PROCESS EVALUATION OF GROUP WELL CHILD VISITS FOR ONE-MONTH-OLD INFANTS

By

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Abstract

A Process Evaluation of Group Well Child Visits for One-Month-Old Infants

Background

Standards for high quality well child care, a vital part of child health promotion and developmental surveillance, are evolving due to health care reform, *Bright Futures* guidelines, and changing American families. Group visits, with a history of improved quality and efficiency, were utilized by a pediatric practice who launched a one-month group well child check.

Purpose

The purpose of this study is to evaluate the process involved in the development of a group-based well child visit for one-month-old infants at their current practice.

Methods

A process and outcome program evaluation utilizing 360^{o} stakeholder feedback was done. Mothers bringing their one-month-old infants to group well visits at a large, private pediatric practice and Patient-Centered Medical Home in an inner-ring suburb of a medium-sized Midwestern city, as well as office staff, were eligible to provide feedback in the form of anonymous surveys following each group visit. Retrospective data analysis of survey feedback was used to answer process and outcome evaluation questions of how the visits impact the staff workload, quality of patient care, staff and mother satisfaction, and overall qualitative evaluation of the visits.

Results

The impact on workload of reception staff and medical assistants was neutral to positive; on practice administrators, neutral to negative; and on the NP group facilitator and RN co-facilitator, positive. Overall efficiency was improved; however, the positive workload effect perceived by the NP and RN was diminished in largest groups. The impact on quality of care was strongly positive, including postpartum depression screening, anticipatory guidance, information exchange, clinician-patient relationship, and social support. Mothers of the one-month-old infants and office staff were very satisfied with the new program. Staff suggestions for improvement centered on process and workflow, and many of these changes were implemented. Mothers' suggestions for improvement were few, and were often conflicting and reflective of individual preferences.

Clinical Implications

This process evaluation gives strong support for utilizing group-based well child visits, particularly in one-month-old infants. This paper may serve as a guide for launching group well visits for other ages and for children with chronic concerns conducive to addressing within the group setting.

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Chapter 1: Introduction

Well-child care is crucial for establishing a medical home, promoting child health and healthy parenting practices, preventing injury and disease, and providing developmental surveillance (Hagan, Shaw, & Duncan, 2008; Schor, 2004). Since passage of the Affordable Care Act in 2010, well visits are completely covered for families (The White House, 2015), facilitating greater accessibility to well-child care. While significant inquiry has been made into what constitutes quality well child visits (Bethell, Peck, & Schor, 2001; Bethell, Peck, Halfon, & Schor, 2004; Halfon, Stevens, Larson, & Olson, 2011; Norlin, Crawford, Bell, Sheng, & Stein, 2011; Olson, Inkelas, Halfon, Schuster, & O'Connor, et al., 2004; Radecki, Olson, Frintner, Tanner, & Stein, 2009; Regalado & Halfon, 2001; Schuster, Duan, Regalado, & Klein, 2000; Tanner, Stein, Olson, Frintner, & Radecki, 2009), these requirements are evolving and should be re-evaluated in the era of healthcare reform.

Purpose

The purpose of this study was to evaluate the process involved in the development of a new group-based well child visit for one-month-old infants at their current practice; a large, private pediatric practice and Patient-Centered Medical Home. Study results will be used to continually improve upon the process and may also help to guide the development of future group visits.

Background and Significance

Recommendations for pediatric preventive care, including well visit content and periodicity, are established by the American Academy of Pediatrics (AAP) and published in *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents* (Hagan et al., 2008). Originally published in 1994, it has been updated twice, leading to significant examination of how we are providing well child care, and whether redesign is required to meet the needs of children and their families (Coker, Casalino, Alexander, & Lantos, 2006; Coker, Chung, Cowgill, Chen, & Rodriguez, 2009; Coker, DuPlessis, Davoudpour, Moreno, & Rodriguez et al., 2012; Coker, Windon, Moreno, Schuster, & Chung, 2013; Radecki et al., 2009). Previous studies have reported that parents' needs are not being met by traditional well child visits (Olson et al., 2004), and that providers cannot address all aspects of care that they want or need to within time constraints (Tanner et al., 2009).

In group-based visits, a clinician provides care and education to a group of similar patients at the same time. The group dynamic is patient-centered, with a participatory communication style and environment of mutual peer support. Group visits are an innovation of care aimed at improving anticipatory guidance, visit duration, social support, and provider productivity and efficiency, and have been successfully utilized for well child care (Dodds, Nicholson, Muse, & Osborn, 1993; Osborn & Woolley, 1981; Page, Reid, Hoagland, & Leonard, 2010; Rice & Slater, 1997; Rushton, Byrne, Darden, & McLeigh, 2015; Saysana & Downs, 2012; Taylor, Davis, & Kemper, 1997). Yet studies on group-based well child visits have been

scattered; the first landmark study was done in 1981, with no more studies until 1993 and 1997, and not again until 2010-2015. And while evidence for efficacy has been good, group well visits have yet to become a common practice.

While no study has investigated group well visits at specific ages, the first month of a child's life was hypothesized to be an ideal time to incorporate group well visits. It is a vulnerable time of growth and development and for setting the stage for parenting style, practices, and confidence. Certain issues are common during this time frame, especially relating to skin, sleep, feeding, crying, and stooling, that parents find problematic or concerning, but that practitioners regard as variations of normal. Despite AAP recommendations (2015), many pediatric practices have historically omitted a well-child visit at one month of life largely because of reimbursement constraints. By providing the one month well visit in a group setting, the practitioner can more efficiently address these common issues, and establish reassurance of normal growth and development during a one-on-one physical exam and through group social support.

Specific Aims

This study answered the following process evaluation questions:

1. How do group-based well visits for one-month-old infants impact the workload of (a) reception staff, (b) administrator(s), (c) the weekly medical assistant, (d) the RN co-facilitator, and (e) the PNP group facilitator?

2. How do group-based well visits for one-month-old infants affect the quality of patient care?
3. How satisfied are (a) mothers and (b) office staff with group-based well visits for one-month-old infants?
4. Are there changes that can be implemented within the process in order to improve quality, workload/efficiency, and/or satisfaction?

Theoretical Rationale

This study included a process evaluation utilizing 360-degree, or multisource, feedback in order to answer the research questions. According to the World Health Organization (WHO), program development—in this case, creation of group well child visits for one month olds—is one of the main reasons to perform a process evaluation (2000b). Process evaluation includes process objectives, the planned activities or services, and outcome objectives, the expected changes that will occur (WHO, 2000a). Process objectives in this study were answered by evaluation Q-1 and Q-4; outcome objectives were answered by Q-2 and Q-3.

Three hundred sixty degree feedback is founded on the premise that information gathered from multiple perspectives is more comprehensive and objective than information gathered from only one source (Fleenor & Prince, 1997). The practice in this study distributed surveys to all stakeholders who would be impacted by group visits as part of its continuous quality improvement. According to WHO, quality improvement is driven by goals of high customer satisfaction (Q-3)

and empowers staff to be involved in effecting real change within their organization (Q-1, Q-3, Q-4); it recognizes the inter-relationship of services and processes for patients and their families, and clinical and non-clinical staff, (WHO, 2000b), referred to as "evaluation planning 'partners'" (WHO, 2000a).

Chapter 2: Integrated Review of the Literature

Impetus for Process Evaluation: Changes to Well Visit Structure

Directives for delivering well child care have increased significantly. Nearly 25 years ago, a multidisciplinary group of pediatric health care experts and family advocates assembled to discuss the health promotion of every child in America. The outcome of this meeting was the first edition of *Bright Futures: Guidelines for Health Supervision of Infants, Children, and Adolescents* in 1994 (AAP, 2015). *Bright Futures* provided enhanced guidelines for the health supervision of infants, children, and adolescents. It has now been updated, with the third edition released in 2008, and is considered the standard of pediatric preventive care (Hagan et al.).

With the expanded directives comes a re-examination of how we are providing well child care and whether it is meeting the needs of children and their families. Redesign of well child care has been an area of investigation particularly in the last decade (Coker et al., 2006; Coker et al., 2009; Coker et al., 2012; Coker et al., 2013; Radecki, Olson et al., 2009). Factors including changing family demographics and structure, increased awareness of developmental and behavioral problems, updated and expanded guidelines for anticipatory guidance, and changes to reimbursement for ill and well care with healthcare reform have necessitated a re-evaluation of current practices (Coker et al., 2006 & 2012; Radecki et al., 2009; Regalado & Halfon, 2001; Schuster et al., 2000; Yarnall, Pollak, Østbye, Krause, & Michener, 2003). Parents are reporting that their needs aren't being met (Olson et al., 2004), and providers are

reporting that they simply cannot address all aspects of care that they want or need to within given time constraints (Tanner et al., 2009).

