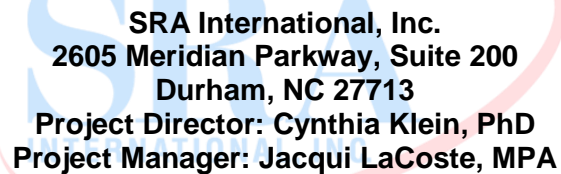




# **Welcome Home Baby**

## **Year 1 Evaluation Report**

Submitted By:



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## 1 Executive Summary

The Welcome Home Baby (WHB) program, developed in response to a need for a consistent and universal entry point to the early childhood system in Kent County, serves as a primary gateway for families of newborns to access a wide variety of community services and information. The effort is a broad partnership that includes local health systems and service providers. WHB is expected to lead to better coordination and alignment of existing childhood programs, increased initiation of a medical home early in life, lower incidence of ED use and hospital re-admittance, and identification and referral to appropriate community services with favorable outcomes.

This report represents the findings from the first full year of the project (July 2010 through June 2011) and is based on the WHB Evaluation Plan developed collaboratively with First Steps. It serves as a baseline on which to build a system of services.

Highlights of Year 1 evaluation findings include:

### Program Data and Population Served

- WHB hospital liaisons made 2052 visits with families at hospitals during Year 1
- The program successfully conducted nurse home visits with 85% of those families that accepted services in the hospital.
- WHB provided home visits for 853 families and 862 newborns (larger number of newborns due to multiple births) across Kent County.
- Approximately 16% of the families served had a teenage parent and 41% of mothers served had a high school education or less indicating WHB is serving a high-needs population. Furthermore, 57% of nurse home visits were conducted with families whose newborn was enrolled in Medicaid.

### Program Outputs and Outcomes

- Client feedback on the nurse home visit was positive, with 99% of clients<sup>1</sup> reporting the nurse provided them useful information on their own and their newborn's health
- During the home visits, WHB made 1308 referrals to partnering referral agencies
- The program came very close to meeting its goal of 95% of clients taking their newborn to an initial medical home visit within 5 days of life, with 85% of families served in Year 1 reporting taking their newborn to the primary care provider within the first 5 days.
- Newborn emergency department visits and hospitalizations within 30 days of birth were low (15% ED; 1% Hospitalizations)
- Approximately 63% of referrals resulted in families accepting services of the partnering referral agencies

### Program Impacts

WHB impacts were evaluated from staff, partnering referral agencies, and client perspectives.

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<sup>1</sup> Clients completing client satisfaction survey

- Staff members provided numerous real-world examples of successfully helping parents get their child to a first doctor's appointment and providing other reassurance to parents that directly impacted a child's health in the first days of life.
- Approximately 75% of referral partners felt that WHB serves as a gateway for families to early childhood services. Overall, referral partners indicated the referral process was a benefit (92%) to first-time mothers and mothers age 25 or less. They also felt that WHB staff were knowledgeable and referred families to the appropriate services (92%).
- Clients indicated the general knowledge they received during the nurse home visit helped them gain confidence in parenting.

Program improvements resulting from this evaluation include exploring strategies for improved client engagement, revising the WHB evaluation plan to assess more system-level and client outcomes (i.e., ED use), and working to establish data partnerships with hospitals to share outcome data and comparison group data.

## Introduction

Welcome Home Baby (WHB), developed in response to a need for a consistent and universal entry point to the early childhood system in Kent County, serves as a primary gateway to Kent County's early childhood system, connecting with new parents in the first days of their child's life. In order to be offered WHB services, a parent must be a Kent County resident, a first time parent (mother or father) or parent(s) ages 25 and under, or a first birth in the United States.

WHB is a universal and voluntary program that provides families with an opportunity for three touch points: an initial contact in the hospital, a visit in their home from a Maternal Child Nurse, and a 30-day phone follow-up. After conducting an extensive maternal-child health assessment, the nurse home visitor answers the new parents' questions about their babies and offers a menu of community services to the family. The nurse helps the family access the resources that best meet their needs.

WHB program activities launched on July 19, 2010. This report covers the period from program launch on July 19, 2010 through June 30, 2011, referred to in this report as "Year 1." WHB is a broad partnership that includes local health systems and referral partner agencies. Health systems that participated in Year 1 included the three local birthing hospitals: Saint Mary's Healthcare, Metro Health, and Spectrum Butterworth.

It is important to note that WHB was not implemented uniformly at partnering hospitals, rather WHB launched at Saint Mary's Hospital on July 19, 2010, Metro Health Hospital soon followed on September 7, 2010, and Spectrum Health launched on April 11, 2011.

To date, program staff includes: 12 pay-per-visit nurses, 1 full-time hospital liaison, 1 full-time and 1 part-time intake and referral specialist, 1 full-time clinical manager, 1 full-time hospital liaison supervisor, and 1 full-time program manager.

## 2 Evaluation Methods

The evaluation of WHB Year 1 is based on goals developed by WHB program management and staff. This evaluation seeks to assess the following program goals:

- WHB serves as a gateway for families to early childhood services, eg. Maternal Infant Health Program (MIHP) home visiting services
- Participant families (95%) take their newborn to an initial medical home visit within 5 days of life
- Participant families have a low incidence of ED use and hospital re-admittance
- Participant family needs are identified and referred to appropriate community services as agreed upon by the families
- WHB increases referrals into the early childhood services system

Evaluation data collected to evaluate these goals included both qualitative and quantitative data, as shown in the table below.

**Data Collection Year 1**

Collected by	WHB (nFocus)				SRA Evaluation Team			
Data Source	Program Services	Demographic/ Assessment	30-Day Follow-up (n=367)	Client Satisfaction Survey (n=140)	Hospital Partner Interviews (n=4)	Referral Partner Survey (n=13)	Staff Interviews (n=8)	Client Interviews (n=6)
Qualitative			X	X	X	X	X	X
Quantitative	X	X	X	X		X	X	X

WHB collected and stored services, demographic, assessment and follow-up data in the nFocus online database. The program conducts a 30-day phone follow-up interview with clients to offer further resource and referral options, and after the 30-day phone call mails each client a satisfaction survey that inquires about the usefulness of services and resources provided.

