AAP Neuromotor Screening Project Final Report

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Project Background

Through a cooperative agreement with the Centers for Disease Control and Prevention (CDC) the American Academy of Pediatrics (AAP) conducted a Quality Improvement and Innovation Network (QuIIN) project based on the Neuromotor Screening clinical report and algorithm: Motor Delays: Early Identification and Evaluation. An expert panel had completed authorship of the clinical report and algorithm which was published in Pediatrics. The QuIIN project followed the Institute for Healthcare Improvement Web&Action model, incorporating educational Webinars with action plans and discussion/feedback by project participants.

Scope/Objective

The objective of this scope of work was to conduct a QuIIN project that would determine if physicians were able to follow the algorithm and whether the algorithm helped them to accurately identify children with motor delay.

Method: IHI Web & Action Model

- Three 45-minute Webinars – six-weeks apart started last spring
  Webinar agenda: review prior action period results (webinars 2 & 3), receive education on topic, and review template action plan for next action period and next steps
- Following each Webinar, the participants implement/test the action plan and complete a brief survey

Activities

The recruitment phase of the project resulted in 14 sites in 11 states signing up. During the first half of the project 12 of those teams participated actively. Participation dropped off during the second half of the project and by the final Webinar only six teams attended and seven teams completed the Post Project Survey.

Five webinars were held including the orientation and closeout webinars, and 3 educational webinars by expert faculty including:
- March 27th by Dr Garey Nortiz on Clinical Report and Algorithm – Overview and Integration into Practice
- May 8th by Dr Max Wiznitzer on Neurologic Exam ad Related Tests.
- June 27th Patient Care if Motor Delay Is Identified by Dr. Dipesh Navsaria

For each webinar an Action Plan was developed detailing step by step activities for teams to follow to make practice changes related to the topics presented. After the teams completed these activities the follow up post Action Period survey was completed. Results were shared on subsequent webinars.

A project listserv was utilized with mixed results. Participant feedback at the project start about the burden of additional emails seemed to derail the sharing across teams using this communication tool. Attempts by faculty to “seed” the listserv with questions to prompt sharing were largely unsuccessful.
The listserv was useful for the frequent reminder emails were sent to keep participants focused on recommended deliverables and due dates.

At project start an embargoed copy of the guidelines and algorithm was shared with teams and on May 27, 2013 Motor Delays: Early Identification and Evaluation was published online in Pediatrics and disseminated to all teams.

Results

Pre Survey Results
Like many QI projects our participants began with the perception that care was being provided appropriately at their practice. At the project start 83.3% of the 12 responding providers who completed the survey reported they were routinely performing exams on all infants; and that number increased to 91.7% for infants with known risk factors. Similarly 83.3% reported they were performing a neuromotor exam as recommended in the algorithm when a motor concern is identified in their practice.

Mid-Point Survey Results
Midway through the project three specific areas of confusion/concern on the algorithm were identified by the 10 team(s) and addressed by faculty including:

a) Step 3a and 3b: reportedly was confusing; “unless screening tool (3b) is specifically for neuromotor delay, devl surveillance (3a) for motor delay (bright future) is more detailed.

b) Step from #4 to #5b – “it depends on what screening tools used; bright futures motor surveillance is more detailed than PEDS which we use in our clinic.

c) The role of MRI for all children with high tone especially in children such as very early/extremely low birth weight preemies where an etiology is suggested/expected by history.

End of Project Survey Results

At the project end ratings on the two key questions were similar to the findings at project midpoint (Table 1), however only 7 providers completed the survey:

a) the steps in the Identifying Children with Motor Delays algorithm for surveillance and screening are clear and concise summaries of how clinicians should proceed, and

b) “recommendations and key points in the Identifying Children with Motor Delays algorithm surveillance and screening are explicit and should be followed by primary care providers.
Addition survey results reported included:

2/7 teams reported practice changed process or written protocols for performing developmental surveillance. One team added a 4 year ASQ and another a more detailed exam and earlier referral.

6/7 teams reported practice changed process or written protocols for screening for motor delays. One team added a 4 year ASQ. One reported doing a more detailed exam. A third team changed/added timing of ASQs.

0/7 practice changed process or written protocols for documenting family history during Bright Futures health supervision visits (well child visits).

4/7 Based on the Clinical Report: Motor Delays: Early Identification and Evaluation, has the practice changed process or written protocols for scheduling patients to come back early if a concern was identified?

1/7 As a result of your participation in the Putting Neuromotor Screening into Practice QuIN project, did you find any gaps in your ability to deliver coordinated care?

When asked to comment on any difficulties experienced in implementing the steps in the algorithm in the practice the answers included:

- Identifying the issues at 2 months vs. waiting and furthering services
- Getting patients into pediatric neurologist on a timely basis
- No MRI approvals
- MRI prior authorization
6/7 teams reported that when a motor concern is identified they are performing a neuromotor exam as recommended in the algorithm.

For infants under 12 months:
- 6/7 teams reported a neurologic exam part of the standard of care (routine)
- 6/7 teams reported a neurologic exam is routine for infants with a known delay
- 7/7 teams reported a neurologic exam routing for infants with a known risk (e.g., preterm, genetic disorder)
- 7/7 is a neurologic exam routine for infants with parental concerns

When asked about Children with Motor Delays/Concerns being referred for services participant reported using all services.