Stakeholder Perspective: Parents

In a study of 131 parents in 20 focus groups, parents (91% mothers) reported that they wanted reassurance about their children and about their parenting skills, and an unrushed opportunity to discuss what they determined to be priorities in well child care (Radecki et al., 2009). They also desired a clinician who is child-focused, has a personable and respectful demeanor, and respects parental expertise. Parent suggestions for improving well child care included better social marketing about the value of well child care, increased emphasis on behavior and development, and enhanced exchange of information. In another 2009 study of 56 low-income parents in 8 focus groups, mothers reported substantial problems with well child care, including access to providers and inadequate behavioral and developmental services (Coker et al.). Furthermore, the mothers thought that nonphysician providers were potentially more expert in behavioral and developmental issues than physicians. Most of these parents endorsed nonphysician providers and alternative locations and formats, including group well child visits, as an alternative to individual, physician-provided well child care (Coker et al., 2009).

Stakeholder Perspective: Clinicians

Pediatric clinicians also have suggestions for improving well child care. In a 2006 mail survey of a national random sample of 1000 general pediatricians, 97%

rated the current U.S. system as excellent or good in providing well child care (Coker et al., 2006). At the same time, a majority (54-60%) reported that in a maximally efficient and effective system, nonphysicians would be performing many of the duties that they are currently providing, including anticipatory guidance and developmental and psychosocial screening. Other methods of innovation and workload sharing were also endorsed. A study of 282 pediatricians and 41 PNPs in 31 focus groups in 13 cities also uncovered areas of concern and suggestions for improving well child care (Tanner et al., 2009). These clinicians stated the importance of establishing therapeutic relationships and individualizing care. The providers agreed that eliciting parental concerns is the first priority in quality well child care. As in the parental focus groups (Radecki et al., 2009), the pediatric care provider groups suggested that an increased emphasis on behavior and development are a priority in improving well child care. To this end, suggestions included innovations in practice organization and integration of existing innovative programs.

While providers endorse the importance of providing family-centered care focused on development and behavior, and providing anticipatory guidance, clinicians lack time perform accordingly. In an observation of 483 visits by 43 pediatricians and 9 midlevel providers with patients from 0 to 19 years of age, clinicians addressed a mean of only 42% of *Bright Futures*-recommended age-specific topics in a mean 20.3 minute visit (Norlin et al., 2011), which is a normal well child visit duration. Only 38.9% of those visits began with an open-ended question eliciting parent or child concerns. Topics relevant to infancy that were

addressed less frequently than recommended included family support, parental well-being, behavior and discipline, and media screen time. Similarly, Bethell et al. (2004) examined data from the National Survey on Early Childhood Health (NSECH; N=2068), a study of 2068 children ages 4-35 months, in order to determine the use of four composite performance measures, which when taken together, represent 23 topics from the AAP health supervision guidelines. Bethell and colleagues found that performance was highest in the areas of family-centered care and screening for smoking and drug and alcohol use in the home, and was lowest in the areas of anticipatory guidance and education and assessment for family psychosocial risks.

Quality of Care: Anticipatory Guidance

It is not surprising that pediatric clinicians are unable to provide all recommended anticipatory guidance given the volume of counseling directed. A 2006 study (prior to the most recent update to *Bright Futures*), sought to quantify and characterize the verbal advice that pediatricians are expected to deliver to patients and their guardians (Belamarich, Gandica, Stein, & Racine). Searching the AAP *Pediatric Clinical Practice Guidelines and Policies* (3rd ed.), they discovered 57 policies with 192 discrete health advice directives. Only 4% of these originated before 1993, while 96% were created from 1993 to 2002.

Yet providing quality anticipatory guidance is a vital element of a quality well child check (AAP, 2015). In a 2001 study, the Promoting Healthy Development Survey (PHDS), a 36-item parent survey that assesses whether healthcare providers

talk about recommended anticipatory guidance topics, was developed and tested with a diverse group of families in three managed care organizations (n=1478) (Bethell et al., 2001). Parents reporting positive parenting behaviors had significantly higher scores on the anticipatory guidance quality measure. Parents who reported that their questions on specific anticipatory guidance topics were answered were more likely to report higher confidence in related parenting activities and were less likely to report concerns about their child's development in related areas.

According to data from NSECH, as well as the Periodic Survey of Fellows, a national survey of members of the AAP, parents and pediatricians tend to agree on the relative ranking of which topics are most frequently addressed. Most frequently addressed are traditional preventive care topics, such as immunizations, sleep, and feeding, while more recently introduced topics such as developmental needs and family context are less commonly discussed (Olson et al., 2004). In that study, 36% of parents with children ages 4 to 9 months and 56% of parents with children ages 10 to 35 months reported unmet needs for anticipatory guidance. In a 2000 study, Schuster et al. asked a nationally representative sample of 2017 telephone respondents about six topics recommended in *Bright Futures*. Parents reported that they had not discussed the following with their clinician: newborn care, 38%; crying, 65%; sleep patterns, 59%; learning, 77%; discipline (6 to 36 months of age), 75%; and toilet training (18 to 36 months of age), 66%. Thirty seven percent of those surveyed indicated that they did not discuss any of the topics in question. Among parents who had not discussed a particular topic, those who indicated that they could

use more information on the topic ranged from 22% for newborn care and crying to 55% on supporting learning. Similarly, Bethell et al. (2004), in the aforementioned examination of data from NSECH, found that 94% of parents reported one or more unmet needs for parenting guidance, education, and screening in one or more of the content of care areas evaluated. In Schuster et al. (2000), those who had discussed more anticipatory guidance topics were more likely to report that they had received excellent well child care. Interestingly, those who wanted more information on more topics said that they would be willing to pay extra to receive the information.

Quality of Care: Duration of Well Child Visit

Longer visits are associated with more anticipatory guidance provided (Halfon et al., 2011). According to data from NSECH, longer visits are also associated with more psychosocial risk assessment and higher family-centered care ratings (Halfon et al., 2011). Visits greater than 20 minutes in duration are also associated with 2.4 times higher odds of receiving a developmental assessment, 3.2 times higher odds of recommending the clinician, and 9.7 times higher odds of having enough time to ask questions (Halfon et al., 2011). This is in sharp contrast to the only 7.2 anticipatory guidance topics, for a mean of 42% of those recommended by *Bright Futures,* covered in an average 20.3 minute well child visit (Norlin et al., 2011). Additionally, according to NSECH data, nearly half (47.1%) of parents surveyed reported spending only 11-20 minutes with the clinician at their last well child check, and one third reported spending less than or equal to 10 minutes (Halfon et al., 2011).

Using published and estimated times per service to determine the physician time required to provide all services recommended by the U.S. Preventive Services Task Force (USPSTF), at the recommended frequency, to a patient panel of 2500 with a nationally representative age and sex distribution, Yarnall et al. (2003) concluded that 1773 hours of a physician's annual time, or 7.4 hours per working day, would be needed for the provision of preventive services. There is simply not enough time in a pediatric health care provider's working day to meet all well child care guidelines within the current practice model. Group well child visits, lasting from one to hours, are a solution to visit duration.

Program Development: Group Care

Group visits, also known as shared medical appointments, are one innovation of care aimed at improving anticipatory guidance, visit duration, social support, and provider productivity and efficiency. Group visits enable a clinician to meet the needs of multiple similar members simultaneously.

Group visits differ from individual medical visits particularly in the participatory communication style and supportive environment within which they are conducted. Watts, Gee, O'Day, Schaub, K., & Lawrence et al. (2009) described the role of nurse practitioners (NPs) in group visits based on the chronic care model. Watts and colleagues explained that the role of the clinician in a group visit is that of a facilitator; the goal is information exchange rather than information provision by the healthcare professional. The group dynamic is patient-centered and based on peer

support. In a landmark review of group well child visits, Osborn and Woolley (1981) also described how the context of group visits differs. In their study of 11 groups, led by both physicians and NPs, less time in group was spent discussing physical aspects of care, while more time was spent discussing the infant's daily care and more personal issues such as family stress, the father's role in raising a child, sibling reactions to the infant, and maternal depression. In another foundational group well child study, Dodds et al. (1993) observed that families took a more proactive role in group visits, more frequently initiating anticipatory guidance topics in group well visits than in individual visits. Furthermore, more content was covered in each anticipatory guidance category, including behavior and development, nutrition, family and parenting, sleep, safety, immunizations, and child care providers. Mothers from the Osborn and Woolley study (1981) reported that they preferred group well child visits because of the reassurance found in observing the range of normal development among similar age infants, hearing questions asked by other mothers, and because of sharing common experiences. According to focus groups of low-income parents, group well child visits are viewed as "empowering," and a source of social support and mutual learning from other parents (Coker et al., 2009).