SRA, in collaboration with the WHB data coordinator, conducted descriptive statistics analysis on program services and demographic data and SRA analyzed assessment and services data to evaluate specific goals. In addition, SRA conducted the following evaluation activities and analyzed for qualitative findings:

### Hospital Partner Interviews

SRA conducted interviews with four program contacts at the local health systems where WHB was implemented – Spectrum (2), Metro (1) and Saint Mary’s (1) hospitals. WHB staff created interview questions for the contacts, then SRA emailed each contact to invite them to an interview. All contacts accepted. SRA interviewed administrators from each hospital and the program liaison from Spectrum during the week of August 22. (WHB staff act as the liaison at Metro and Saint Mary’s.) SRA asked hospital partners about their experience working with WHB staff, collaboration with WHB, challenges of implementation and their perception of the program’s effectiveness.

**Referral Partner Surveys**

Referral partners are those community services agencies that WHB refers families to after their home visit. SRA drafted survey questions to gauge how well the referral process is working, the effectiveness of communications with WHB and the partners' perception of WHB's overall effectiveness. SRA revised the survey based on feedback from WHB staff, then distributed it to each partner agency (13 total) using the Survey Monkey website on August 22.

**Staff Interviews**

SRA interviewed WHB staff to obtain feedback on the organization's perceived effectiveness and other topics. SRA drafted questions for review and revision by WHB staff. SRA interviewed all 8 WHB staff members by phone from late August to early September of 2011. Staff members were asked to use a conference room or another private location so that their responses remained confidential.

**Client Interviews**

SRA conducted individual interviews by phone with 6 mothers who were randomly selected by WHB staff. Interviews were held during the week of September 12, 2011. SRA asked mothers about their reasons for accepting a WHB home visit, their confidence in caring for their newborn, what they liked and did not like about the experience and their ideas for improving the program.

Demographic data points were collected from the program's start, but not all were entered into the nFocus database. Additional data collected was entered in the nFocus database during the second quarter of the project, including:

- Mother of the baby's education added
- Added 30-day follow-up call data
- Hospital visit liaison data added
- Language spoken by the mother of the baby added
- Name of the nurse conducting home visit added

### 3 Process Evaluation

The process evaluation of WHB looks at program data to assess service delivery. It focuses on the types of clients served, services provided, and referrals to community services. Finally, it allows WHB to verify what the program is and whether it is being implemented as designed.

In order to be offered WHB services, a parent must be a Kent County resident and first time parent (mother or father) or parent(s) ages 25 and under or a first birth in the United States. Keeping in mind the staggered implementation in the 3 community hospitals, during Year 1 a WHB home visit was offered to 1,405 eligible families in a hospital (overall across all hospitals).

#### Eligibility and Engagement

During Year 1, WHB provided nurse home visits to 853 parents and 862 babies (discrepancy in numbers indicates multiple births). As shown in Figure 1, the program successfully conducted nurse home visits with 85% of those families that accepted services in the hospital in Year 1.

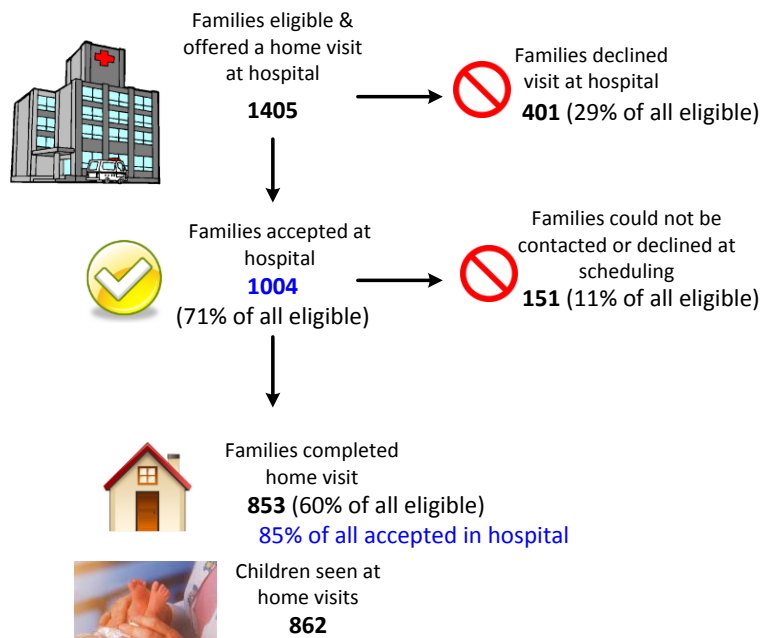


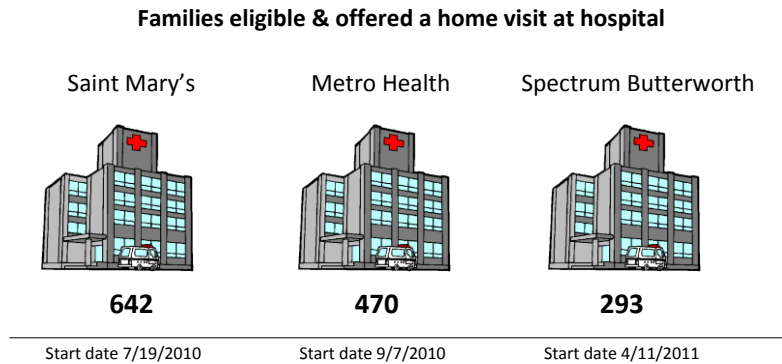
Figure 1

From the eligible population, 71% of families agreed to the home visit during their hospital stay. The most common reasons given for declining WHB at the hospital included:

