of "selective services," or "services available to all children and families and likely to be accessed by some to promote early intervention for health and developmental problems," the *Framework* identified Mid-Level Developmental Assessment (MLDA). The authors describe MLDA as the expedient assessment of a child with a behavioral or developmental health concern identified through screening.

The *Framework* also highlights the importance of surveillance and screening in pediatric primary care to detect children for whom there are developmental and behavioral concerns. The American Academy of Pediatrics (AAP)[2] recommends that child health providers implement developmental surveillance at all well-child visits. Developmental surveillance entails soliciting parental concerns, maintaining a longitudinal developmental history, documenting perspectives from individuals other than parents (e.g., teachers, child care staff) and identifying risks and protective factors. Developmental screening uses validated tools to detect concerns. The AAP recommends that child health providers implement screening with formal tools at the 9, 18 and 24 (or 30) month well-child visits.[3]

MID-LEVEL DEVELOPMENTAL ASSESSMENT

The goal of MLDA is to appropriately evaluate children for whom surveillance and/or screening show concerns and then triage children into higher level evaluation services or community-based therapeutic services for immediate intervention. Since MLDA is briefer and less expensive than a full behavioral or mental health evaluation, and since resources for full evaluations are scarce in Connecticut and throughout the country, the Framework suggests that increased availability of MLDA programs could ensure that children with concerns identified through surveillance and screening would receive more timely evaluations. Furthermore, MLDA would not over burden scarce behavioral and mental health resources. In addition, children who receive MLDAs could be immediately connected to helpful services without waiting to complete full evaluations. Many of these evaluations result in findings indicating that children are not eligible for extensive services with stringent eligibility criteria imposed by public funding or private health insurance.

Best practices in a care system for children dictate that a full continuum of health services be available for all children and youth. Despite the range of developmental and behavioral health services in Connecticut, the capacity of these services to adequately address the needs of children is limited. Traditionally, the developmental and mental health services available to children and families involve either universally administered services, such as anticipatory guidance and screening in pediatric primary care, or specialty care, such as evaluations and interventions provided by the State's Part C of the Individuals with Disabilities Education Act program, which provides evaluation and intervention services to children ages birth to three. There is no "middle ground." One shortcoming of this two-tiered system is that some children are referred for costly, comprehensive evaluations and treatment that prove unnecessary, precluding other children from securing timely assessments and interventions. In many other instances, children's screening results yield findings that, upon further assessment, indicate mild to moderate concerns that can be addressed immediately and there is no need for them to receive costly and unnecessary full evaluations.

To explore the potential of MLDA to address systems level concerns about children's timely access to evaluation and intervention services, CHDI provided funding to three child serving organizations to test the feasibility and implications of MLDA in Connecticut.

In a 2006 report by the Commonwealth Fund, Mid-Level Assessment was identified as a key strategy for enhancing pediatric practice linkages for developmental services and supports.[4] The authors suggest that having Mid-Level Assessment resources in place could encourage providers to immediately refer children with concerns, making it more likely that children with mild to moderate delays could receive timely and appropriate care. Literature on development, implementation, and evaluation of MLDA programs is limited. Kelly[5] has described the development of a mid-level assessment model to provide second level assessment and triage for preschool-aged children referred to a tertiary care center with non-specific developmental and behavioral concerns. Data were collected on 116 patients who participated in the program, the average time from date of referral to date of appointment (26 days), type of developmental delay, and disposition outcomes. Based on the results of satisfaction surveys, the researchers concluded that the mid-level assessment model was feasible and well accepted by parents and referring physicians.

To explore the potential of MLDA to address systems level concerns about children's timely access to evaluation and intervention services, CHDI provided funding to three child serving organizations in July of 2009 to test the feasibility and implications of MLDA in Connecticut. Pediatric Associates of Bristol (Pediatric Associates), the Village for Families and Children (the Village), and the Yale Pediatric Primary Care Center (Yale PPCC) received funding under the Children's Fund of Connecticut Innovation Fund program, which is administered by CHDI. The goal of these demonstration projects was to improve alignment of needs and services for the children they served. This report reviews the three MLDA programs, discusses their findings and provides recommendations for building an MLDA system for Connecticut.

