Gateway to Care CHIP Education Project Evaluation

A Report for the
Texas Health and Human Services Commission and
Gateway to Care

Prepared by

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Gateway to Care CHIP Education Project Evaluation

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Introduction

The Gateway to Care (GTC) CHIP Education Project provides peer-to-peer advisors known as Navigators to assist clients in the greater Harris County area to identify and obtain health care safety net services. GTC and the Texas Health and Human Services Commission (HHSC) designed and implemented a pilot program in which Navigators were paid to provide education services to Children’s Health Insurance Program (CHIP) clients who were referred by CHIP health plans and new CHIP enrollees referred by HHSC. The University of Texas School of Public Health in Houston (UTSPH) worked with the GTC CHIP Education Project and HHSC to determine if pilot participants were satisfied with the navigation services, whether they acknowledged use of a medical home subsequent to receiving navigation services, and whether the program had an impact on patterns of care and costs.

GTC Navigation Services

Since January, 2006, state-certified community health workers, or Navigators, have been employed by GTC, full-time, to provide navigation services to CHIP families. Navigators have assisted CHIP-enrolled families in identifying and accessing healthcare services at the appropriate level of care by:

- Educating clients on the importance of identifying and using a permanent medical home.
- Assisting clients in obtaining social services and other community resources that could have a positive influence on health care utilization.
- Assisting clients in the development of preventive healthcare plans.
Families who received navigation services were referred from five contracted CHIP health plans serving Harris County using different referral criteria and in March 2008 HHSC began to refer new CHIP enrollees. Some plans made no referrals during the pilot period. Some plans referred families based on multiple emergency department (ED) visits by a child, inappropriate ED usage, or multiple sibling’s multiple visits to the ED. Some plans referred clients whose enrollment was soon to expire or were having re-enrollment problems.

Navigators interviewed each family by phone (or occasionally in person) in order to help them understand their options for accessing health care and utilize CHIP benefits in a more effective manner. In addition, Navigators worked with the families to determine and understand their health care needs and to analyze the reason they were not utilizing health care services appropriately or were having enrollment problems. If disease management issues were identified, the family was referred to the appropriate health plan’s patient education and case management staff. By the end of the interview, each family had a completed Family Health Care Plan, which documented health care services each family member had access to and when enrollment of each family member had to be renewed. In addition, a relationship was established with the families and contact information was shared so that clients could follow-up with the Navigator if they had further questions or problems.

Evaluation Objectives and Methods

The evaluation of navigation services provided to CHIP families had two objectives. The first objective was to conduct monthly surveys of families who had received services six months

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earlier to determine if they were satisfied with the services and if they were using their child’s primary care provider as a medical home. The second objective was to determine if clients who received navigation services had increased use of primary care and reduced use of the ED following receipt of navigation services.

Client Survey

Clients who received navigation services between the months of September 2007 through February 2008 were surveyed to determine client satisfaction and use of a medical home. For six months, beginning in March 2008, HHSC selected 100 CHIP enrollees who had received navigation services six months prior to the survey month. Contact information for these clients was given to UTSPH researchers who made up to four calls to each client to complete each interview.

The interview questionnaire contained eight questions (see Appendix). The first five questions asked about the health care use by the child and the remaining three requested information regarding navigation services. All personal information that was obtained on the clients was kept secure by the researchers and all identifying information was eliminated upon completion of the interviews. Survey data were analyzed for all respondents who were successfully contacted and completed the survey.

Impact on Services and Costs

Given the objectives of the program, we hypothesized that families receiving navigation services would increase their use of primary care services and reduce their reliance on hospital EDs. To test this hypothesis, the researchers designed the study to determine whether CHIP clients who received navigation services had increased visits to physicians and reduced ED visits compared to matched clients who did not receive such services.
CHIP billing data were obtained on a treatment group of children living in Harris County who were continuously enrolled in CHIP from 2005-2007 and received navigation services between the months of January and September of 2006, and a control group matched by age, gender, and ED visits in the pre-intervention period, who were also continuously enrolled over the same period. The number of physician office visits and ED visits were determined for each child for each year over the two-year study period using current procedural terminology (CPT) codes in accordance with the American Medical Association. Code numbers 99201-05, 99211-15, 99241-45, 99341-50, 99381-85, 99391-95, 99401-04, 99411-12, and 99426-29 were used to identify physician visits while codes 99281-85 were used to identify ED visits.