- The mother felt like she had enough support with family, friends, doctor, etc. and did not need any services (most common reason)
- The family was already receiving home visits from a MIHP or other home visiting program
- The family did not like home visits or feel comfortable having someone come to their home

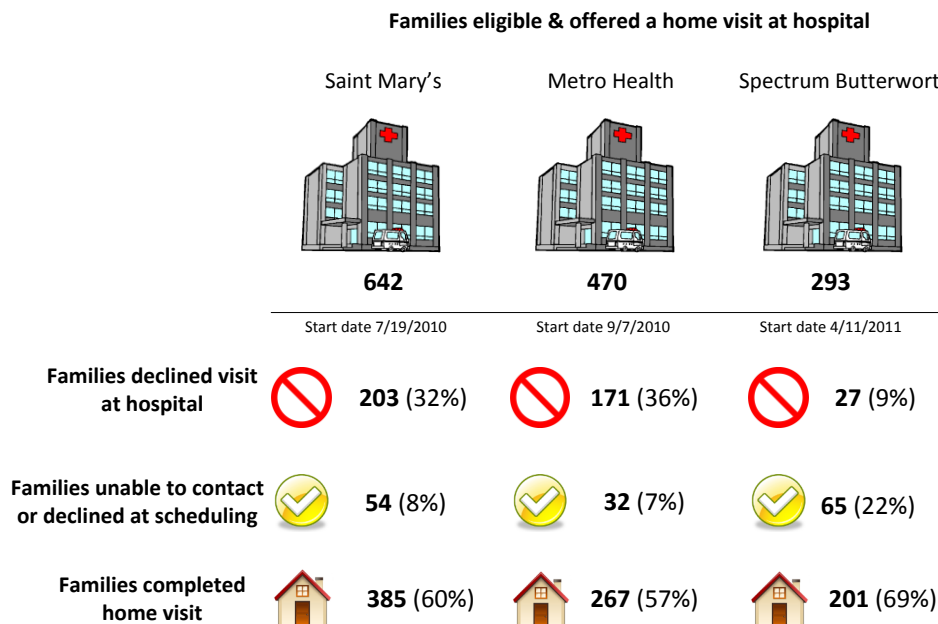
Following hospital discharge, WHB staff attempted to schedule the home visit by making up to 4 phone calls, and then sending a letter and/or email. Of those who accepted the WHB home visit, 85% completed the visit.

Parents can fall into more than one eligibility category, thus there is duplication when assessing categories of eligibility. For example, a first time parent may also fall into the category of teenage parent or parent ages 20-25. In reviewing the eligibility criteria for WHB program services, there were a total of 688 first-time parent families, 400 families with parents aged 20-25, and 96 families with teen parents (aged 19 and under). Figure 2 shows the distribution of families by hospital who were eligible and offered WHB services.



**Figure 2**

It is important to consider the eligibility numbers in the context of the start dates for each hospital. Saint Mary's Hospital was the only hospital to participate for the full term of Year 1. It is anticipated that the number of families eligible for services will increase from 1405 to approximately 2300 or greater, based on Year 1 totals. As shown in Figure 3, each hospital varied in their participation rates. For example, only 9% of families declined the home visit at Spectrum Butterworth, but 36% of families declined the visit at Metro Health. While families at Spectrum were less likely to decline during their hospital visit, they were more likely to be un-contactable or decline at a later date than the other two hospitals.



**Figure 3**

The program collected data around reasons for clients who accepted services in hospital, then ultimately declined services upon contact. The most common reason for decline (53%) was the program was simply unable to contact the clients. If staff was able to make contact, approximately 20% of clients who declined were not interested in services, 13% cancelled, 4% were not home/not found when a home visit was attempted, and 4% had already received another program’s home visit.

It is also important to consider the number of new families entering services. By program quarter, home visits increased markedly in the 4<sup>th</sup> quarter of Year 1 (total n=853):

- Q1 July-Aug = 15% (128)
- Q2 Sept-Dec = 22% (188)
- Q3 Dec-Mar = 18% (153)
- Q4 Mar-Jun = 45% (384)

**Additional Hospital Outreach**

WHB Hospital Liaisons made additional hospital visits at Saint Mary’s Healthcare and Metro Health Hospital to provide information and services to families who were not eligible because they resided outside Kent County. During Year 1, an additional 357 families who reside outside of Kent County were visited in the hospital and offered community resource information for the area in which they live.

**Table 1: Hospital Visits with Out-of-County Residents**

Hospital	Families offered information n=357
Saint Mary’s	151 (42%)
Metro	206 (58%)

At Metro Health and Saint Mary’s Healthcare, WHB Hospital Liaisons also visited Medicaid-eligible families not eligible for WHB to offer a referral to the Maternal Infant Health Program (MIHP) at the Kent County Health Department. A total of 290 visits were completed to offer the Maternal Infant Health Program to new parents, resulting in 119 referrals being made to the Kent County Health Department. (Note: During Year 1 WHB did not collect the type of referral, whether it was a new referral or a re-referral, hence the 119 total is reflective of people who may already have been enrolled. The data on type of referrals is being collected for Year 2).

**Table 2: Hospital Visits with Kent County Residents (not eligible for WHB)**

Hospital	Number of referrals made n=119
Saint Mary’s	72 (61%)
Metro	47 (39%)

As shown in Table 3, WHB hospital liaisons made 2052 visits with families at hospitals during Year 1.

**Table 3: Total Hospital Liaison Visits for WHB Year 1**

Visit Type	n=2052
Offered WHB to eligible families	1405 (69%)
Offered community resource information to out-of-county residents	357 (17%)
Offered referral to MIHP-KCHD to Medicaid-eligible families not eligible for WHB visit	290 (14%)

**Breast-feeding**

According to research by the American Academy of Pediatrics<sup>2</sup>, there is a direct correlation between healthy babies and breast-feeding. One of the overall objectives of WHB is to support mothers in their efforts to breastfeed by providing parents education and support on this topic. The WHB hospital liaison asks the mother in the hospital if they are breast-feeding, formula feeding, or both and the program follows up with feeding methods at the home visit and during the 30-day follow up phone call.