THREE MID-LEVEL ASSESSMENT PROGRAMS

Table 1 provides information about the three funded MLDA programs including their referral sources, staffing and tools used. All three programs provided MLDA on-site and integrated the service with other services offered on-site. Pediatric primary care featured prominently as a referral source for all three programs, with most of these referrals resulting from surveillance and screening. A variety of staff members delivered the MLDA ranging from social workers to developmental pediatricians as well

Table 1: MLDA Programs in Three Sites

MLDA Site	Referral Sources/Criteria	MLDA Staff
Pediatric Associates of Bristol (Pediatric Associates): private pediatric primary care practice serving approximately 7,500 children and adolescents in central Connecticut. The practice has five general pediatricians.	Screening during well-child exams Physician surveillance Parent/patient concerns and self-referral	Team of three part-time behavioral health professionals: 1) developmental pediatrician, 2) general pediatrician with substantial experience and interest in behavioral, mental health, and neurological issues, and 3) child psychologist and psychology intern from the Wheeler Clinic
Village for Families & Children, Inc. (the Village): private, non-profit human services agency with an extensive array of mental health programs in the areas of: placement and permanency (adoption, foster care and family preservation), children's behavioral health and family and community support programs.	Primary care partner practices, agency programs (family resource center, mental health clinic), other agencies, parents	Clinical social worker, psychologist, case manager, early childhood educator
Yale New Haven Hospital, Pediatric Primary Care Center (Yale PPCC): provides comprehensive well-child care to children living in New Haven. Twenty faculty and 56 pediatric residents deliver services to approximately 7,500 patient visits annually.	Screening during 9, 18, and 30 month well-child exams	Speech therapist, occupational therapist, special education teacher; all are staff at ReachOut, Inc., an early intervention program

Table 2: Children Receiving MLDA

MLDA Site	# of Children Served	Ages of Children Served	Tools Used*
Pediatric Associates	163	4 months to 22 years	ADOS, ANSER, CARS, CAST, Connors, Eyberg, Ohio Scales, PHQ9, SCARED, SANDAP, Vanderbilt
The Village	80	12 months to 6 years	DAYC, IDA, ITSEA, Mullen
Yale PPCC	37	9 months to 30 months	Preschool Language Scales 4th Edition (PLS 4), Battelle Developmental inventory

* This listing provides acronyms; see Appendix 1 for a list with full names of tools used and more informationn about each tool.

as therapeutic service providers in the Yale PPCC program and Pediatric Associates. Assessors used many tools, which are described in Table 2. Some tools (Connors, Vanderbilt, PHQ9) are increasingly used in pediatric primary care settings and others (Eyberg, Ohio Scales, DAYC and IDA) are used in mental health settings or upon referral of children for more extensive evaluation services. The sites serving children younger than six utilized assessment measures that cover the full range of development including behavior and psycho-social development. For children six and older, learning and behavioral problems are more differentiated, and measures addressing those specific areas were used. In all three sites, MLDA extended the level of evaluation available on-site by incorporating higher level evaluation tools into children's assessment.

In addition to performing MLDAs, sites also undertook additional activities to better identify children who might benefit from MLDA as well as to connect children from MLDA to further evaluation and intervention. The Yale PPCC expanded their screening during well-child exams to ensure that children were screened for autism

Pediatric primary care featured prominently as a referral source for all three programs, with most of these referrals resulting from surveillance and screening.

spectrum disorders at 18 and 30 month well-child visits as well as with the Ages and Stages Questionnaire at 9, 18 and 30 month visits. They also trained rotating cohorts of pediatric residents in talking with parents about the outcome of screening and the importance of follow up assessments when screening showed concerns. The Village MLDA process included a comprehensive family interview that provided information on parental stress, development as reported in other settings and input from pediatric primary care providers when they were not the referral source. The assessment covered developmental, behavioral, and psychosocial health.

The Village MLDA staff held weekly team case conferences to review findings from each family interview and MLDA before presenting findings to families in a feedback session. The Village and Pediatric Associates augmented their MLDA work with extensive case management support. Both sites designated staff to link families to services indicated from the MLDA. Pediatric Associates also provided behavioral health intervention services on site. These included counseling and medication prescriptions and management by the psychologist and pediatricians.

A Referral to the Village's MLDA Program:
Eighteen month old Mara was referred for a Mid-level Developmental Assessment by her pediatrician at the local children's hospital primary care center based on the PEDS developmental screening results that showed 'red flags' about her behavior and language skills. Based on the pediatric provider's previous experience, he believed that Mara was not likely eligible for the State's Early Intervention program (Birth to Three), given the requirement of 50% delay, or two standard deviations below the mean. The pediatrician instead referred Mara to the Village for a "Mid-level" Developmental Assessment.