In a qualitative review of group visit literature, Jaber, Braksmajer, & Trilling (2006) concluded that the data are sufficient to support the effectiveness of group visits in improving patient and physician satisfaction, quality of life and quality of care, and to decrease emergency department and specialty visits. This conclusion was echoed by 18 key stakeholders including chief medical officers and medical directors,

who reported that group visits are likely a more effective way to provide anticipatory guidance and behavioral and developmental services (Coker et al, 2012).

Stakeholder Perspectives: Patient Satisfaction

Patient satisfaction is reported to be high across the span of group visits. In their experience with family physician and NP co-led group visits for asthma, lipid management, and osteoporosis, Jaber, Braksmajer, & Trilling (2004) concluded that patient satisfaction with the programs has been high. Noffsinger and Atkins (2001) piloted drop-in group medical appointments (DIGMAs) for adults and also reported patient satisfaction as "very high." In a study of WellBaby Plus, a program that included group well child visits and home visitation, program participants reported greater satisfaction with their care than matched comparison families (Rushton et al., 2015). Osborn and Woolley (1981) reported equal satisfaction between group and individual well child care participants, but only 1 out of 42 group participants indicated that she would prefer her child be seen individually, and 8 out of 11 groups requested that providers continue the group setting after the study protocol concluded. Similarly, out of 28 surveys from 7 families who participated in a series of group well child visits run by pediatric residents, all responded that they would recommend group visits to their friends or families (Saysana & Downs, 2012). Twenty-seven out of twenty-eight indicated either agree or strongly agree to measures of satisfaction, understanding the usefulness of information presented, having their questions answered, and having time to ask questions. Page et al. (2010) described WellBabies, a new model of group well-child care that they implemented. Eleven women who had

participated in the group were interviewed, and all had largely positive reactions to the program. The five themes undergirding their satisfaction included mutual support within the group, developmental comparisons among infants, learning from others, more parental involvement in the child's care, and more relaxed, personal time spent in the visit. All 11 of these women indicated that they would choose group visits for a future child.

Evaluation: Clinical and Child Outcomes

When Jaber et al. described their experience with group visits for adults with chronic illness in 2004, they indicated that although their experience with group care provided evidence of the feasibility of this practice model, they needed to refine the processes of care before measuring the impact of the program on hard outcomes. Pediatric studies, however, have been reporting outcomes since the outset. Osborn and Woolley reported in 1981 that parents of children who were enrolled in group well child care completed more well child visits, sought less advice between visits, and were more likely to state that their children had not been ill. In 1997, Rice and Slater reported that parents whose children were enrolled in group well child care were at least as likely to acquire knowledge of childcare and development. They also tended to recover faster from postpartum depression and better manage minor illnesses. Taylor, Davis, and Kemper specifically studied group well child visits in high-risk children, and determined that developmental outcomes and maternal-child interaction in those who participated in groups was at least as good (1997). However, in another study, they found that there was no effect of the format of well child care

on determining maternal outcomes, including sense of competence and social isolation, in high risk mothers (Taylor & Kemper, 1998). Ultimately, health care utilization and health status in high-risk children participating in group well child care was similar to those participating in individual care, leading the Taylor et al. teams to conclude that it is a viable format in this population (Taylor et al., 1997).

More recent studies of group well child care have also reported specific outcomes. Page et al. (2010) reported that 11 of the 11 babies in WellBabies were up to date on immunizations at one year of age (compared to their practice immunization rate of 95%). Rushton et al. (2015) reported that patients enrolled WellBaby Plus were more likely to attend all of their well child checks, more likely to be fully immunized, less likely to be overweight, and parents had a greater recall of anticipatory guidance received.

Stakeholder Perspectives: Benefits to the Practice

Group well visits are beneficial not only for patients, but for the practice providing them. Providers are able to improve their productivity and efficiency, report satisfaction with the experience, and are able to retain more patients.

Efficiency.

In their landmark study, Osborn and Woolley (1981) concluded that group well child visits are efficient, requiring no more provider time per pair (mother and child) than individual visits, and at no income loss for the practice. Dodds et al. (1993) also concluded that in group well child visits, providers were able to cover

more of the AAP recommended anticipatory guidance topics with no additional time required per patient. In Noffsinger and Atkins' DIGMAs, in the four groups led by four physicians at two different sites combined, the DIGMAs occupied only 5.5 hours of physician time (2001). These same physicians would only have been able to see 16.3 patients during individual visits, but in the pilot DIGMA sessions, they saw 41.8 patients. This represents an average increase in efficiency of 256.4%.

Satisfaction.

Furthermore, Noffsinger and Atkins reported that all four of the physicians who piloted the DIGMAs were "highly satisfied" with their program (2001). In an early study on group well child visits, Rice and Slater (1997) also concluded that child health supervision is a "pleasant and effective" method of health care delivery.

Retention of patients.

Clinicians also benefit when their patients are satisfied, and one way that patients signal their satisfaction is by staying with the provider or the practice. Patient retention is important for morale, reputation, and the bottom line. Among the first 21 participants in WellBabies, 17 (81%) remained in the practice beyond one year, compared to 26 (62%) of a randomly chosen comparison group who received individual well child visits (Page et al., 2010). Notably, the four patients who left relocated out of the practice area.

Summary

Changes in family dynamics, child supervision policies and advice, and reimbursement structure have necessitated redesign of how we provide well child care. Health care reform has also allowed us to provide more and better well child care, targeting previously missed ages such as one month of age, a time of rapid physical and developmental changes and significant parental inquiry. In a review of the literature, group visits have been shown to be effective in managing care ranging from chronic illness in adults to preventive care in children. Group visits are satisfactory to health care providers because they allow increased efficiency and productivity, enabling the clinician to see more patients in the same amount of time and to cover more anticipatory guidance content. Group visits are also satisfactory to patients, who enjoy the longer, more relaxed visit, the social support, and the increased involvement in care and information exchange. Child developmental and clinical outcomes have been shown to be at least equivalent, and generally superior, among children who receive their well child care in a group format. There are significant gaps in the timeline of group well child visit studies, from 1981 to 1993 and 1997, and not again until 2010. Previous studies commonly investigated socioeconomically high risk patients, and/or have looked at group well child care in combination with other interventions, such as home visits. Additionally, there are no studies available describing the impact of group well child visits with a particular age group, such as the vulnerable and often missed one-month-old interval. There are also

no studies evaluating the process of new group well visits from a 360-degree feedback perspective. This study aimed to address those gaps.

Chapter 3: Methods

Research Design

This study was a process evaluation, based on 360-degree feedback, of the development of a new group well visit for one-month-old infants, at their current pediatric practice.

Subjects and Setting

Subjects include a convenience sample of current patients and staff from a large, independent private practice and Patient-Centered Medical Home located in an inner-ring suburb of a medium-sized Midwestern city. The one month group well child visits (hereafter, "group visit(s)") were conducted in one to two groups biweekly, including two to six mothers and their infants, in the conference room of the aforementioned practice.

Sample Recruitment

The entire office staff was educated about the one month group visits prior to launch at an all-staff meeting, and the Pediatric Nurse Practitioner (PNP) who served as group facilitator also sent out an informational email detailing each department's specific role in making the group visits successful. Potential patients were recruited at lactation visits and newborn well child checks. Flyers were also hung on the wall in each exam room marketing the groups.

Planning task force.

A planning task force began to meet about two months prior to group launch. The group consisted of: the pediatrician founder of the practice; the PNP group facilitator, who is trained in group facilitation by Centering Healthcare International (CHI); a practice FNP who attended a two-day workshop on group visits; the RN telephone advice nurse and internationally board certified lactation consultant (IBCLC) who served as group co-facilitator; two practice administrators, one of whom also attended the two day group visit workshop, and another who is the practice IT manager; the lead Patient Services Representative (PSR); and a lead medical assistant (MA). This group developed the general objectives for group visits, which included delivering high-quality well child care as guided by *Bright Futures* (2008) standards. The group also developed the following specific objectives:

1. To screen every mother for postpartum depression, using the Edinburgh Postnatal Depression Scale (EPDS; Appendix E).
2. To provide assessment of and support for breastfeeding when applicable.
3. To provide enhanced anticipatory guidance in the areas that were deemed by the task force as commonly of concern at one month of age, including skin care and rashes, feeding and sleeping issues, stooling changes, and soothing a fussy baby.
4. To provide an open environment where mothers are comfortable asking the care team questions.

5. To provide care within a socially supportive environment, wherein mothers can discuss with and learn from one another.
6. To streamline care, increasing the efficiency and reducing the burden on staff as possible.
7. To encourage high levels of satisfaction in both mothers and staff.
8. To provide an open loop for feedback from both mothers and staff.

The planning task force, led by the PNP group facilitator, also developed the specific protocol for group visits and revised the protocol as needed in order to more effectively meet objectives or logistical concerns and as indicated by feedback received. The group remained in communication via an email group consisting of all group members.