During Year 1, of the 853 families that were assessed by a home visit, 56% of mothers reported breastfeeding exclusively in the hospital, which decreased over time to 35% at the 30-day follow-up (Table 4). It should be noted that not all mothers are able to be reached through the 30-day follow-up phone call (total was 367 in Year 1).

**Table 4: Types of Newborn Feeding by MOB**

Time point	Formula Only	Breastfeeding Only	Breast & Formula Feeding	% Breastfeeding in some capacity	% Exclusive Breastfeeding
<b>Hospital</b> (n=860)	144	485	231	83%	56%
<b>Home Visit</b> (n=862)	195	393	274	77%	46%
<b>30-day call</b> (n=367)	111	129	127	70%	35%

WHB mothers reported breastfeeding in some capacity (83%) slightly higher than national rates<sup>3</sup> (74.6%) at birth (hospital).

**Table 5: U.S. National Breastfeeding Rates, 2008**

Child Age	Breastfeeding	Exclusive Breastfeeding
<b>At birth</b>	74.6%	
<b>7 days</b>	73.6%	52.1%
<b>1 month</b>	69.2%	46.2%

Also, WHB clients reported exclusive breastfeeding at the home visit time point (46%) slightly lower than the national (52%), and remained slightly lower at the 1-month (30-day) time point, 35% WHB vs. 46% national.

<sup>2</sup> AAP journal article *Breastfeeding and the Use of Human Milk*, American Academy of Pediatrics Journal Vol 115 No. 2 2005.

<sup>3</sup> [http://www.cdc.gov/breastfeeding/data/nis\\_data/](http://www.cdc.gov/breastfeeding/data/nis_data/)

**Client Demographics**

According to 2010 Kent County birth statistics, total targeted births in Kent County were 16% Hispanic and 83% non-Hispanic with approximately 1% of the births not reporting race or ethnicity<sup>4</sup>. Table 6 presents the race/ethnicity of the mothers of newborns served.

**Table 6: Mother’s Ethnicity**

Race/Ethnicity (Mother)	N=862	%	Total Kent Co. Population
African American	125	15%	10%
Asian	26	3%	2%
Caucasian	544	63%	80%
Latino/Hispanic	142	16%	10%
Multi-Racial	11	1%	3%
Native American	1	<1 %	<1%
Not Reported	1	<1%	--
Other	12	1%	--

Families served by WHB in Year 1 reflect a more diverse ethnic distribution than Kent County as a whole in 2010.

Data on mother’s age and education is incomplete for Year 1, as this data was not entered into the nFocus database until Q2 (73% of total client population age data and 70% of education level were entered). Based on available data as shown in Table 7, in Year 1, nearly half of all mothers served were age 20-25 (45%), followed closely by mothers age 26-31. Approximately 16% of mothers served were age 19 or younger.

**Table 7: Mother’s Age**

Age of Mother	N=626	%
10-14	3	<1%
15-19	93	15%
20-25	283	45%
26-31	191	30%
32-36	36	6%
37-42	18	3%
43-48	2	<1%

As shown in Table 8, approximately 41% of mothers indicated a high school education or less.

**Table 8: Mother’s Education Level**

Level of Education	N=599	%
None	8	1%
Not Reported	6	1%
Grade School (1-5) or Less	9	2%
Junior High (6-8)	52	9%
High School (9-12)	182	30%
Post High School	164	27%
Trade School	12	2%
Bachelors	120	20%
Graduate Degree	46	8%

<sup>4</sup> Data received from Kent County Health Department Epidemiologist

During Year 1, 57% (492) of nurse home visits were conducted with families (baby) enrolled in Medicaid. Data compiled by the Kent County Health Department shows of the total population eligible for WHB services, only 51% is enrolled in Medicaid<sup>5</sup>. The age, education, and Medicaid data demonstrate WHB is serving a high needs population.

**Home Visits**

During Year 1, WHB provided nurse home visits to 853 parents and 862 babies. Key components of the nurse home visit include:

- Comprehensive assessment of newborn and parents
- Education
- Resource materials
- Referrals to community resources

***Comprehensive Assessments***

During the nurse home visit, a comprehensive assessment is conducted that includes assessing the health of the newborn and mother and conducting risk screenings (a risk factor and a psychosocial screening). This assessment serves multiple purposes. First, it identifies the needs of the family. Secondly, the information gathered from the assessment helps to inform the community at large about the needs of families. Third, the results of the assessments are shared with the medical home and home visiting services to which the family is referred.

Of the 853 families that received a nurse home visit in Year 1, 28% (234) were assessed as having some risk factor. The family risk factors are self-reported by families in the hospital and at the home visit. Data for Year 1 is presented in Table 9.

**Table 9: Year 1 Risk Factor Distribution**

Risk Factor	N	% of families with risk factors (N=234)	% of all Year 1 families (N=853)
Teen parent	123	53%	14%
Parent with diagnosed mental/physical condition that interferes with parenting ability	63	27%	7%
Family who is isolated with inadequate support system	35	15%	4%
Family history of child abuse and/or neglect	21	9%	2%
Parent with negative or ambivalent attitude regarding pregnancy or parenting	19	8%	2%
Parent with substance abuse or addiction	11	5%	1%
Family with incarcerated parent	8	3%	1%
Family who is homeless	5	2%	1%
Child with long-term or chronic illness	5	2%	1%
Child with diagnosed handicapped condition	4	2%	0%
Family history of delinquency	2	1%	0%
Child with a diagnosed mental health condition or documentation behavioral issue	2	1%	0%

\*families can be identified as having more than one risk factor, thus number of factors in Table 8 will not equal 234 and % will not equal 100.