Referrals to all three MLDA programs spanned a variety of developmental and mental health concerns. At the Yale PPCC, where the MLDA program focused on young children, the main concern resulting in a referral was communication (78% of the 80 children referred), followed by motor (11%), cognition (5%), autism (3%), and mixed domain (3%). At Pediatric Associates, where MLDA was used for children of all ages in the practice, attention problems (38% of the 163 children referred) and anxiety (31%) were the major concerns for children referred to MLDA. Other issues that accounted for a significant number of referrals included: disruptive behaviors (18%), adjustment disorders (14%) and learning disorders (12%). Some children had more than one concern when referred so that total percent exceeds 100. The Village referrals most often included more than one concern with the primary concern of mental health or behavioral issues (85%). In addition, referrals were of children with communication concerns (40%), cognitive (25%), and motor (20%). Here, too, only young children were recipients of the MLDA services.

RESULTS OF MLDA

Table 3: Results of MLDA

MLDA Site	Children Referred to More Extensive Evaluation Services as a Result of MLDA
Pediatric Associates (n=163)	18%
The Village (n=80)	14%
Yale PPCC (n=37)	46%

In order to assess the extent to which MLDA was able to efficiently triage children to further evaluation or directly to helpful intervention services, all three sites documented the results of MLDAs they performed. Table 3 provides aggregate results for each site, showing the number of children who, after the MLDA, required further specialty or extended evaluation.

In all three sites, more than half of the children with concerns identified through surveillance and/or screening did not require more extensive evaluations.

What Were the Results of Mara's MLDA?

Mara was evaluated with the Infant and Toddler Developmental Assessment (IDA) Provence Profile. Findings reported that Mara has a mild delay (25%) in language and her play schema is somewhat immature for her age, placing her in the category of mild to moderate behavioral concern.

In all three sites, more than half of the children with concerns identified through surveillance and/or screening did not require more extensive evaluations. Results from the Yale PPCC, which show that almost half of the children assessed with MLDA required further evaluations, may be explained by the low number of children receiving MLDA. Almost half of the children referred to MLDA at the Yale PPCC did not keep the appointment. It could be that families whose children had more noticeable concerns and whose parents were therefore more worried by their children's developmental progress were more likely to keep appointments. This resulted in a higher percentage of children assessed needing more extensive evaluations than in the two other sites that did not experience high no-show rates. Furthermore, at least 80% of the children with concerns in Pediatric Associates and the Village sites could be referred directly to therapeutic intervention services as a result of the MLDA, which provided clear evidence that delays were mild to moderate and did not need extensive further evaluation. Pediatric Associates was able to link several children directly to mental health counseling, parent education programs, and school services. One striking finding from Pediatric Associates is how few specialty evaluations (e.g., psychiatric, neuropsychological, neurological) were required by those children participating in the MLDA program. The MLDA providers referred two children directly for psychiatric assessments, two for neuropsychological evaluations, and three for neurological evaluations. The low number of youth in need of extensive further evaluation may be due in part to the referral of children whose symptoms are newly developing and in part to the expertise maintained by the on-site team.

The results of evaluations of children who completed MLDA, and were deemed to need further evaluation, highlight the efficient use of full evaluation services following MLDA.

A variety of dispositions followed MLDA in the three sites. For the 19 children at the Yale PPCC who were not referred for full early intervention evaluations, 11 went on to show normal development per screening at subsequent well-child visits, six subsequently showed further concerns and two were lost to follow-up. Eighty-six percent of the children referred to the Village MLDA program were found to have mild to moderate delays and were enrolled in a variety of development promotion and mental health programs including individual or group therapy, Family Resource Centers, parent support and parenting education programs, developmental play groups, and preschool opportunities.

A look at the results of evaluations of children who completed MLDA and were deemed to need further evaluation highlights the efficient use of full evaluation services following MLDA. Of the 18 children at the Yale PPCC referred for either a preschool special education or early intervention evaluation, only four were determined to be ineligible for services. Eleven children (14% of those receiving MLDA) at the Village were referred to early intervention or preschool special education services, and they were all found to be eligible. MLDA, then, was effective in ensuring that children who receive extensive evaluation are eligible for programs that have stringent eligibility requirements.

At Pediatric Associates, after the initial MLDA visit, 59% of patients were recommended to follow-up with their mid-level assessment provider, while 9% of patients were recommended to follow-up with their primary care provider, and 4% were referred to another mid-level assessment provider within the practice. Thus, the initial disposition for 72% of patients was to remain in the care of an in-house provider. For 9% of patients, the initial disposition was for the family to monitor progress and schedule future appointments as needed. The percentage of patients referred to an outside provider after the initial visit was 18%. After subsequent visits, the majority of patients continued to receive follow-up services from their mid-level assessment provider, who also provided on-site intervention. Over the course of the 12-month period, 57% of the patient population was able to be exclusively managed by in-house providers (primary care and mid-level assessment team, who also provided intervention), and 43% of patients (n=65) were referred for evaluation, treatment, or other services by an external provider. The most common external referral sites were mental health clinics (26% of referred patients) or private behavioral health practices for treatment (18% of referred patients). The most common reasons for referral were the need for a higher level of care, typically weekly mental health services (43% of referred patients), and/or longer term care extending beyond the brief solution-focused treatment available at the primary care site (43% of referred patients).