Pre-post physician visits, ED visits, and ED costs for the treatment and control groups were compared to test the hypothesis that service patterns and costs would improve for those receiving navigation services.

In order to be included in the treatment group, an individual had to be:

1. Continuously enrolled with the CHIP program for a one year period pre-navigation services and a one year period post services. Continuous enrollment was defined as not having more than two gaps in enrollment of up to 45 days during the specified time period.

2. Served by a Navigator between January 2006 and September 2006; and

3. A resident of Harris County throughout the study period.

In order to be included in the control group, an individual had to be:

1. Continuously enrolled in CHIP for a two year period with program start or renewal dates prior to September 2005.

2. Not served by a Navigator

3. A resident of Harris County throughout the study period.

4. Have age, gender and first 12 month ED visits that match a treatment group individual.
Differences in ED visits, physician visits and costs from the pre-navigation services year to the post-navigation services year were calculated for the treatment group. The same was done for the first and second 12-months of the control group. Differences in the year-to-year changes were compared to determine the impact of the program.

Results

Survey

Out of all CHIP families that received navigation services between the months of September 2007 through February 2008, 600 were randomly selected to be contacted for interview and 240 were successfully contacted. The following is a summary of the findings. The results for each question are listed separately in the Appendix.

Medical Home

- 89% (213) of those contacted reported that their child was still enrolled in CHIP and of those enrolled in CHIP 91% (194) reported using and/or having a primary care provider as a medical home for their child.
- 78% (165) of those enrolled in CHIP indicated their child had seen a doctor, nurse or other medical provider in the last six months.
- Only 1% (1) of those children who obtained services went to the ED for care, while 93% (154) used their child’s PCP.
- 83% (40) of those who were enrolled in CHIP and did not use medical care indicated their child had a PCP. Out of eight families whose child did not have or use a PCP, only two indicated it was due to a problem of access.
Program Satisfaction

- 25% (54) of families contacted remembered their encounter with a Navigator. That figure rose to 30% (42) among those who were contacted and prompted about the program.
- Of those who remembered their encounter with a Navigator, 83% (45) indicated the encounter helped a lot.

Services and Costs

CHIP claims and enrollment data from January 2005 through September 2007 was used to determine the impact of the program on services and costs. These data were examined for the 770 CHIP children who received navigation services during January 2006 through September 2006. About one third (258 out of 770) met the inclusion criteria of being Harris County residents continuously enrolled over the two year study period and were selected as the treatment group. From the sample of 9,000 CHIP enrollees from Harris County who did not receive navigation services between January 2006 and September 2006, only 1,696 (19%) were determined to meet the inclusion criterion of being continuously enrolled. From this population, 258 participants were selected as the control group who matched the treatment group as closely as possible in terms of pre-intervention ED use, age, and gender in descending order of importance. Table 1 shows the age and gender characteristics of the two groups.
Table 1. Characteristics of Treatment and Control Group

<table>
<thead>
<tr>
<th></th>
<th>Treatment</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-1</td>
<td>5 (1.9%)</td>
<td>5 (1.9%)</td>
</tr>
<tr>
<td>2-9</td>
<td>100 (38.8%)</td>
<td>97 (37.6%)</td>
</tr>
<tr>
<td>10-17</td>
<td>153 (59.3%)</td>
<td>156 (60.5%)</td>
</tr>
<tr>
<td>Mean</td>
<td>10.29 years</td>
<td>10.35 years</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>109 (42.2%)</td>
<td>110 (42.6%)</td>
</tr>
<tr>
<td>Male</td>
<td>149 (57.8%)</td>
<td>148 (57.4%)</td>
</tr>
</tbody>
</table>