Inclusion and Exclusion Criteria

To meet inclusion criteria, an adult needed fit into one of the following mutually exclusive categories:

1. A mother of an infant aged three to six weeks ("one month") who participated in the group visit; *role: accompanied infant to well visit, participated in group discussion.*
2. the PNP group visit facilitator; *role: examined all infants and directed their care; led group discussion.*

3. the Registered Nurse (RN) group visit co-facilitator; *role: reviewed paperwork from clipboards, as detailed below, with mothers; helped to develop feeding plans; helped to lead group discussion.*
4. the group visit medical assistant (MA); *role: set up the exam area in the conference room prior to group weekly; escorted mothers and infants from the waiting room to the conference room; obtained length and weight on each infant; provided instruction to mothers on the flow of the visit upon entering the conference room.*
5. any patient service representative (PSR), also referred to as reception staff, who had any interaction with/responsibility for the group visit; *role: scheduled group visits in person or by phone; checked patients in and out of visits; provided clipboards to mothers arriving for the second weekly group as applicable.*
6. the administrator responsible for the group visit. *role: set up and tore down the conference room for group weekly; facilitated execution of changes to the process as indicated.*

Although no exclusion criteria for participating in group were specifically listed, patients who were acutely ill would have been advised not to participate. Additionally, a patient with serious, complex, chronic medical needs would probably not have been well-suited to participate in a group visit for well care; this situation did not occur during the study period. Finally, fathers and other support persons were

welcomed to attend group, but did not complete a survey as part of the 360-degree feedback process.

Human Subjects

There are no human subjects involved in this study as anonymous data was retrospectively analyzed. The CWRU IRB determined that the protocol did not fit the definition of human subjects research, and does not require any further IRB review or approval. Additionally, all infants and their mothers participating in group visits were provided with high quality, courteous care guided by *Bright Futures* standards.

Instruments

The pediatric practice created surveys for its own its use as part of its continuous improvement (Appendix A). Content validity was verified by collaboration with content experts; the PNP certified in group facilitation by CHI, the pediatrician practice founder and president, a PhD-prepared experienced PNP, and a DNP-prepared program evaluation expert. The surveys were remotely modeled after the evaluation tool used by Centering Parenting, a well-established model of group care for mothers and infants (2012).

The brief surveys collected self-reported anonymous data at the conclusion of each weekly visit from all stakeholders involved in the process, as specified in inclusion criteria above. The surveys include 2 to 9 questions, answered on a Likert scale, to capture the objectives established for the group visits prior to launching, as detailed below. They each conclude with two open-ended, qualitative questions in the

form of: 1) What is one thing you really liked? And 2) What is one thing we could do differently or better?

Concepts Measured

Mother surveys measured the following aspects of the group visit: screening for postpartum depression; social support; anticipatory-guidance; patient-centered care; clinician-patient relationship; breastfeeding; and overall satisfaction with care. PNP surveys measured anticipatory guidance, workload, and satisfaction. RN co-facilitator surveys measured anticipatory guidance, breastfeeding support, workload, and satisfaction. MA surveys measured workload and satisfaction. PSR surveys measured workload. Administration surveys measured perceived benefit and workload. All surveys measured the overall satisfaction component and areas for improvement qualitatively.

Procedure

Groups began at 1 p.m. +/- 2:40 p.m. biweekly, and were scheduled to last for 75 minutes. 1:00 p.m. was chosen as the start time because it directly followed the PNP's lunch break, removing the risk of imposing patient delays. Reception staff filled the 1:00 p.m. group first, then began filling the 2:40 p.m. group if indicated by enrollment. On group weeks, each mother, her one-month-old infant, and support person(s), if applicable, were escorted from the practice waiting room to the nearby conference room, by the weekly medical assistant. The MA helped the mother to unload her belongings onto a chair, and explained the flow of the visit, prior to taking

infant and mother and/or support person to the weight station just outside the conference room, where weight and length would be obtained.

For the first several months, all mothers were given a clipboard upon arrival into the room. Then, in response to a suggestion by the medical assistant, mothers in the second group were given clipboards by reception staff upon check-in. The clipboard contained a group visit overview (Appendix B), confidentiality sheet (Appendix C), feeding screening tool (Appendix D), the Edinburgh Postnatal Depression Scale (EPDS; Appendix E), and the survey. Instructions on the survey requested that mothers complete it at the conclusion of the visit. Mothers were asked to complete the paperwork on their clipboards and to write down their questions, if applicable, on a large easel in the room, while the PNP called one infant and their parent(s) at a time in rotating fashion to a designated exam area in the corner of the conference room. The exam area consisted of a changing table with clean exam paper for each patient, examination tools, two chairs for a mother and support person to sit in, and a sink for hand hygiene. Some privacy was afforded by distance from the circle of chairs used for group discussion, and by the easel, which helped to partially block the exam area from view. Each infant received a full physical exam by the PNP, who also reviewed growth and specific medical needs with the parent(s) if applicable.

Following infant exams and completion of paperwork, the PNP rejoined the circle of chairs with the mothers and RN co-facilitator, and began group discussion. The goal was for group discussion to begin no more than 20 to 30 minutes after group start time; if necessary, remaining infants were examined following group discussion.

Discussion varied somewhat according to the questions written by parents on the easel, as well as those asked verbally. However, in each session, the PNP and co-facilitator specifically addressed concerns common to the one month period, including feeding, sleeping issues and safety, skin care, fussiness, stool pattern, and to call for fever or poor feeding. Portions of the *Happiest Baby on the Block* DVD (Karp & Montee, 2006) were also shown to supplement the discussion on fussy babies.

At the end of the visit, the PNP requested that mothers place their completed surveys in a pile face down on the conference table. The MA, reception staff, administrator(s), PNP, and RN co-facilitator were delivered surveys to their clinical areas, and requested to return them to the red envelope located on the researcher's desk.

Answers to evaluation questions were found by retrospectively analyzing anonymous data from all survey sheets collected by the practice through the first six months of group well visits.

Data Analysis

In order to preserve objectivity and anonymity, data from the surveys was entered by a third party unrelated to the investigator or her committee. Descriptive statistics including percentages and frequencies were performed on all survey Likert scale scores using SPSS. Additionally, background data were collected from the practice EMR and reported as descriptive statistics. This included the total number of mothers who participated in groups, the average number of mothers per group,

anonymous demographic data including primipara or multipara and insurance status, and how many patients participated compared to how many were eligible.

Qualitative data were coded by the researcher using qualitative content analysis (Elo & Kyngäs, 2008), and confirmed with two members of her research committee for interrater reliability. Inductive content analysis was used in order to move specific quotes from staff and mothers into more general themes if applicable (Elo & Kyngäs, 2008).

Q-1. How do group-based well visits for one-month-old infants impact the workload/efficiency of office staff? Descriptive statistics on workload questions of surveys from all office staff in sample. Qualitative analysis of staff responses to "one thing you really liked" related to workload or efficiency.

Q-2. How do group-based well visits for one-month-old infants affect the quality of patient care? Descriptive statistics on scores from mother, RN co-facilitator, and PNP surveys measuring breastfeeding, anticipatory guidance, postpartum depression, patient-centered care, and clinician-patient relationship domains, and perceived benefit on administration survey. Qualitative analysis of mother or staff responses to "one thing you really liked" related to quality of patient care.

Q-3. How satisfied are (a) mothers and (b) office staff with group-based well visits for one-month-old infants? Descriptive statistics on satisfaction scores from all members of sample. Qualitative analysis of mother or staff responses to "one thing you really liked" related to satisfaction.

Q-4. Are there changes that can be implemented within the process in order to improve quality, workload/efficiency, and/or satisfaction? Qualitative analysis of mother and staff responses to "one thing we can do differently or better."

Chapter Four: Results

The purpose of this study was to evaluate the process of creating a new group well visit for one-month-old infants in a large, independent private practice and Patient-Centered Medical Home in an inner ring suburb of a medium-sized Midwestern city. The study aimed to answer evaluation questions related to workload, quality of care, satisfaction, and potential improvements, by retrospectively analyzing 360-degree feedback provided by mothers of patients who attended the group from its launch in December 2014 through June 2015, and staff who were involved with visits during that time frame.

Description of Sample

Eighty-one mothers participated in 19 groups during the survey collection period, representing an average of 31.1% of newborns born to the practice monthly. All 81 mothers returned surveys, for a 100% response rate. According to data from the practice EMR, there was an average of 4.26 mothers per group, and the average percentage of first-time mothers in a group was 79.3%. The average percent of patients eligible for VFC (Vaccines for Children, a federally funded vaccine program extended to patients covered by Medicaid or uninsured) was 3.7%; the remainder of patients were privately insured. Practice data on the overall rate of VFC newborns is not currently being collected; the overall practice Medicaid rate for all ages is 12%, Surveys were completed anonymously, and no other demographic data was collected or will be reported.