What Followed Mara's MLDA?

As the pediatric health care provider had surmised, Mara was not eligible for any 'categorical' programs. Mara's parents will receive parent education and support and will be connected to these services at the Village RAMBUH Family Center. Mara will be enrolled in a child development play group (also at the Village RAMBUH Family Center) to address both her communication and behavior challenges. Mara's developmental and behavioral progress will be monitored in her primary care medical home.

CHALLENGES TO IMPLEMENTING MLDA

Although all three sites successfully completed MLDAs and were able to triage many children directly to services, they also identified several challenges to implementing a sustainable MLDA program. Challenges included the following:

No-shows: The Yale PPCC MLDA program experienced a no-show rate of 48% (36 of 75 patients scheduled). Only nine of those who did not keep their appointments cancelled before the scheduled visit, meaning that two MLDA staff from ReachOut were on-site at Yale expecting to see children and lost significant billing opportunities when patients did not arrive for scheduled appointments. Eleven of the 80 children scheduled at the Village MLDA program did not arrive for their appointments. However, all but one were rescheduled and subsequently received an assessment. Pediatric Associates did not experience any significant no-show challenges. One advantage of on-site services coordinated with primary care is that patients were familiar and comfortable in the setting and the few who did miss their initial mid-level assessment appointments were easily re-referred by their primary care providers at their next primary care visit. In sum then, it appears that in the urban hospital setting extra efforts are needed to either ensure that patients arrive when scheduled or that personnel on site to perform MLDAs can perform other on-site services so as not to forego needed reimbursement.

Coordination of scheduling between primary care and MLDA program: Yale PPCC also struggled with scheduling children for MLDAs. Although 175 appointments were available for the MLDA program between January and November

2010, only 75 children received appointments. Several factors contributed to the low rate of scheduling for MLDAs. Because the Yale PPCC relied on developmental screening results, children who were not screened according to the AAP schedule were not considered for the MLDA. For some children who did not pass the screening, pediatric providers determined that there was no need for further assessment based on discussion with parents/caretakers. The Yale PPCC also did not have a schedule with available appointments for MLDA posted until the clinic scheduling manager integrated the MLDA appointments into the clinic's general scheduling system.

Third party reimbursement for MLDA: Sites reported a variety of challenges in obtaining adequate reimbursement from insurance (public and private) to cover the entire MLDA service. Although the actual cost of assessment is reimbursed by Medicaid and private insurers, the rate is low and often does not adequately account for the time of more than one clinician participating in the assessment as well as the costs of gathering data prior to assessment, administration and scoring of rating scales from multiple reporters (e.g., parents and school personnel), team review of cases and report preparation. Care management following assessment to meet with parents/caretakers and connect children to services is another area where reimbursement is inadequate. Although mental health providers can bill Medicaid for care management, the rules are stringent such that it is often difficult to recoup adequate reimbursement for the time it takes to link children to more extensive evaluations and interventions. Commercial insurers rarely reimburse for care management or coordination time.

Spanish speaking and culturally competent evaluators: Fifteen of the 80 children referred to the Village for MLDA needed evaluation in Spanish. Initially these evaluations were provided by part time staff, but eventually the capacity to complete evaluations in Spanish was built into the MLDA program staffing. The Village assigned one bilingual clinical staff person with early childhood developmental experience and expertise to the Mid-level team for specific hours each week. In addition, a bilingual, bicultural developmental evaluator conducted evaluations on a fee for service basis to meet the increasing referrals of children whose primary language was Spanish.

Staffing capacity to assess young children: In addition to securing staff who could conduct assessments in Spanish, the Village also initially struggled to identify staff with experience and expertise with children ages birth to five. The agency selected two staff psychologists and two staff social workers to conduct the MLDAs and to further refine the model. Once the model was developed and piloted, two full time Village clinicians were assigned to the Mid-level team for specific hours each week. In addition, two Master's level developmental specialists provided evaluations as needed.