ED use declined in both the treatment and control group over the study period (Table 2 and Figures 1-3). However, the decline in ED use in the treatment group was twice as much as in the matched controls (66% versus 33%) and the difference was statistically significant at the 10% (p=0.07) confidence level. Physician visits also decreased slightly for both groups and pre-post differences were not significant. ED costs fell in the treatment group by almost $40 per person (79%) but also declined by $16 for controls (a 50% reduction). The net difference was a $24 decrease in ED costs per person in the treatment group which translates into an estimated cost savings of $18,480 for the 770 clients receiving navigation services from January through September 2006.
Table 2. Use and Cost of Services of Treatment and Control Group

<table>
<thead>
<tr>
<th></th>
<th>Treatment Group (Number of Visits/Child)</th>
<th>Control Group (Number of Visits/Child)</th>
<th>P-value Comparing Treatment and Control groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>ED Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-intervention</td>
<td>0.42</td>
<td>0.36</td>
<td>0.49</td>
</tr>
<tr>
<td>Post-intervention</td>
<td>0.14</td>
<td>0.24</td>
<td>0.09</td>
</tr>
<tr>
<td>Pre-Post Change</td>
<td>-0.27*</td>
<td>-0.13</td>
<td>0.07</td>
</tr>
<tr>
<td>Physician Use</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-intervention</td>
<td>3.36</td>
<td>2.80</td>
<td>0.03</td>
</tr>
<tr>
<td>Post-intervention</td>
<td>3.05</td>
<td>2.61</td>
<td>0.19</td>
</tr>
<tr>
<td>Pre-Post Change</td>
<td>-0.30</td>
<td>-0.18</td>
<td>0.69</td>
</tr>
<tr>
<td>ED Cost</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre-intervention</td>
<td>48.95</td>
<td>30.88</td>
<td>0.18</td>
</tr>
<tr>
<td>Post-intervention</td>
<td>10.44</td>
<td>15.34</td>
<td>0.24</td>
</tr>
<tr>
<td>Pre-Post Change</td>
<td>-38.50</td>
<td>-15.54</td>
<td>0.10</td>
</tr>
</tbody>
</table>

* Negative number represents a decrease in use and cost in the post period.

Figure 1. Pre-Post ED Visits of Treatment and Control Groups
Conclusion/Discussion

In Harris County, as in many other communities around the country, a number of strategies are being implemented by individual providers, provider groups, and managed care plans to improve the quality and continuity of primary care in Medicaid, CHIP, and uninsured
populations by increasing the use of medical homes and reducing reliance on the hospital ED for non-emergent reasons in Medicaid, CHIP, and uninsured populations. Strategies include community education, nurse-operated telephone triage, after-hours primary care, case management, and urgent care centers.\textsuperscript{1,2}

The GTC CHIP Education Project was successful in achieving client satisfaction with almost 85% of the 25% who remember having been served indicating the service helped a lot. Almost 91% of navigation clients surveyed also acknowledged six months after receiving navigation services that their child had a primary care provider as a medical home. The goal of achieving an increase in physician use was not reached by the intervention. However, a decrease in ED visits and costs did occur. While ED visits and costs declined in both groups after the intervention, a sharper drop was seen in the treatment group. The reduction in ED costs in the first year did not cover the expense of the program. At a cost to Texas CHIP of $77.65 per family (the payment made to GTC for each Navigator encounter), the GTC CHIP Education Project led to a net decrease in ED costs of $24 in the treatment group compared to the control group, or a savings of about $18,480.