One MA was assigned to each group visit; a total of 2 MAs participated over the course of the survey collection period. An MA was handed one survey for each group they coordinated (on a 2-group day, the MA would be given 2 surveys), and a total of 18 MA surveys were returned, for a response rate of 94.8%. Three total administrators participated over the course of the survey collection period, with a maximum of two possible per group, for a total of 15 surveys completed. The response rate is unable to be calculated as it unclear how many total administration surveys could have been completed. One NP conducted the group visits, and a total of 19 surveys were completed, for a 100% response rate. Six PSRs could have potentially interacted with group visits; each week, the NP researcher gave one survey to each PSR and requested that she complete it if she had participated with group that week. A total of 48 surveys PSR surveys were completed, and the response rate also cannot be calculated for this group. A total of two RNs co-facilitated group visits, with one RN in each group, and the RN was also given one survey for each group that she co-facilitated. A total of 16 RN surveys were returned, for a response rate of 88.9%.

Major Study Variables

Workload/Efficiency

As shown in Table 1, the majority of PSR and MA surveys reported that group visits made their job about the same, with the remainder indicating that group visits made their job easier. The majority of administrator surveys also indicated that

group visits made their job about the same, but unlike the PSR and MA surveys, the remainder of administrator surveys indicated that group visits made their job harder.

Additionally, all PSR surveys reported agree or strongly agree that it is easy to schedule group visits. Similarly, all MA surveys reported agree or strongly agree that providing group-based well child care makes good use of their time.

Workload was measured on the RN co-facilitator survey by questions that related to other roles performed by the RN in this practice: telephone advice nurse and lactation consultant. As shown in Table 2, all RN surveys indicated agreement to covering content in the group well child visit representative of phone calls received at the same age, and to being able to provide lactation support in the context of the group well child check.

Workload was measured on NP surveys by questions about content that could be covered in a one month group well child visit, and as compared to the NP's role outside of group. As shown in Table 3, all NP surveys indicated strongly agree to being able to address content at the one month well child check that cannot always be covered at the newborn or two month well child check, and to being able to address concerns at the one month well child check that are commonly seen at ill visits around this age. However, NP reports were not universally in agreement on measures of being able to successfully meet the objectives of the visit within the time constraints.

Group visits did enhance the productivity of the NP. According to practice protocol, the NP would have been able to see a maximum of 4 individual well child checks in 80 minutes, whereas she could see up to 6 babies in 75 minutes of scheduled time for the group well child visit. This represents a maximum increase in efficiency of 160%. Accounting for recovery intervals between and after 2 groups, the NP could see up to 12 patients in 2 groups in the 210 minutes allotted, for an average of 17.5 minutes per well check. According to practice scheduling protocol, including recovery breaks, the NP could see up to 8 individual well child checks in 210 minutes, for an average of 26.25 minutes per well check. This represents an increase in efficiency of up to 150% for 2 full groups. On average, there was a 106.5% increase in NP efficiency in the first 6 months of groups.

Workload-related staff responses to the open-ended question "What is one thing you really liked?" referred to process objectives. MAs reportedly liked the arrival process with patients arriving close together and the group process running "smoothly." Similarly, administrators indicated liking the process, which they also noted "runs smoothly," and appreciated improvements made upon the set-up process as the groups progressed. There were only a few PSR responses related to workload on this question, but responses included seeing more patients in the same time frame and that "they are very easy to schedule." The NP reported a positive impact on workload when the group was 4 to 5 babies, noting that a group of 4 is "the ideal size" and a "good discussion size," and "5 seems to be the max we can comfortably accommodate in a reasonable time frame." There were no RN responses to "one

thing you really liked" related to workload; however, there were several workload-related responses to "one thing we can do differently or better," as detailed below.

Quality of Patient Care

Quality of patient care was measured by postpartum depression screening, social support, information exchange and anticipatory guidance, patient-centered care and clinician-patient relationship, breastfeeding and lactation support, and benefit to the practice.

All mothers who attended the group well visit were screened for postpartum depression by completing the Edinburgh Postnatal Depression Scale (EPDS). This score was entered onto each patient's progress note in the EMR by the RN co-facilitator, and if omitted, was cross-checked by the NP and entered. However, on surveys, 73, or 90.1% of mothers indicated yes to being screened for postpartum depression today, while 2, or 2.5%, indicated no, and the remaining 6, or 7.4%, were unsure. Regarding social support, 71 out of 81 mothers, or 87.7%, indicated that other moms talked to them, and that there was socialization within the group. Nine, or 11.1%, responded no, and one mother did not respond.

Patient-centered care, clinician-provider relationship, and information exchange were measured on a 5-point Likert scale, where 1 represented strongly disagree, and 5 represented "strongly agree." As shown in Table 4, the mean scores for feeling comfortable asking the care team questions, having all the questions that were asked answered, and receiving enough information to care for my baby well,

were 4.78, 4.72, and 4.64, respectively. As shown in Table 5, all mothers indicated agreement to feeling comfortable asking the care team questions, and all but one mother indicated agreement that all questions asked were answered. All but one mother indicated agreement that she received enough information at the appointment to take care of her baby well; the remaining mother was unsure. As noted above, all NP surveys indicated strongly agree to being able to address content at the one month well child visit that cannot always be covered at the newborn or two month well child check, and to being able to address concerns at the one month well child visit that are commonly seen at ill visits around this age.

Measures of breastfeeding are shown in Table 6. While 66.7% of mothers reported that they were exclusively breastfeeding their babies, all mothers who responded indicated that they had enough support from their care team to breastfeed their baby if they want to. Additionally, as noted above, all RN surveys indicated agreement to being able to provide lactation support in the context of the group well child check.

All administration surveys reported either agree (11, or 73.3%) or strongly agree (4, or 26.7%) that providing group-based well visits is beneficial to our practice. There were no Likert scale items on the PSR or MA surveys that directly measured quality of care.

In response to the “one thing you really liked,” quality of care responses indicated both process and outcome measures. The MA responses were process-

oriented and referred to special features of the group, such as not having to wait in the waiting area, which "makes the parents more relaxed," as well as snacks. PSR responses related to quality referred to social support, including "building friendships, helping nervous (new maybe) moms," "community interaction," and "community based." One PSR noted that "there were several moms setting up 'play dates,' building friendships!" PSRs also commented on the improved anticipatory guidance and information exchange, citing the opportunity for parents to go over questions together, to "ask questions in between visits," and noted the "interaction between patients and staff." One PSR summed it up with, "think it's a great idea—especially for first time moms."

Administration responses were outcome-oriented and referred to benefits to patients, such as "it makes parents feel confident and they are not alone," "knowing moms have support," and "knowing we are making a difference in a unique way." The administrators also indicated liking the specific NP group facilitator. The NP responses related to quality included being able to answer questions and provide anticipatory guidance, with answers such as "capturing things that could have slipped through the cracks," and "lots of questions from group members means lots of content addressed." The NP also enjoyed "meeting the needs of parents," and commented several times about the "differences" and "variety" both represented and respected among parents, including feeding practices.

Similarly to the PSRs, the RN responses related to quality of care also largely referred to the social support aspect. The RN noted that she "enjoyed hearing the

families interacting," and noted "mothers talking with each other more today, offering each other support," and that it is a "time for mothers to feel like they are not alone." The RN indicated that the informal nature of the group helps to facilitate this interaction. She also noted that "mothers seem comfortable asking questions [and] comfortable in the setting." Finally, the RN mentioned an adaptation that she had made in the process—"talking about feeding with moms on a more one-on-one basis," in response to her perception that "mothers seem more reserved to talk about breastfeeding in a larger group, especially with dads involved"—in order to improve the quality outcome of breastfeeding support.

Mother responses related to quality of care commonly centered on improved anticipatory guidance and information exchange, which they referred to as "advice," and "info" or "information," and one mother noted, "good info to increase my confidence in parenting." Mothers also liked the open "discussion" and "dialogue" between parents and providers, and hearing other parents' questions, which several mothers noted, "I hadn't yet thought of" or "I may have forgotten to raise." A few mothers noted that this was facilitated by the longer group time. Many mothers particularly enjoyed the guidance from the *Happiest Baby on the Block* DVD (Karp & Montee, 2006). Mothers also commented on the socialization aspect, and referred to the group setting as "intimate," "open," "warm and comfortable," and "friendly." Similarly to the NP, one mother also noted the mutual respect about feeding practices: "…everyone was open with [breastfeeding] or formula." Mothers also enjoyed the opportunity for a physical exam and growth check and as well as the specific care

team, whom they said “put worries at ease” and were “very thorough” and “wonderful!”