Information flow between MLDA staff and others involved in children's care: Effective and timely communication with providers both within the MLDA host agency as well as outside (e.g., child care, primary care, education settings) is essential for maximizing the value of MLDA. Sites faced ongoing issues with obtaining information at the beginning of the assessment and for sharing information about results and service recommendations. Sites used Case Managers (Village) as well as clinicians (Pediatric Associates) to obtain and disseminate information. The Village modified the MLDA model partway into the project to assign the case management responsibilities to the MLDA team members. As a result, and similar to the Pediatric Associates' staffing plan, the Developmental Evaluator now contacts the pediatric and other service providers to obtain relevant health, early care and education, and other related information as part of the Mid-level Developmental Assessment. The Village Family Interviewer assists the family with appointments and with gaining access to the services specified following the MLDA. The Village has found that information exchange responsibilities can be successfully carried out by the MLDA team members. At Pediatric Associates and Yale PPCC, where MLDA providers were on-site, there were few problems securing information from the referring pediatricians. However, a significant issue for primary care sites was receiving information back from the treating community providers regarding children referred after mid-level assessment.

Using conservative estimates, MLDA can save an average of $540 per child. The case for providing full reimbursement of the costs of MLDA can be made as follows for 100 children receiving an MLDA after screening shows one or more developmental or behavioral concerns:

- The average cost of an MLDA is $500 per child totaling $50,000 for 100 children.
- The cost of a full evaluation averages about $1,300 across Birth to Three and specialty services (psychiatry, neurology) per child for a total of $130,000 for 100 children.
- The cost of full evaluation for the 20% of children who need full evaluation as a result of findings from the MLDA is $26,000 (20 children x $1,300 per evaluation).
- The total assessment and evaluation costs for 100 children receiving MLDA is $76,000 ($26,000 plus $50,000).
- The ensuing savings for every 100 children is $54,000 ($130,000 minus $76,000) or $540 per child.

These projected savings account for savings resulting from assessment and evaluation only. They say nothing about the expected savings in special education, mental health and associated social services that will result from early detection and intervention.

CONCLUDING CONSIDERATIONS FOR BUILDING A SYSTEM OF MLDA

1. **MLDA is most easily implemented and will be most effective when it is integrated and coordinated with the other care and services that children receive.** Family-centered care encourages a variety of health seeking practices that are well correlated with health outcomes as well as patient satisfaction. It stands to reason that when children's developmental concerns are identified in primary care or in other venues where they receive services (e.g., early care and education) that families will be most willing to receive follow up in those familiar settings and with providers who are part of their existing service system. Pediatric Associates was highly successful in engaging families in MLDA as the service was delivered in their primary care site. Similarly at the Village, several children who received MLDAs were participants in other

For MLDA to be most effective, other components in the assessment system need to adjust their services to take advantage of the knowledge and insight gained through MLDA for referred children. This will ensure greater efficiency in service delivery.

Village programs. When primary care providers referred children to the Village MLDA, the Village staff collected information for integration of the primary care concern into the assessment process. This integration of services contributed to the low no-show rate. Yale PPCC was slow to integrate the scheduling for MLDA into the primary care clinic, the main referral source. As a result, several appointment slots went unfilled. Furthermore, the MLDA providers were from a contracted agency and not integrated with clinic providers. The result was that almost half of the children referred for MLDA did not keep their appointments. This no-show rate is far greater than what the clinic reports for other primary care services (30% no-show rate).

2. **MLDA can only meet family's needs and ensure the efficiency of early identification if it is integrated with other child assessment service systems.** A variety of assessment services currently exist for children with, or at risk for, developmental and behavioral concerns. These include: Part C Early Intervention (Birth to Three in Connecticut), Preschool Special Education assessments provided for 159 school districts, evaluations carried out under the Connecticut Behavioral Health Partnership for children insured by Medicaid, as well as a host of private provider evaluations. The outcomes of these assessment services often determine eligibility for publicly funded programs as well as insurance coverage for private programs. MLDA needs to complement and support these services, not place an additional barrier between children and intervention services. This new model needs to be integrated with other assessment services to ensure maximum efficiency of extensive evaluation resources, such as child psychiatrists, as well as pave a smoother path to intervention for children at risk for delays and concerns who do not qualify for categorical programs. The goal of MLDA needs to be identification of children's needs, and the best paths to meeting them, which may include full evaluations.

For MLDA to be most effective, other components in the assessment system need to adjust their services to take advantage of the knowledge and insight gained through MLDA for referred children. **A comprehensive system needs to guarantee: 1) screening in primary care settings, 2) MLDA integrated with primary care as a second stage service, and 3) full evaluation for only the children most likely to qualify for services with strict eligibility criteria. This will ensure greater efficiency in service delivery.** Duplication in evaluation services will be minimized as will wait times for more intensive evaluations. This will benefit families, who will experience fewer appointments as well as more quickly gain access to interventions and conserve precious resources.