The findings are consistent with other studies of ED diversion initiatives reported elsewhere.\textsuperscript{3-8} The effectiveness of the program might be enhanced by the use of a more strict and standardized referral criterion to identify and more precisely target the frequent ED user population for the intervention, such as predictive modeling. In addition, counseling specific to appropriate ED use might be added to the intervention that includes written information to parents on what to do when their child gets sick.\textsuperscript{9} Other modifications, such as more encounters with the Navigators, may be needed to increase effectiveness.
This pilot study had several limitations. For instance, the treatment group consisted of participants who received navigation services only during the first nine months of the program. During this period, the logistics of the intervention were still being modified to maximize its efficiency so the data analyzed could misrepresent its full effect. In addition, we were not able to find identical matches for each member of the treatment group. We were also not able to measure primary care physician visits separately from other physician visits and non-emergent ED visits from other ED visits in the CHIP billing data. The billing data reflects only those claims that were paid by HHSC and not all the services that were actually billed by the health plans so the analysis may not capture all services received by the clients. The results may not be generalized to populations outside of Harris County or to other navigation services programs.
References


Appendix: CHIP Education Project Survey Questionnaire and Results

Client Name _________________________________

CHIP ID#       ___________________

Hello, my name is _________________, and I'm calling on behalf of the Gateway to Care CHIP Education Project and the Texas Health and Human Services Commission.

May I speak with the parent or guardian of (insert child's name)?

(Repeat first sentence with parent/guardian or continue if you are talking to parent/guardian.)

I'd like to conduct a short survey with you about the services you get through the Texas Children's Health Insurance Program or CHIP.

SCREEN 1. Is (child's name) still in Texas CHIP?

Yes (go to SCREEN2)

No (go to EXIT 1))

EXIT 1. OK. Thanks very much for your time. (Terminate interview.)

SCREEN 2. This survey will take about five minutes. Do you want to start now?

(IF NOW IS NOT A GOOD TIME, schedule a time to call back that is convenient for the interviewee. IF NOW IS A GOOD TIME, continue.)

Before we begin, I need to tell you that you do not have to take this survey. Nothing will happen to your CHIP benefits, or any other benefits, if you do not take this survey.

IF RESPONDENT IS UNWILLING TO PARTICIPATE AT ANY TIME, thank him/her for their time.

The survey questions ask about your child’s use of health care in the past six months. Do not include care your child got when he or she stayed overnight in a hospital. Do not include the times your child went for dental care visits.

1. In the past six months, has your child seen a doctor, nurse, or other medical health care professional, including for doctor appointments, well-child checkups, or physical exams, or has your child visited the emergency room, a health clinic, or an outpatient hospital department?

☐ Yes (go to 2)

☐ No (skip to 4)

☐ Don’t know (skip to 4)
4. Refused (skip to 4)

2. In the past six months, what kind of place did your child go to most often for health care?
   1. Clinic or health center (If checked, go to 3)
   2. Doctor’s office or HMO (If checked, go to 3)
   3. Hospital emergency room (If checked, skip to 5)
   4. Hospital outpatient department (If checked, skip to 5)
   5. Some other place (specify _____) (If checked, skip to 5; however, if respondent answers, “the child’s primary care provider or PCP,” go to 3 and check “yes,” then skip to 6)
   6. Doesn’t go to one place most often (If checked, skip to 5)
   7. Don’t know (If checked, skip to 6)
   8. Refused (If checked, skip to 6)

3. Is the doctor or place, your child’s primary care provider or PCP?
   1. Yes (skip to 6)
   2. No (skip to 5)
   3. Don’t know (skip to 6)
   4. Refused (skip to 6)

4. Does your child have a primary care provider or PCP?
   1. Yes (skip to 6)
   2. No (skip to 5)
   3. Don’t know (skip to 6)
   4. Refused (skip to 6)

5. Why doesn’t your child go to a primary care provider or PCP (check all that apply)?
   1. I can’t find a doctor who accepts my child’s insurance
   2. Doctors are not available in my area.
   3. I have problems with transportation.
   4. I can’t get through to the doctor’s office on the phone.
   5. Appointment times are not convenient.
   6. I can’t get an appointment soon enough.
   7. Once I was at the office, the wait was too long to see the doctor.
   8. I am dissatisfied with my child’s doctor.
   9. My child sees several doctors for multiple needs.
   10. I don’t know who my child’s primary care provider is.
When I contacted the doctor’s office, I was told to go somewhere else.

Other, specify ____________.

The next few questions are about Gateway to Care, a group that provides parents with information about how to use Texas CHIP.