Satisfaction: Mothers

Maternal satisfaction was also measured on a 5-point Likert scale, where 1 represented strongly disagree, and 5 represented strongly agree. The mean score for being satisfied with receiving their baby’s care in the group setting was 4.41. As shown in Table 7, the majority of mothers indicated agreement to being satisfied with receiving care in this type of setting, and to participating in group care for their babies again if given the chance.

In mothers’ responses to “one thing you really liked,” themes underlying satisfaction included validation of their experience as normal, as well as outcomes also measured in quality of care, including improved anticipatory guidance, the group atmosphere, a longer visit which including “open discussion” and “plenty of time to ask/answer questions,” and the clinician or care team. Only one mother reported liking snacks, one of the extra features thought by the planning team to enhance patient satisfaction.

Satisfaction: Office Staff

Table 8 describes the responses of MAs, RNs, and NPs, the staff members who were surveyed about satisfaction with their role in providing group-based well child visits. The majority of both MA and RN co-facilitator surveys indicated strongly agree to being satisfied with their role in providing group based well visits,

while the remainder indicated strongly disagree. All NP surveys indicated agree or strongly agree to being satisfied with providing group-based well care.

In response to "one thing you really liked," administrators, PSRs, and the NP all reported satisfaction in helping patients/parents and meeting a need. Administrators and PSRs also reported satisfaction in parents' enjoyment and satisfaction with the visits. Administrators noted that "everyone who comes seems to enjoy the visits," and "everyone has said how much they have learned from group visits and how much they enjoy it." Similarly, PSRs noted that "everyone likes it!" and referenced mothers' excitement about the visits, and that "parents are happy when they leave [and] are here." Administrators and PSRs also referred to the growth and increasing attendance and popularity of the group visits, which a PSR called "very successful!" Similarly, the RN reported satisfaction in parent benefits, such as, "I enjoyed hearing the families interacting" and "there was more conversation this group which I think the group enjoyed." The group environment was also the underlying theme of NP responses regarding satisfaction. The NP referred to the "group dynamic," as "collegial," especially on weeks when mothers are "enthusiastic and engaged," and once when an involved grandmother particularly contributed to the group discussion. MAs did indicate any specific aspects of their satisfaction except those already mentioned in workload or quality of care.

Proposed Changes

The second open-ended question asked staff and mothers, "What is one thing we can do differently or better?" Answers were coded qualitatively by the researcher according to inductive content analysis (Elo & Kyngäs, 2008), and verified by two members of her research committee for interrater reliability. The answers were then grouped according workload/efficiency, quality of care, satisfaction, and "other."

Workload/efficiency.

Most of the staff responses to "What is one thing we can do differently or better?" related to the process and flow of the visits and its impact on workload. A few administrator responses referred to the set-up process, with suggestions including "better preparation/less people involved in set-up" and "we can be more organized and have only one person facilitate everything. Too many people were not communicating with every department involved." Similarly, one NP survey noted "Roles—knowing who to ask for what." There were no other suggestions regarding set-up or role delineation.

Responses from several groups centered on the arrival process. The RN had suggestions in general, while the MA and PSR suggestions focused more on the arrival of the second group, as detailed below. The RN co-facilitator suggested: "Figure out a way to balance all the responsibilities of the mother's upon arrival – undressing baby, completing forms, talking to NP about physical." Suggested on another RN survey was to "put minimal amount of paperwork on clipboard;" and on

another survey, “The mom’s are juggling getting baby undressed & filling out clipboards. Could they do paperwork first, then undress the baby? Once baby is undressed, they are usually crying. Perhaps starting with Happiest Baby Video, so they can practice soothing techniques during the group visit.”

Several responses were also related to time management with two groups, including the transition between group one and group two. As previously mentioned, the groups launched with one group well visit scheduled; that group quickly filled and a second group was added by group week two. An administrator suggested, “2 full groups—better time management.” More specifically, an MA stated, “overlap is difficult [with patients] arriving while group still in session,” and a PSR wrote “When the [first group] is done, should we bring [second group] in or wait? Don’t want there to be too much clutter.” In response to this situation, an MA suggested to “prepare for both groups so that when one is finished the overlap goes smoother.” At that time, the MA recommended having the clipboards and snacks fully prepared. Later, an MA, possibly the same one, suggested having the clipboards for the second group prepped in the front office, so that if mothers arrived prior to all group one mothers leaving, they could sit in the waiting room and begin the clipboard process. Although initially the planning task force had recommended avoiding the waiting room for group patients, it was determined that this impact on overall flow would be more beneficial.

There were also issues with scheduling brought up by several categories of staff. Scheduling the group visits was a new process. The NP’s schedule was blocked off for eight ten minute slots, and each patient was inserted into one ten minute slot.

At one early visit, patients reported that they had been told to come at the actual time of their slot, possibly due to the automated reminder system, rather than all patients arriving at 1 p.m. This concern was noted on MA and NP surveys. This issue was reconciled by a designated PSR doing reminder calls rather than having the automated reminder system contact group patients. Another minor scheduling issue raised by the NP included counting the mother of twins as "one" patient when factoring in group size – although she brought two babies, this group had a rare total of only 3 babies, which meant only 2 mothers in discussion. PSRs also reported their own concerns with scheduling, including "clarification on dates age for visits – confusing trying to be sure patients aren't [too] young/old." This was an area that required some reiterating, and interoffice messages were sent from the NP to the PSR group within the practice EMR, as well as in the one month email group, which contains the PSR lead who can re-train her staff as needed.

Scheduling also became more complex with the addition of the second group. Initially, the second group was not started until the first group was full. However, this resulted in lopsided groups, and the PSRs had to call a few people from group one and request that they move to group two. The administrators, NP, and RN referred to concerns with when and how to schedule the second group. Administrator suggestions included "have even groups [without] having to move people" and "make the groups more even." This was also brought to the attention of the one month email group, and the NP requested that the second group start to be filled once the first group was at four patients, which should prevent rescheduling of patients. This was a

satisfactory solution to all. However, the NP concerns of figuring out scheduling "given the back-up with 2 large, complicated groups" and in order to "best care for 2 large, complicated groups" remains outstanding. One NP suggestion included "I think 90 [minutes] would be helpful," and the RN noted, "2 full groups today, could use 30 minutes between larger groups"

Scheduling issues reported by the NP also included patients who reported being unsure of whom they were seeing (one patient was expecting and requesting to see a physician, rather than a nurse practitioner), and the duration of the appointment. A scheduling issue raised by the MA included what to do with patients who did not arrive to the visit in a timely fashion, or did not show up at all. It would be difficult to accommodate late arrivals without disrupting the entire group; yet given the age range for attending visits, and groups already at capacity, it was also possible that a patient would miss his or her opportunity to ever attend if not in the originally scheduled slot.

There were also several responses related to the general process during the group visit; most of these were raised by MAs. One MA survey requested a solution for mothers who want to breastfeed with privacy (outside of the group room) "and not stall the group or provider." Another MA survey suggested not requesting additional weights for a patient, which "got in the way with patient flow." Finally, the MA suggested revisions in where to refer mothers to change their babies, in order not to occupy the weight station or the changing table used for baby exams. Ultimately, this was taken to the one month group email by the MA, who after discussion with the NP, suggested a changing pad that could be placed on the conference table, cleaned

with a sanitizing wipe as necessary, and covered with a clean sheet of table paper for each patient. This was well received by the staff, purchased, and implemented promptly with great success.

The NP and RN both had suggestions about group size regarding workload. As previously mentioned, the NP and RN both indicated that five is an ideal number of couplets. NP responses included, " 5 seems to be the max we can comfortably accommodate in [a] reasonable timeframe (saw 5 today—some even came early—easy exams but lots of questions," "time constraints—very difficult to see 5 babies in 75 [minutes]" and "challenging to meet needs of all in time constraints with 6 babies." Similarly, the RN noted: and "6 mother/babies seems like 1 too many couplets." The RN stated, "feel like it is a little rushed," and the NP suggested to "streamline the process." However, the NP noted once that it is difficult to manage "flow" in a smaller group (actual size was not referenced; the smallest group was 2 mothers).

Improvements to the process following group were brought up several times by administrators only, who were responsible for returning the conference room to its original state. Administrators suggested to "let other people know when each group is over," "let people know when patients are gone," and "everyone cleans up room."

Quality.

There were no MA, PSR, or administrator suggestions for improvement that centered around quality of care. NP and RN suggestions related to quality overlap

with those related to workload. The NP stated things like, "challenging to meet needs of all in time constraints with 6 babies," "I felt I could give less individualized attention in larger group," and "having enough time for moms to really open up with 6 babies;" RN quotes included "feel like it is a little rushed," "I would like to see time for parents to talk more," and "have a format for covering the essential [anticipatory] guidance for this age." Both providers allude to a sense of compromised quality in the largest groups, and an apparent relationship between quality and time available or time management. The RN and NP also continually adapted according to their perceptions in order to improve quality as the groups progressed. The RN noted on one survey that she had been "talking about feeding on a more one on one basis because mother's seem more reserved to talk about breastfeeding in a larger group, especially with dads involved."