<sup>5</sup> 2010 data calculated based on the total target moms who delivered in Kent County hospitals.

Families that self-identify as having more than one risk factor are considered at increased risk. The number of families with two or more risk factors in Year 1 was 40 (Table 10); 17% of families with risks and 5% of all families served in Year 1.

**Table 10: Multiple Risk Factors Per Family**

Risk factors identified per family	N=234	% of families with risk factors
One risk factor	194	83%
Two risk factors	27	12%
Three risk factors	9	4%
Four risk factors	3	1%
Five risk factors	1	<1%

**Education**

During the home visit, the nurse works with the parents to educate on the importance of completing a medical home visit for the newborn within five days of birth, educates mothers on breastfeeding techniques, and provides information on community resources. WHB mails a client satisfaction survey to all clients who receive a home visit once a 30-day follow-up call has been completed. The survey offers each client the opportunity to evaluate services they received and identify any issues or any further services they need. The surveys are anonymous, but there is a section for clients who have issues to provide their contact information if they want to be contacted to address issues or needs. In Year 1, 193 client satisfaction surveys were completed, representing 23% of families served.

Results from the Year 1 Client Satisfaction Survey indicated feedback on the nurse education and information provided during the home visit, including:

- 99% of respondents reported the nurse provided them useful information on their own and their newborn’s health
- 92% of respondents reported they felt confident in taking care of their newborn; 5% were somewhat unsure and 3% reported they needed assistance
- 85% of respondents reported they felt very good about finding services in the community for themselves and their newborn; 11% were somewhat unsure and 4% needed further assistance

**Resource Materials**

Part of the WHB home visit involves determining any basic needs the family has, such as a car seat or transportation. Table 11 presents the basic needs identified by WHB clients during Year 1 home visits.

**Table 11: Basic Needs Identified During Home Visits**

Need(s)	N=122	% of Year 1 families
Crib/Pack n Play	61	8%
Transportation provided to first medical home visit	55	7%
Car Seat	6	<1%

In addition, the nurse will offer resource materials from the WHB gift bag. Results from the Client Satisfaction Survey provided feedback on the materials offered to clients during the home visit, including:

- 89% of respondents reported the Purple Crying DVD (which offers tips on how to soothe a crying infant) was useful to them
- 94% of respondents reported the thermometer was useful to them
- 93% of respondents reported the Parent/Baby Book/Information was useful to them

***Referrals to Community Resources***

At each home visit, the WHB nurse uses the comprehensive assessment to guide their recommendation to offer the community services that the family is eligible to receive. Families are then able to choose the community services they would like to be referred to. All referrals to services are voluntary, made only with the permission of the family. During Year 1, a total of 1308 WHB referrals were made to program partners, reflecting an average of 1-2 referrals to community resources per family.

As shown in Table 12, the top three referral partners in Year 1 were the Connections program, MIHP (Health Department), and Bright Beginnings, comprising 70% of all referrals made. Partner agencies are defined primarily as the home visiting agencies. (Note: This number does not reflect the additional referrals made at the 30-day follow up call by WHB staff.)

**Table 12: Year 1 Referrals Made to Referral Partners**

Agency/Program	N=1308	%
Connections	428	33%
MIHP- Health Department	261	20%
Bright Beginnings	217	17%
MIHP-Cherry Street Health Services	73	6%
Healthy Start - HV	65	5%
MIHP-MOMS	65	5%
Healthy Start - Phone	57	4%
Arbor Circle - Infant Toddler	55	4%
MOMsBloom	36	3%
Strong Beginnings	20	2%
Encouraging Family Foundations	14	1%
CHAP	7	1%
Early On-ISD	4	0%
Early Head Start	3	0%
MIHP-New Beginnings	3	0%

**30-Day Follow-up Phone Calls**

WHB staff complete a 30-day follow-up phone call with all home visit clients. WHB staff make three phone call attempts to reach parents. The phone call serves four main purposes:

- 1) to inquire about how the family is doing; asking questions about health, coping, rest, and support;
- 2) to gather data such as hospital and ED usage, attendance at medical home appointments, and whether mothers are breastfeeding;
- 3) to find out if the family has started services with those programs to which they were referred at the home visit (if not, to follow-up with the agency); and

4) to assess the family for further needs and make necessary referrals.

At 30-days post nurse home visit, WHB staff try to contact the families to assess needs and offer additional resources/referrals as needed. As shown in Table 13, WHB staff successfully conducted follow-up phone calls with 65% of clients (Note: The number of clients is less than 853 due to a 30-day lag from time of visit to follow-up, and the large increase of home visits in the fourth quarter. This means that the follow up period has not been reached for many participants in Year 1 and some of Q1 data is missing).

**Table 13: 30-day follow-up call completion**

Contact Type	N=582	%
Contact made w/ family	375	65%
Message left	176	30%
No contact made	31	5%

Families have the opportunity to accept new referrals at the 30-day phone call if need or interest has changed. WHB staff receive verbal consent from the client over the phone to make a direct referral to a WHB partner. As shown in Table 14, very few referrals were made from the 30 day follow-up call during Year 1.

**Table 14: 30-day follow-up call completion**

Agency/Program	N=16
Arbor Circle - Infant Toddler	7
Bright Beginnings	2
MOMsBloom	5
Encouraging Family Foundations	2

## 4 Outcomes

The key outcome questions for WHB include:

- Are participant families (95%) taking their newborn to an initial medical home visit within 5 days of life?
- Do participant newborns have a low incidence of ED use and hospital re-admittance?
- Are participant family needs being identified and referred to appropriate community services?

### Medical Home Visits

The nurse home visit occurs within 3-5 days of hospital discharge. During the visit, the nurse discusses the importance of taking the infant to their medical home (primary care physician - PCP) within 5 days of life. The nurse collects the date of the newborn’s first scheduled visit. To verify visit occurrence, the nurse makes up to 3 phone calls in attempt to contact the mother to verify the newborn medical visit. It is an expected outcome of the nurse home visit that 95% of newborns are seen at their medical home within 5 days of life.