When asked if they were able to identify more children with motor delay earlier than before participation in this QuIN project 3/7 replied yes

5/7 providers reported using the Ages and Stages Questionnaire as a general developmental screening tool.

When specifically asked about using the Identifying Children with Motor Delays algorithm for surveillance and screening:
- 3/4 reported they were better able to facilitate referrals to specialty care.
- 1/7 implemented changes to their clinical practice and management of children with developmental delays upon implementation of the algorithm
- 1 already had program in place for referral
- 1 reported they were already doing ASQ at all well child checkups but the neuromuscular exam is more detailed now

When specifically asked about implementing any changes to office procedures using the Identifying Children with Motor Delays algorithm, providers replied:
- Already in place - however need to implement with other practitioners.
- Added electronic referrals to PIE program

6/7 reported they did not find any gaps in their ability to deliver coordinated care as a result of participation in the Putting Neuromotor Screening into Practice QuIN project. One provider commented “watched the videos - but it still wasn’t completely clear as to how to document and move forward with the protocol”.

One team reported that they “did not find very helpful, could have just read the clinical report. we are using the pictures of normal and abnormal de vel for resident education.”
**The Web & Action Model**

Results of 4 survey questions about the model are included in the graph below:

![Survey Results Graph](image)

Although most feedback was positive to questions about the Web in Action Model, one response for 3 of the 4 questions was “somewhat disagree”. There were no comments noted for this question but we suspect that one provider was responsible for these 3 replies.

The question about the project website “Project Web site provided appropriate background and ongoing project updates” most likely indicates providers didn’t use it or it could be improved. Participation data from the web vendor might be able to differentiate that.

The timing interval between webinars was reported as both too long and just right by 3 teams each (43%), with one of the three teams who rated it as too long, noting that they “started ahead of other teams”. One team (14%) thought the timing interval was too short.

100% (5/5) teams rated the AAP Project Staff and QI support “just right” with commendations for Jill Healy: “Jill Healy was excellent, always providing ready and helpful answers in a timely manner.” One additional comment suggested that “perhaps - specific parameters for referral would have been helpful”

**Summary**

**Successes**

At project end the key learning was that 6/7 teams found the steps in the Identifying Children with Motor Delays algorithm for surveillance and screening were clear and concise summaries of how
clinicians should proceed, and “recommendations and key points in the Identifying Children with Motor Delays algorithm surveillance and screening were explicit and should be followed by primary care providers. Only one team reported they were “neutral” about both of the above, and were not following the guideline recommendations. This suggests that the Guidelines and Algorithm have met the intended purpose.

Challenges and Limitations
Challenges similar to those experienced by many QI projects including scheduled time of calls, physician turnover, insufficient staff support due to other ongoing projects were all reported. The drop off in participation in the project over the summer was significant, but it perhaps had a larger impact because the participating cohort was smaller than most projects from the beginning.

Ongoing lack of access to pediatric neurology specialty care is not unique to this condition and is a challenge that requires ongoing attention and improvement efforts. Similarly Referral to Early Intervention, Early Childhood Education and other support services is also a problem. On the final survey nearly 60% of teams reported they were not able to facilitate referrals according to the algorithm for surveillance and screening. At project close it was unclear if participants felt these issues were resolved and some concerning replies on the final survey suggest perhaps not, as at least one team is not following the guideline recommendations.

Recommendations
Challenges reported but unresolved need further attention if the implementation of the guideline will spread across the country. The first three recommendations were included in the interim report but continue to be important, others added.

1. The use of the Walkthrough Exercise in Action Plan One was informative and helped teams identify opportunities for improvement including process changes to reduce variation and improve reliability. That type of simulation should be recommended to practices initiating efforts to use the guidelines and implement the algorithm in practice.

2. AAP should work to develop a list of electronic fields to help incorporate steps in the algorithm into decision tree steps for provider prompts and documentation. These could be collected from the current practices and expanded with additional IT knowledge expert support. Having a “data dictionary” would facilitate teams making edits to their existing EHRs.

3. Solving health related social service problems patient’s face and the lack of adequate access to specialty practices and other community resources are common in specialty focused project like this. Of course this is also outside the scope of this project to change, although with continues support these pilot sites should be able to manage patients more appropriately in their practice and assure referrals are being made for the patients for whom they are necessary.

4. Challenges reported with MRI approval by 2/7 sites suggest working with Medicaid and private insurance providers to facilitate timely authorization for this procedure as part of the optimal care will be necessary as the guideline is implemented nationally.

5. The Web in Action Model was successful and although participants varied on questions about the length of the f Action Periods, keeping it at 6 weeks or decreasing it only slightly (5 weeks) should work for all. Alternately a survey at project start indicating team preference might be preferred. It is
hard to determine what the next cohort would prefer since in our final survey with only 7/12 teams responding could be used since in this project the teams were split between suggesting the interval was right and indicating it was too long or short (43% vs 57%). If future projects decree a more rapid project timeline, a 4 week interval would likely be just as successful. Recording the webinars is important as this offers very busy providers options to view content on days off or down time, and it also increased the reach and impact of the training by allowing more providers in the office access to the content.