Mother suggestions related to quality were often conflicting. While several mothers had noted the *Happiest Baby on the Block* DVD (Karp & Montee, 2006) as one thing they "really liked," one mother suggested omitting the video because "it cut off the good [conversation]/group sharing," while another mother suggested using a big-screen TV. Maternal suggestions regarding group duration were also conflicting. Half of the parents who mentioned duration said a longer session would be more beneficial, which as noted above, is related to improved quality. However, the other half of mothers who commented suggested a shorter session. Finally, mothers varied according in their preference for asking questions versus receiving directed advice. One mother suggested "more directed Q&A," and another "more prompted

topics…rather than just questions." Conversely, two mothers requested that the NP cover more questions—even those raised by mothers in other groups.

Social support was also a category related to quality raised by mothers as "one thing we can do differently or better." Mother responses included, "I'd love more socializing [with the] other moms," "more interaction between participants," and even "if socialization is intended, that was unclear."

Satisfaction.

In response to the "one thing we can do differently or better" question, the MA and PSR surveys did not have any specific suggestions for improving their own satisfaction. Several of them noted "N/A" in this area. One PSR noted, "So far, so good. No complaints." Similarly, one administrator survey indicated "nothing," while two reported "no more surveys" and "not having surveys." The NP and RN also did not have any specific suggestions for improving their satisfaction.

Mother suggestions for improvement centered around privacy, comfort, expectations, and socialization. Some mothers suggested more privacy or individual attention, including a private physical screening in a separate room, "submitting questions on cards/paper before or anonymously," "no men," or even "get the option to do a single visit if requested."

Related to satisfaction, a few mothers suggested making certain aspects of the group more comfortable or special, including offering different snack choices and more comfortable accommodations, which ranged from the temperature in the room

to breastfeeding pillows to a place to change babies. Finally, several mothers commented on having unclear expectations for the visit, and requested "better description/explanation of the [appointment] beforehand/while scheduling," "didn't realize how long appt would take," and "if socialization is intended, that was unclear." The NP and mothers also suggested a better description for mothers prior to group specifically about what the group entails. This includes details about the provider, how long the group is, and a better description of the group format and process. At the time of publishing, this is also being updated by the one month group visit task force, and this communication will be emailed to mothers who schedule one week prior to their group visit.

Of note, only 28 out of 81 mothers who returned surveys offered any feedback in the "one thing we could do differently or better" area. Of the 28 who responded, 17 mothers actually provided positive, rather than critical feedback in this area, such as "I believe this group is efficient & beneficial the way it is operating currently," "enjoyed everything," "nothing," and "nope, was great!"

Other.

There were certain suggestions for improvement that didn't fit well into any of the categories specified by the research questions, but should not be ignored. One category includes growth of the one month group well visits. Several PSRs suggested better marketing of the groups. These included things like "ask more if moms would like to participate," "marketing—a lot of parents just don't wish to schedule or feel

the visit is necessary," "provider marketing," and "maybe mentioning one month visit during prenatal and LC appointments." Additionally, several PSRs and an administrator recommended that more groups be offered; the administrator suggested considering an alternate day and "see what the parents think." At the time of publication, this is being taken into consideration, particularly after one month was filled to capacity even with a single group being added on the "off" week. The current protocol is to keep a slot of appointments open that could be used for a single group until one week prior; there is a designated PSR who will monitor the status of groups and either begin to book in that block, or open it back up to general scheduling at that time.

Analysis of Evaluation Questions

Q-1: How do group-based well visits for one-month-old infants impact the workload of (a) reception staff, (b) administrator(s), (c) the weekly medical assistant, (d) the RN co-facilitator, and (e) the PNP group facilitator?

This question was analyzed with descriptive statistics including frequencies; additionally, qualitative analysis of answers to the open-ended question, "What is one thing you really liked?" was included where applicable.

1(a): The majority of reception staff indicate that group-based well visits make their job about the same, while the remainder report that the visits make their job easier. All reception staff report that it is easy to schedule group-based well visits. PSR staff noted in open-ended questions that they liked how easy it is to schedule the

visits, and that more patients can be seen at the same time. Ultimately, the impact on workload or efficiency is either neutral or positive for reception staff.

1(b): The majority of administrators indicate that group-based well visits make their job about the same, although just over 25 percent indicate that the visits make their job harder. Of note, the administrator took on an extra responsibility, not part of her usual daily role, in setting up and tearing down the conference room for the group visit weekly. Administrators noted in response to the open-ended question that the process runs smoothly, from set-up through the group visit. Overall, the impact on administrator workload is generally neutral, but there is a measurable increase in workload that can be perceived by the administrator as making her job harder.

1(c): The majority of MA surveys also indicated that group-based well visits make their job about the same. The remainder reported that the visits make their job easier. The MAs also agreed or strongly agreed that providing group-based well child care makes good use of their time. In response to what they really liked, the MAs frequently noted that the visits run smoothly. Therefore, the overall impact on the workload of MAs as reported by MAs is also positive or neutral.

1(d): The RN co-facilitator surveys all reported that the content covered in the group well child visits was representative of the advice phone calls received for babies of the same age. In open-ended questions, the RN surveys specifically liked the open discussion and opportunity for mothers to ask questions. In response to the being able to provide lactation support in the context of the group well child check,

all of the RN surveys agreed. Therefore, the impact on the workload of the RN co-facilitator, whose role in this practice also includes telephone advice and lactation support, is also positive. The RN co-facilitator is able to multi-task and serve multiple patients in these capacities at the same time.

1(e): Similarly, NP surveys all reported strongly agree to being able to address content at the one month group well child check that cannot always be covered at the newborn or two month well child check, and all strongly agreed to being able to address concerns at this visit that are commonly seen at ill visits around this age. Therefore, the one month group well child visit also has a positive impact on the workload of the NP, who is able to increase her anticipatory guidance capacity within the context of a group well visit, and is able to streamline her work by addressing the concerns of several patients at once that might otherwise be seen in separate ill visits. Furthermore, NP productivity increased 160% in a group well visit with 6 babies compared to individual well checks for 6 babies. Accounting for recovery "breaks" per practice protocol, there was an overall increase in productivity of 150% for two full groups of 6 babies each, compared to seeing individual well visits during that same timeframe. However, while the efficiency of the NP is increased, the NP was unsure about 10 percent of the time that she was able to successfully meet the objectives of the visit within the time constraints. Especially in light of open-ended responses, the NP response to impact workload is overall positive, except in very large groups, where the load is at times excessive.

Q-2: How do group-based well visits for one-month-old infants affect the quality of patient care?

The group-based well child visits for one-month-old infants had a positive impact on screening for postpartum depression; all mothers who participated in the group-based well child visit were screened for postpartum depression, although not all mothers realized and subsequently reported that they were. The visits also had a positive impact on social support among mothers; the majority of mothers indicated that there was social support within the group. The social support aspect of the group was also mentioned in response to the question about what they really liked on surveys from administrators, PSRs, RNs, and mothers.

The visits also enhanced anticipatory guidance and information exchange. The NP strongly agreed that she was able to address content at the one month group well visit that she cannot always cover at the newborn or two month well child visits, as well as concerns that she commonly sees at ill visits around this age. Similarly, the RN agreed or strongly agreed that content covered at the visit is representative of many advice phone calls that she receives around this age. Mothers all agreed or strongly agreed to feeling comfortable asking the care team questions, and all but one agreed or strongly agreed that the questions they asked were answered. All but one mother reported agree or strongly agree to receiving enough information at the appointment to take care of her baby well. The remaining mother was unsure. In response to the open-ended question, many mothers cited features of information exchange such as having the opportunity to ask questions and to hear the questions of

others, having questions answered, and anticipatory guidance received from the NP, within the open discussion, or from the *Happiest Baby on the Block* DVD (Karp & Montee, 2006) as the one thing that they really liked.

Feeling comfortable asking the care team questions also helps to capture an aspect of the patient-clinician relationship. This was also reported by the RN and by mothers in the open-ended question, several of whom reported the Nurse Practitioner or the care team as the one thing they really liked.

Breastfeeding support was also enhanced within the group well visit. While 66.7% of mothers reported that they were exclusively breastfeeding their babies, 96.3% of mothers answered "yes" to having enough support from the care team to breastfeed their baby if they want to; the remaining 3.7% did not answer. Furthermore, all RN surveys reported agree or strongly agree to being able to provide lactation support in the context of the group well child visit.

Finally, the visits were universally viewed by practice administrators as beneficial to our practice, and in response to the open-ended question about what they really liked, being able to make a difference and benefits to the patients such as increased parental confidence were recurrent themes.