**Outcome:** As shown in Table 15, the program came very close to meeting its goal of 95%, with 85% of families served in Year 1 reporting taking their newborn to the doctor within the first 5 days of life. (Note: WHB is unable to obtain data for all families.)

**Table 15: Days to First Doctor Appointment\***

Days to Appointment	N	%
0	10	1%
1	118	15%
2	172	21%
3	198	24%
4	128	16%
5	62	8%
<b>TOTAL 1-5 days</b>	<b>688</b>	<b>85%</b>
6	37	5%
7	26	3%
8	9	1%
9	4	<1%
10	7	1%
<b>TOTAL 6-10 days</b>	<b>83</b>	<b>10%</b>
11	7	1%
12	8	1%
13	6	1%
14	4	<1%
15	2	<1%
<b>TOTAL 11-15 days</b>	<b>27</b>	<b>3%</b>
17	2	<1%
18	4	<1%
19	1	<1%
<b>TOTAL 16-20 days</b>	<b>7</b>	<b>1%</b>
21	1	<1%
25	1	<1%
33	2	<1%
<b>TOTAL 21-33 days</b>	<b>4</b>	<b>&lt;1%</b>

\*Of the 853 families served, data was collected on 809 families, representing 95% of Year 1 families.

**ED and Hospital Readmissions**

During the nurse home visit, the WHB nurse assesses the health of the baby and mother. If any health issues are identified, the WHB nurse will connect the family with the proper community resources. In some instances, there may be immediate issues that do require sending the family to seek medical attention – sometimes these needs can be met by a primary care provider, other times they may require more immediate medical care. For this reason, the program is expected to make a difference in ED use and hospital re-admittance, with the hope that the incidences are low, compared to broader community rates. It should be noted the data collected for this outcome is from parent self-report on the client satisfaction survey and from the 30-day follow-up phone call.

**Outcome:** While data was not available for county or hospital comparison, self-reported emergency room use for newborns among 357 follow-up clients was only 15% and newborn readmissions reported were only 1%.

**Table 16: Acceptance into Service (Year 1 Referrals)**

Data Collection Point	Newborn ED visits	Newborn ED %	Newborn Hospitalizations	Newborn Hospitalization %
30-Day Follow-up Phone Call (n=357)	53	15%	5	1%
Client Satisfaction Survey* (n=193)	24	12%	7	2%

\*mailed following the 30-day follow-up

**Referrals to Community Services**

During the nurse home visit, the WHB nurse is expected to share information about parenting, child development and community resources and to connect the parents to helpful services. None of these connections is required and it is up to the families to follow through with them. The WHB nurses conduct a social risk assessment while in the home and identify any needs the family has. From this interaction, the nurse recommends and refers families to community services. WHB wants to determine if they are referring families to appropriate community services. Data is collected from referral partner agencies on whether client referred by WHB is accepted into or declines services. Constraints on acceptance data include 1) most programs return acceptance data, on average, within 30 days, and 2) some programs continue to try to contact referrals after returning their acceptance data sheet.

**Outcome:** Overall, of the 1308 referrals to community services made during Year 1, 63% of referrals<sup>6</sup> resulted in a family accepting the services of the partnering agency (Table 17).

<sup>6</sup> From data available (n=854)

Table 17: Acceptance into Service (Year 1 Referrals)

Agency/Program	# Referrals	Accepted N (%)	Declined N (%)	No Status Provided N (%)	Program Unable to Contact N (%)
Connections*	428	-	-	-	-
MIHP- Health Department	261	199 (76%)	53 (20%)	3 (1%)	6 (2%)
Bright Beginnings**	217	122 (56%)	35 (16%)	40 (18%)	19 (9%)
MIHP- Cherry Street Health Services	73	66 (90%)	3 (4%)	4 (5%)	-
Healthy Start - HV	65	31 (48%)	16 (25%)	18 (28%)	-
MIHP-MOMS	65	35 (54%)	21 (32%)	2 (3%)	7 (11%)
Healthy Start - Phone	57	38 (82%)	4 (9%)	4 (9%)	-
Arbor Circle - Infant Toddler	55	23 (42%)	20 (36%)	2 (4%)	10 (18%)
MOMsBloom	36	5 (14%)	11 (31%)	17 (47%)	3 (8%)
Strong Beginnings	20	12 (60%)	5 (25%)	3 (15%)	-
CHAP	7	5 (71%)	2 (29%)	-	-
Early On-ISD	4	4 (100%)	-	-	-
Early Head Start	3	2 (67%)	1 (33%)	-	-
MIHP-New Beginnings	3	1 (33%)	1 (33%)	1 (33%)	-
Encouraging Family Foundations**	14	-	-	-	-
<b>Totals<sup>7</sup></b>	<b>1308</b>	<b>543 (63%)</b>	<b>172 (20%)</b>	<b>94 (11%)</b>	<b>45 (5%)</b>

\*Connections services are not initiated until 2 months post-birth and the program did not collect acceptance into services data during Year 1

\*\*BB had 1 on a waiting list

\*\*\* EFF does not provide this data

Note: The number of referrals made by WHB during Year 1 (2<sup>nd</sup> column) may not equal the total referral acceptance data provided to the program due to data collection lag time.

<sup>7</sup> Referral acceptance data available for 854 referrals

## 5 Impact

There are multiple qualitative perspectives of program success: staff, referral partners, and clients. WHB staff can identify issues clients are having during the home visit, but families are not required to accept any referral to community resources. This may pose a barrier to WHB serving as a gateway to community services and is an issue staff on which can provide insight.

Similarly, referral partners have a unique perspective to share on the appropriateness of referrals made to their agencies, capacity issues and client outcomes over time. In addition, WHB client feedback on their experiences with WHB services and with referral agencies are important to consider.