Using conservative estimates, MLDA can save an average of $540 per child.

3. **Payment for MLDA services needs to reflect the time and staff involved in assessments as well as care management services.** Work remains to be done on matching third party reimbursement options and rates with activities that are encompassed in the MLDA model. The Village was successful in identifying reimbursement options for several of the components of their MLDA model, including the parent interviews, developmental assessments, parent feedback sessions, and associated case management conducted by a behavioral health provider for children covered by Medicaid. The agency continues to explore potential reimbursement options for covering participation of one or more of the agency providers at the weekly case conference as well. In sum, the costs specific to completing the MLDA are reimbursed by third party reimbursements. However, infrastructure costs including management and supervision and care coordination for children insured by commercial payers also need to be supported to ensure sustainability of the model. The Yale PPCC program counted on reimbursements to support the availability of the ReachOut staff, and when patients did not show for appointments, that support was threatened.

The value of MLDA can only be realized if payers reimburse for care coordinate. The 2009 Affordable Care Act[6] recognizes the need for payment for primary care providers to coordinate care and for case management activities. Implementation of these policies will enhance the feasibility of mid-level assessment as a component of pediatric primary care services.

4. **It is essential that assessments, recommendations and services are coordinated and implemented across the settings in which children receive care and services.** The optimal implementation of MLDA includes coordination of assessments and follow up care between MLDA, primary care, and other development/behavioral health providers. Follow up action from MLDA can include further evaluation, connection to intervention services, or monitoring by the primary care provider. Care coordination can ensure that children receive recommended follow-up. The two primary care sites were able to provide ongoing monitoring and further referral if necessary. Providers in the Yale PPCC used their familiarity with patient histories to apply a higher index of suspicion to the ongoing developmental surveillance of children who received MLDA. As a result, they quickly identified six children in subsequent primary care visits whose concerns escalated and connected them to services. Similarly Pediatric Associates was able to connect children to mental health and community services after brief intervention from an on-site clinician.

The Health Insurance Portability and Accountability Act of 1996 and state patient privacy requirements often make it difficult for providers to share information without first obtaining parental consent. Although this ensures patient privacy, it places a communication barrier between behavioral and primary care providers as busy primary care practices often fail to obtain proper consent from patients for information sharing. Policy that allows easier information sharing across health and mental health specialties, such as exists for medical specialties, would allow for improved communication of MLDA results and recommendations across service sectors.

5. **Monitoring MLDA's contribution to state level developmental measures can yield data to inform policy discussions, especially for school readiness.** An important goal of MLDA is to support healthy development and school readiness by ensuring that developmental needs are addressed as soon as possible. We will only know if this result is realized if we collect and maintain data on developmental screening, MLDA outcomes, and children's utilization of early intervention and community-based services. States need to consider these data in conjunction with kindergarten assessment information. Data for young children need to be gathered and maintained across the various systems in which children receive services: pediatric primary care, early intervention, early care and education

Monitoring MLDA's contribution to state level developmental measures can yield data to inform policy discussions, especially for school readiness.

and community services. Federal initiatives, such as Race to the Top and Project Launch, are supporting the development of integrated early childhood systems with extensive data integration. There is a place for MLDA in all of these initiatives, as well as an imperative for continuous monitoring of its contribution to healthy child development.

6. **MLDA's potential to address adolescents' socio-emotional development warrants further exploration.** Pediatric Associates demonstrated the value of screening and on-site MLDA and intervention services for youth with mental health needs. Although the larger system of adolescent evaluation services is not as formal as that for very young children, which benefits from federal mandates under Parts B (preschool) and C (birth to three) of the Individuals with Disabilities Education Act, MLDA is a promising strategy for efficiently identifying mental health and substance use concerns in youth and connecting them with mental health services before their symptoms escalate.