6. Do you remember getting a phone call from someone or talking in person to someone from the Gateway to Care CHIP Education Project about how to get health care for your child?

Yes

No (skip to Exit 2)

Refused (skip to Exit 2)

7. How much did the call help you learn how to get health care for your child?

Not at all

A little

A lot

Don’t know

Refused

8. After talking to that person from Gateway to Care, are you more likely to use your child’s primary care provider or PCP rather than other types of providers, like the emergency room?

Yes, more likely to use a primary care provider or PCP

No, not more likely to use a primary care provider or PCP

Don’t know

Refused

Exit 2. Thank you for taking this survey. Your responses will help us understand more about the health care children need and get through the Texas CHIP program. (Terminate interview.)
Survey Results

Screen 1:  Is *(child's name)* still in Texas CHIP?

Yes = 213 (89%)
No = 16 (7%)
Don’t Know = 11 (4%)

Question 1: In the past six months, has your child seen a doctor, nurse, or other medical health care professional, including for doctor appointments, well-child checkups, or physical exams, or has your child visited the emergency room, a health clinic, or an outpatient hospital department?

Yes = 165 (78%)
No = 45 (21%)
Don’t Know = 3 (3%)

Question 2: If doctor visit in last 6 months, what kind of place did your child go to most often for health care?

Clinic or Health Center = 84 (51%)
Doctor’s office or HMO = 80 (48%)
Hospital Emergency Room = 1 (1%)

Question 3: If doctor visit in last 6 months, is the doctor or place, your child’s primary care provider or PCP?

Yes = 154 (94%)
No = 10 (6%)

Question 4: If no doctor visit/don’t know, does your child have a primary care provider or PCP?

Yes = 40 (83%)
No = 6 (13%)
Don’t Know = 2 (4%)

Question 5: Why doesn’t your child go to a primary care provider or PCP? (if Question 4 No or Don’t Know) Reasons provided by participants who responded “other”:

2 missing data.
1 She has not been to a doctor in Texas since she moved from another state.
1 Haven't seen a doctor yet.
1 I can’t find a doctor who accepts my child’s insurance.
1 Doctor moved and she hasn't found one nearby.
1 Not sure
1 When I contacted the doctor’s office I was told to go somewhere else.
Questions related to navigation services.

Question 6: Did you or anyone in your household talk to someone from the Gateway to Care CHIP Education Project, either on the phone or in person, about your child's CHIP benefits? (The following was added beginning the third month [May] of interviews.) “They might have talked to you about seeing your PCP on a regular basis, coverage for dental and vision care, when to take your child to the emergency room or how to contact a nurse directly when you need one."

Yes = 54 (25%)
No = 159 (75%)

The table below shows how the monthly figures were affected by the change in this question.

<table>
<thead>
<tr>
<th>MONTH</th>
<th>YES</th>
<th>NO</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>March</td>
<td>4</td>
<td>28</td>
<td>32</td>
</tr>
<tr>
<td>April</td>
<td>8</td>
<td>35</td>
<td>43</td>
</tr>
<tr>
<td>May</td>
<td>4</td>
<td>20</td>
<td>24</td>
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<tr>
<td>June</td>
<td>14</td>
<td>28</td>
<td>42</td>
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<tr>
<td>July</td>
<td>15</td>
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<tr>
<td>August</td>
<td>9</td>
<td>24</td>
<td>33</td>
</tr>
<tr>
<td>TOTAL</td>
<td>54</td>
<td>159</td>
<td>213</td>
</tr>
</tbody>
</table>

Question 7: If yes, how much did the call help you learn how to get health care for your child?

Not at all = 0 (0%)
A little = 9 (17%)
A lot = 45 (83%)
Don’t know = 0 (0%)

Question 8: After talking to that person from Gateway to Care, are you more likely to use your child’s primary care provider or PCP rather than other types of providers, like the emergency room?
Yes, more likely to use a primary care provider or PCP = 44 (82%)
No, not more likely to use a primary care provider or PCP = 6 (11%)
Don’t know = 4 (7%)