### **Impact: Staff Year 1**

When staff were asked to provide examples of how WHB services are improving the health of children served, many staff members cited helping parents get their child to their first doctor's appointment (whether through reminders to make the appointment, making the appointment or providing transportation) and providing assurance to parents as examples of improvements in child health.

More specific examples included discovering babies with jaundice and getting them to their medical home and providing mothers breastfeeding support.

#### ***Staff Feedback on Implementation Year 1***

Staff were asked to identify key barriers to engaging clients. While some (such as scheduling contact) may simply be realities that cannot be "fixed", WHB staff identified the following barriers to engagement:

- Parents are often wary of or do not understand WHB services. For example, "Some families are suspicious of the service (and are not) sure exactly who they are allowing into their homes. There is some fear that if the nurse sees something wrong that Child Protective Services will be called."
- The hospital setting itself is a barrier, as penetrating the hospital culture is "difficult" and there is no access to clients discharged over the weekend. While WHB staff may call Metro patients who are discharged over the weekend on Monday, Spectrum and Saint Mary's do not allow that to occur. Additionally, parents deal with so much while they are in the hospital that it is often difficult for them to comprehend the services that WHB offers. Finally, interpretation services are typically provided by phone in the hospital and are provided by people who are not familiar with WHB. Therefore, the interpreter may not explain the program in the best manner and may not answer questions properly.
- It is often difficult to reach the parents. Although staff call at different times of the day and evening and send letters, emails and text messages, parents do not always respond.
- Once the nurse conducts the home visit and offers referrals to services, some parents claim everything is fine and do not see the need for additional services, although the nurses see issues such as poverty and post-partum depression.

Staff were also asked to discuss program strengths and weaknesses. Staff members felt that one of WHB's greatest strengths is that it "truly helps people." They also reported "the whole staff is

invested in the work and what we are doing” and that they are a “dedicated and skilled team.” One staffer said the nurses are “extraordinary.” Aside from the staff, the program’s ability to get a nurse into a family’s home so soon after hospital discharge was a great strength.

Weaknesses varied and included:

- the program’s ability to offer one visit to a family, when some would benefit from additional home visits;
- need for improvement when coordinating at the community level;
- lack of publicity in the community; and
- cumbersome paperwork that requires nurses to personally make changes to forms, rather than dictating changes over the phone or by email.

**Impact: Partners Year 1**

Thirteen referral partner agencies were invited and completed an online survey assessing WHB Year 1 implementation and impact.

Referral partners felt that WHB serves as a gateway for families to early childhood services (75%) and only 58.3% felt that WHB increased referrals to early childhood services. Slightly less than 55% of people thought WHB prevents duplication of services in Kent County.

**Table 18: Referral Agency Survey Results**

Indicate the extent to which you agree or disagree with the following statements:	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree
WHB is beginning to serve as a gateway for families to early childhood services.	3 25%	6 50%	2 17%	1 8%	-
WHB is increasing referrals into early childhood services systems.	3 25%	4 33%	4 33%	1 8%	-
WHB is preventing duplication of services in Kent County.	1 9%	5 46%	2 18%	2 18%	1 9%

Referral partners were asked to comment on program effectiveness. Only one partner responded:

- WHB's philosophy of being THE program to make all referrals for this population has been confusing, and has added an additional layer of coordination between agencies/services. Families should participate in some services in a sequential manner, instead of at the same time. But, WHB has not embraced this concept. It seems that making the referrals is more important than what individual families actually need.

Referral partners were asked to provide additional feedback for consideration.

- We have feedback from clients that they really appreciate the nurses' willingness to answer so many of the questions they have when they arrive home with the baby. I wish this service had existed years ago!
- During a mom's prenatal care it is essential that she learn all about the Welcome Home Baby Program.

Referral partners said they received a lower volume of referrals than they expected (69.2%) and that they could handle more referrals from WHB (69.2%). WHB is experiencing lower volumes of participation than was expected (in part due to the staggered hospital implementation), thus the agencies are receiving a lower volume of referrals than expected. It also is possible that

WHB is serving to increase efficiencies by reducing duplications in referrals, which also would reduce the volume.

Overall, partners found the WHB referral process to be informative (100%) and a benefit (92%) to first-time mothers and mothers age 25 or less. They also felt that WHB staff were knowledgeable and referred families to the appropriate services (91.7%). Respondents were a bit more mixed, although overall still positive, regarding active participation in their program’s services by WHB referrals.

**Table 19: Referral Agency Survey Results**

Indicate the extent to which you agree or disagree with the following statements:	Strongly Agree	Agree	Neither Agree Nor Disagree	Disagree	Strongly Disagree
The WHB referral process provides informative and useful information for my clients.	7 58%	5 42%	-	-	-
The WHB service is of benefit to first-time mothers and mothers age 25 or less.	8 67%	3 25%	1 8%	-	-
WHB staff are knowledgeable and refer families to the appropriate services.	4 33%	7 58%	-	-	1 8%
Families referred from WHB actively participate in my program’s services.	2 17%	7 58%	2 17%	1 8%	-

***Partner Feedback on Implementation Year 1***

Overall, referral partners found their communications with WHB staff to be effective (77%) and pleasant (100%). They were less likely to find the referral partner meetings useful (61.6%). Only 33% thought that the referral partner meetings helped their organization increase client referrals.

Respondent’s comments on the referral process included:

- Although WHB staff are knowledgeable about community resources, sometimes families are overwhelmed by referrals to too many similar services<sup>8</sup>.
- Referrals have been steady -- but not the volume that was anticipated.
- Have not had enough referrals to fully know the process
- Overall WHB does an excellent job with the referral process. [WHB staff] understands the potential for overlap and works diligently to preclude it.

**Impact: Child/Family Year 1 (Client)**

Phone interviews were conducted with six randomly selected mothers who received a WHB visit during Year 1.