Appendix 1: TOOLS USED IN MLDA

Acronym	Full Name	Topic and Ages
ADOS	Autism Diagnostic Observation Schedule	Autism; toddlers to adults
ANSER	Aggregate Neurobehavioral Student Health & Educational Review	ADHD; school age
Battelle	Battelle Developmental Inventory	Full developmental inventory; birth to 8 years
CARS	Child Autism Rating Scales	Autism; 2 years and older
CAST	Childhood Asperger Syndrome Test	Asperger; 4 to 11 years
CONNORS	Connors Rating Scales for ADHD	ADHD; 3 to 17 years
DAYC	Developmental Assessment of Young Children	General developmental; birth to 6 years
EYBERG	Eyberg Child Behavior Inventory	Conduct disorders; 2 to 16 years
IDA	Infant Toddler Developmental Assessment	Comprehensive holistic developmental assessment; birth to 3 years
ITSEA	Infant Toddler Social Emotional Assessment	Behavioral health; 1 to 3 years
Ohio Scales	Ohio Youth Problems, Functioning and Satisfaction Scales	3 (parent, youth, and agency worker rated) brief surveys that assess the outcome of mental health services; 5 to 18 years
PHQ-9	Patient Health Questionnaire	Depression; 12 to 18 years
PLS	Preschool Language Scales	Receptive and expressive language; birth to 7 years
SANDAP	San Diego ADHD Project Questionnaires	Comprehensive school and family assessment; school age
SCARED	Screen for Child Anxiety Related Emotional Disorders	Anxiety; 8 years and older
VANDERBILT	NICHQ Vanderbilt ADHD Assessment Scale	ADHD; 6 to 12 years

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Child Health and Development Institute of Connecticut, Inc.

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Mid-Level Assessments: A System Improvement Innovation

When screening in pediatric offices shows developmental concerns, parents whose children are referred for further evaluations currently experience long waits. Once the children are evaluated, often it turns out that they do not qualify for many intervention services. Mid-level assessments, a health care system innovation, could change this by evaluating children sooner and connecting them to a variety of interventions more expeditiously. The Child Health and Development Institute's (CHDI) latest IMPACT series publication, "*Mid-Level Developmental and Behavioral Assessments: Between Screening and Evaluation*," provides evidence for the effectiveness of this new "mid-level" of assessment for children in Connecticut at risk for developmental or behavioral problems.

Full Assessments: A Systemic Bottleneck

In Connecticut's current system, scarce resources at the evaluation stage create a bottleneck. This lack of evaluation capacity among developmental, behavioral and mental health services leads to delays in evaluation appointments and therefore timely referral to intervention services. The resulting wasted time, unnecessary expense and misdirection of resources compromises the ability of the system to optimize the surveillance/screening process and opportunities for timely intervention, to the detriment of children.

A Mid-Level Solution

Mid-Level Developmental Assessments (MLDA) were identified in a 2006 Commonwealth Fund report as "a key strategy for enhancing pediatric practice linkages for developmental services and supports." MLDA strives to "appropriately evaluate children for whom surveillance and/or screening show concerns and then triage children into higher level evaluation services or community-based therapeutic services for intermediate intervention." The promise of MLDA is that it can be more expeditiously available, take less time to complete and cost less than current assessment options. MLDA can result in more timely and appropriate care as well as more efficient use of the scare full evaluation resources in Connecticut.

Although initial research conducted in 2006 to assess the appeal and impact of MLDA was encouraging, a more thorough exploration of the feasibility and implications of this approach was needed. In 2009, with funding from the Children's Fund of Connecticut's Innovation Grant Program, CHDI awarded grants to three child-serving organizations (Pediatric Associates of Bristol, the Village for Families and Children and the Yale Pediatric Primary Care Center) to test MLDA. The goal of the demonstration project was to improve the alignment of needs and services by identifying implementation issues and developing recommendations.

Improving Services, Saving Money

The pilot sites realized significant improvements on a number of important dimensions. MLDA revealed that only a small percentage (less than 20%) of children undergoing this assessment required more extensive evaluations. Eighty percent of children could be enrolled immediately in various development promotion and mental health programs that were readily available. Just about all of the children referred on to more extensive evaluations, qualified for services with stringent eligibility criteria.

In addition to more timely enrollment in intervention services and more efficient use of extensive evaluation resources, MLDA cost data suggest that this approach can save an average of $540 per child, compared to use of full evaluation resources after screening. Accounting for the fact that MLDA would refer an estimated 20% of children for full

evaluation, this represents a 42% cost savings relative to current assessment and evaluation costs.

Creating a Sustainable MLDA System
Pilot program results strongly favor rapid dissemination of MLDA. In addition, experience in the three different clinical settings led to a number of recommendations that address coordination, staffing capacity/competence and reimbursement issues:

- Integrate MLDA with other child assessment service systems to ensure the efficiency in early identification.
- Structure payment for MLDA services to reflect the time, staff and expense of assessments as well as care management that connect children to further evaluation or intervention services.
- Coordinate assessments, recommendations and services across providers of both primary care and development/behavioral health services.
- Monitor MLDA results and outcomes to inform state policy discussions, particularly on the subject of school readiness.
- Evaluate MLDA as a potential model to address adolescent socio-emotional development and substance use concerns to allow expeditious intervention before symptoms escalate.

MLDA represents an innovation that has shown considerable promise in terms of improved experiences for children and families, efficient use of scarce specialist resources and lower costs across the health care system.