The moms were asked how their participation in WHB services helped them gain confidence in caring for their baby. All of the moms responded that the general knowledge they received during the visit helped them gain confidence in parenting. One mother appreciated receiving materials that show the milestones her child should hit at certain stages. Others cited having the ability to call someone if they had issues as providing reassurance.

<sup>8</sup> Staff indicated there was a learning curve to making referrals, with the program initially trying to refer families to 3-4 services, which overwhelmed some. Current practice is to refer most families to 1-2 to lessen the anxiety of too many referrals.

The moms also were asked ‘Do you feel like you have knowledge about caring for your child or used a community resource as a result of your WHB home visit?’ All of the mothers felt they learned something during their visit. Only one had used a community resource recommended by the nurse (Friend of the Court), while another was referred to a service that she already used (WIC).

When asked what they learned (or was reinforced) during the nurse home visit, several moms cited learning the proper way to take a temperature as something they learned during the visit. Other lessons included:

- Breastfeeding will get easier. One mother was ready to stop breastfeeding, but the nurse’s encouragement kept her from quitting.
- Babies experience a purple period of crying. The mother learned that she should leave the room if she reaches a point at which she can no longer tolerate hearing her baby cry.
- There is help if you need it. One mother said that she appreciated being given the WHB number to call if she had a problem.

All mothers felt the visit was positive. The main reasons for finding the visit positive included general information and reassurance. All participants felt the visit length was just right, but one said that for mothers who have other children, the visit could be too long and it would cover material they already know.

None of the mothers could identify anything negative about the nurse home visit, and aspects of the visit that the mothers liked the most included:

- Breastfeeding assistance
- Checking the baby for jaundice
- Receiving the baby book
- Receiving general baby information
- Having the ability to ask questions
- Having someone reinforce lessons to the baby’s father that the mother had already tried teaching him.

#### ***Client Feedback on Implementation Year 1***

Clients agreed they had good interactions with WHB staff in the hospital, at the nurse home visit and by phone (scheduling and 30-day follow-up).

All the moms interviewed agreed to a WHB visit for general knowledge purposes. More specific reasons included a desire for breastfeeding help and wanting to have the nurse look for possible signs of post-partum depression. Two moms cited their desire to have someone come to them just to offer help in those first few days at home with the baby.

All mothers reported liking their interactions with the nurse. They thought the nurse gave them great information and appreciated how neat she was. All but one mom reported the nurse was caring and respectful (the exception was a mom who was reported to CPS). One mother said she appreciated that the nurse was on time and was respectful of the mother’s time. Other comments included:

- “The lady who helped me out was very nice, very helpful.”
- “It’s an awesome program for people who don’t know about community services.”
- “It’s a wonderful program. I would do it again with my second (child).”

## 6 Summary and Recommendations

### Summary

Welcome Home Baby served 853 families and 862 newborns during Year 1. The program's launch in the county was staggered and as a result, service and referral volumes were lower than originally anticipated. The program successfully conducted nurse home visits with 85% of those families that accepted services in the hospital in Year 1. Hospital liaisons made 2052 visits with families during Year 1.

Age (~16% served had a teenage parent), education (41% of mother's had high school education or less), and Medicaid data demonstrate WHB is serving a high needs population.

The program came very close to meeting its goal of 95% clients taking the newborn to the initial medical home visit within 5 days of life, with 85% of families served in Year 1 taking their newborn to the doctor within the first 5 days.

Newborn emergency department visits and readmissions within 30 days were low (15% ED; 1% Hospitalizations) and approximately 74% of referrals resulted in families accepting services of the partnering referral agencies

Feedback from staff, partner referral agencies, and client perspectives was generally positive, with some of the following highlights:

- Approximately 75% of referral partners felt that WHB serves as a gateway for families to early childhood services
- Overall, referral partners indicated that the referral process was a benefit (92%) to first-time mothers and mothers age 25 or less. They also felt that WHB staff were knowledgeable and referred families to the appropriate services (92%).
- Clients indicated the general knowledge they received during the nurse home visit helped them gain confidence in parenting.
- Client feedback on the nurse home visit was positive, with 99% of clients<sup>9</sup> reporting the nurse provided them useful information on their own and their newborn's health

### Recommendations

#### **Engagement:**

- The program should explore strategies to improving acceptance of services. While some engagement issues (such as scheduling contact) may simply be realities that cannot be overcome, WHB should conduct a thorough examination of strategies to mitigate barriers. Results from the staff interviews offered several suggestions for improvements to client engagement, including reaching out to obstetrical offices and other partner agencies.

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<sup>9</sup> Clients completing client satisfaction survey

- The program should continue to collect data on reasons for clients declining program services (both at the hospital and when scheduling) for ways to improve levels of engagement.

**Program Goals:**

- A thorough review of program goals should be conducted to ensure that data is collected to measure the goals and that they are realistic. For example, the program goal that 95% of children served should have their first medical home visit within 5 days of birth was established prior to program implementation. Now that the program understands the context of that goal better, it may be more realistic to set the goal at 90%, giving them room to grow (from the current 85%) but also accounting for the issues outside of program control that naturally occur with the population served.

**Outcomes:**

- A lesson learned from this evaluation report is that WHB should explore ways to play a greater coordination role at the systems-level, identify gaps in service, improve collaboration with hospitals, reduce duplication, and improve communications with partners and hospitals. As such, a review of the evaluation plan is recommended to ensure the program logic model is updated and evaluation measures are aligned to new system-level goals developed.
- In addition, WHB should attempt to establish data partnerships with hospitals to obtain client outcome and comparison group data (i.e., use hospital data for ED and hospitalization outcomes, instead of self-report)

Reviewing program goals, updating logic models and establishing data collection relationships are natural components of program provision and evaluation and will be conducted annually. The review process will begin in November 2011 and is expected to result in an updated evaluation plan by February 2012.