The IMPACT may be downloaded from our website: www.chdi.org/assessment-impact. For a printed copy, please contact Cindy Langer, langer@uchc.edu.

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Medical Homes: The Transformation of Pediatric Primary Care in Connecticut

Pediatric primary care providers in Connecticut are at a crossroads. A "medical home" model of care is steadily transforming health care statewide. Most providers recognize the medical home model can improve outcomes for their patients; but the road to becoming a medical home is costly, both in terms of time and dollars, and sometimes prohibitive for small practices. This Issue Brief summarizes recent policy changes in Connecticut regarding Person Centered Medical Homes (PCMH) and outlines supports for practices transforming to medical homes.

Why Medical Home?

Pediatric primary care providers can make a much greater contribution to children's healthy development by adopting a medical home model of care. A "medical home" is an accessible and family-centered primary care practice that is well coordinated with medical and community services that children need. To be recognized as a Person Centered Medical Home (PCMH) in Connecticut, providers need to meet practice standards from the National Committee on Quality Assurance (NCQA) in the following areas:

1. Enhancing access to and continuity in services
2. Identifying and managing at-risk patients
3. Planning and managing care for patients
4. Providing patients with self-care support and access to community resources
5. Tracking and coordinating care
6. Measuring and improving performance

Connecticut's Transformation: Managed Care to Medical Home

Connecticut has become a national leader in promoting the PCMH model of care as the optimal health care delivery system for children. **In January 2012, Connecticut was the first state to implement a statewide medical home system through Medicaid.** Governor Malloy called for a reorganization of HUSKY from a managed care system to a PCMH or "medical home" model.

Connecticut's medical home program provides increased Medicaid payments to primary care providers who achieve NCQA medical home recognition. Private insurers, including Aetna and CIGNA, have stated their intention to follow suit and restructure payments to support a medical home system of care in the coming years.

The change to a medical home system reflects the needs of children and the child health providers who care for them. The Department of Social Services (DSS) undertook an extensive planning process to encourage a wide range of provider and family input into the new system. CHDI convened pediatric providers to ensure that their concerns were addressed in the support plan including in the selection of pediatric performance measures. To assist practices in obtaining medical home recognition, DSS created an 18-month glide path program with structured steps for meeting NCQA medical home standards. Practices can receive enhanced payment and start-up funding for participating in the glide path program.

Addressing Challenges for Child Health Providers

Pediatric providers, particularly those in small independent practices, face several challenges in obtaining NCQA medical home recognition. The two most pressing concerns include a lack of electronic health records and a lack of care coordinators on staff in their practices. Several hospital and medical society initiatives are underway in Connecticut to assist practices in implementing electronic health records systems. CHDI is working to address the care coordination challenge.

CHDI has been instrumental in linking the state's Title V Children and Youth with Special Health Care Needs (CYSHCN) Medical Home Initiative through the Department of Public Health to other care coordination opportunities in the state, including Community Health Network, the HUSKY administrative

services organization. As part of this effort, United Way's 211 Child Development Infoline is leading a regional care coordination collaborative in Hartford, with a plan for replicating this model statewide.

In addition to the system building work, CHDI provides direct support to pediatric practices on a range of medical home topics through our EPIC (Educating Practices in the Community) program. Using EPIC, a free academic detailing program, we help providers access care coordination for their patients, implement family centered care, incorporate developmental surveillance and screening in their well child services, and address behavioral health concerns.

The Right Path

Connecticut is clearly on the right path. **Since the policy changes took effect January 2012, DSS has approved more than 100 practices (including almost 500 providers) as medical home providers in Connecticut.** Another 79 practices have applied for the state's glide path option to receive help in becoming a recognized medical home. Hundreds more are making practice changes to enhance the scope of their care, such as incorporating developmental screenings or other key components of the medical home model.

CHDI has helped nearly two-thirds of Connecticut's pediatric practices with change strategies through EPIC. This has contributed to a nearly seven-fold increase in the number of children who are screened for developmental and behavioral health issues in Connecticut since 2008. CHDI has also developed innovations that support providers in implementing the medical home model of care. These include:

- Integrating behavioral health and primary care
- Universal developmental screening in pediatric primary care (EPIC)
- Mid-level assessment as an immediate follow up to screening
- Co-management between primary care and subspecialty services
- Models of care coordination to ensure linkages to services

These innovations will contribute to better patient outcomes and experiences, as well as a more efficient health care delivery system.

To learn more about CHDI's work, visit www.chdi.org. To arrange a CHDI EPIC presentation, contact Maggy Morales at mamorales@uchc.edu or sign up online at: EPIC.

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