Q-3: How satisfied are (a) mothers and (b) office staff with group-based well visits for one-month-old infants?

3(a): Mothers were overwhelmingly satisfied with group-based well visits for one-month-old infants; 91.3% agreed or strongly agreed to being satisfied with

receiving care in this type of setting. Only one mother indicated dissatisfaction, and the remaining 7.4% were unsure. Interestingly, while 91.3% were satisfied with receiving care in this setting, 85.1% indicated that they would participate in group care for their babies again. This time, 12.3% were unsure, and the remaining 2.5% disagreed. Overall, these are very positive scores for mother satisfaction. Themes undergirding parental satisfaction in response to "one thing you really liked," included validating my experience as normal, the warm and respectful group environment, the open discussion, and a longer visit. Other components of satisfaction have been covered in the enhanced quality of care. As perhaps one of the strongest indicators of patient satisfaction, when asked, "What is one thing we can do differently or better?", 60.7% of the mothers who responded to the question wrote "N/A," "nothing," or provided some form of positive feedback.

3(b): Office staff scores were also strongly positive in satisfaction with group-based well visits for one-month-old infants. MA surveys indicated 88.9% strongly agree, RN co-facilitator surveys 93.8% strongly agree, and NP surveys 100% agree or strongly agree to being satisfied with their role in providing group based well visits.

In the open-ended question, administrators, PSRs, and the NP all reported satisfaction particularly in helping parents and meeting a need. MAs also reported really liking the parents being relaxed, and the PSRs noted parents' excitement and enjoyment with the visits. Both of these groups also cited satisfaction with the growth of the groups. RN and NP surveys reported liking camaraderie of the informal and

warm group environment, which the NP noted is composed of a variety of mothers who are respectful of differences.

Q-4: Are there changes that can be implemented within the process in order to improve quality, workload/efficiency, and/or satisfaction?

Quality.

NP and RN suggestions related to quality overlap with those related to quality and will be detailed below. Overall, the NP and RN expressed concerns that quality of care could be diminished in a large group (which they defined as six couplets), and that the time as allotted or as managed could also compromise quality. There were no other staff suggestions for improvement that centered around quality of care.

Mother suggestions related to quality of care were often conflicting. Many mothers cited the *Happiest Baby on the Block* DVD (Karp & Montee, 2006) as the thing they really liked, while one mother suggested omitting the DVD, and another suggested using a big screen TV. Parents who mentioned group duration as a proposed change were evenly split between requesting that the group be shorter or longer. Mothers were also divided according to their preference about questions, ranging from asking for more time to ask questions, to a more directed question and answer time, to receiving more directed advice from the NP, with fewer questions. One area that a few mothers agreed upon was a change for more socialization and interaction with other mothers. Similarly, the RN reported a desire for more time for parents to interact.

Workload/efficiency.

The majority of changes proposed by staff were process objectives focused on workload and efficiency. Staff including administrators had a few suggestions regarding the set-up process, and administrators and the NP also had a few suggestions regarding role delineation. The RN had suggestions about the arrival process in general, especially with balancing demands of the baby's check up with paperwork to be completed on the clipboard; the MA and PSR had suggestions about the arrival of the second group. This became an area of improvement once a second group was added, which started the second week of group visits. In response to PSR and MA questions and suggestions, a revised plan was developed and implemented for improving flow.

There were also several efficiency changes regarding scheduling. There were various scheduling issues and errors reported, including miscommunication of visit aspects to patients, inappropriately accounting for a mother of twins when determining group size, uncertainty about the age of babies who would qualify for the "one month" visit, and how to handle patients who arrived very late or never came. These questions and suggestions were also swiftly addressed and changes implanted as needed, often via communication with the one month email group. There were also complexities with scheduling the second group, once this became applicable. The administrator suggested a strategy for ensuring even groups without having to reschedule patients, and the NP and RN reported concerns with time allocation, particularly for two full groups. A solution was devised by the NP, in discussion with

the administrator and PSR lead, regarding when to schedule the second group to ensure more even groups. The time allocation, at time of publication, remains unchanged.

Most of the staff suggestions for changes regarding the process during visits were raised on MA surveys. These included how to handle mothers who want to breastfeed privately before group starts, not requesting additional weights on babies, and referring mothers to the appropriate location for diaper changes; all of these were noted in the interest of improved flow. Some of these suggestions, such as the diaper change, led to simple and practical solutions that could be easily implemented for improved efficiency and staff and patient satisfaction.

As previously mentioned, NP and RN suggestions related to workload and efficiency centered on group size. Both providers noted that five couplets is the ideal group size. This would improve workload for all staff except the administrator. However, regarding efficiency, 5 babies in a single group visit would represent a 133.3% increase in productivity over individual visits, as compared to a 160% increase with 6 babies in group. In 2 groups, accounting for recovery breaks, 5 babies in group is a 125% increase in productivity over individual visits, compared to 150% with 6 babies in group.

Finally, improvements to the process following group were raised several times by administrators, who requested being notified when group is over and having assistance with cleaning up the conference.

Satisfaction.

There were few responses to improvements related to satisfaction on staff surveys. Several MA and PSR surveys noted "N/A," and an administrator survey reported "nothing." Two administrator surveys did request "no more surveys."

Mother suggestions for improvement related to satisfaction centered around privacy, comfort, expectations, and socialization. According to mothers, enhancing their privacy, especially regarding breastfeeding or the infant exam upon request, would improve satisfaction. Some suggestions for improved privacy, such as no men in the visit, are not being considered at this time; additionally the suggestion for a single visit if requested is not congruent with the purpose of the group well visit. Mother suggestions, though few, for varied snack choices and more comfortable accommodations, can be adapted, and some already have been at time of publication. Another category of suggestions from several mothers in order to improve satisfaction that has already been adapted at time of publication includes better communicating all aspects of the visit prior to attendance, in order to ensure appropriate expectations.

Finally, as in several staff categories, there were many mothers who indicated that nothing could be done to improve their satisfaction; some even responded with positive, rather than critical feedback in this area.

Other.

There were changes that can be implemented within the process that emerged in qualitative analysis that do not necessarily fit the categories of quality, workload/efficiency, or satisfaction. These include suggestions to perpetuate the growth of the groups, raised on PSR and administrator surveys. Suggestions include improved marketing of the visits as well as offering more visits. This is also in process at the time of publication.

Summary

The purpose of this study was to evaluate the process involved in the development of a new group-based well child visit for one-month-old infants at their current practice; a large, private pediatric practice and Patient-Centered Medical Home. A process evaluation utilizing 360-degree feedback was performed in order to obtain well-rounded information from all stakeholders affected by the new program in the first six months of its launch.

Workload

The impact of the group well visits on the workload of office staff, including reception staff, administrator(s), the weekly medical assistant, the RN co-facilitator, and the NP group facilitator was measured by self-report on anonymous surveys. Overall, the impact of the group well visit on the workload of all office staff was either positive or neutral, although there was a segment of administrator reports that indicated the visits made their job harder. The group well visit for one-month-olds

particularly allowed the clinicians (RN and NP) to care for multiple patients simultaneously, improving efficiency. Both the RN and NP reported, however, that impact on workload sometimes became overwhelming when the group size was too large.

Quality of Care

The group well visits for one-month-olds also improved the quality of patient care. In Likert scale data and in open-ended feedback, mothers reported gains in anticipatory guidance, information exchange, and social support. The visits were also beneficial to the patient-clinician relationship. Additionally, all mothers were screened for postpartum depression at the visits, although not all mothers reported being aware of this. Mothers and the RN co-facilitator (who is also an IBCLC) also reported strong breastfeeding support within the group. Finally, the practice administrators reported that they perceived the group visits as beneficial to our practice.

Satisfaction

Mothers and office staff were also strongly satisfied with the group well visits for one-month-olds. Ninety-one percent of mothers reported satisfaction with receiving care in this type of setting, and 85 percent indicated that they would participate in group care for their baby again. Themes of mothers' satisfaction included validation of their experience as normal, the group atmosphere, hearing from other mothers, and the care team. Staff satisfaction scores ranged from nearly 89

percent to 100 percent on satisfaction with their role in providing group-based well baby visits. Staff reported finding satisfaction in making a difference and meeting a need, and in the satisfaction of parents and growth of the groups. The NP and RN also enjoyed the collegial and interactive group environment.

Improvements

The secondary purpose of this study was to utilize results in order to continually improve upon the process and to potentially guide the development of future group visits. In this area, open-ended feedback in response to "what is one thing we can do differently or better" is particularly helpful.

Workload/efficiency.

Responses related to the process and flow of the visits and its impact on workload comprised the majority of staff responses to this question. These included suggestions for set-up, the arrival process, time management with two groups, scheduling issues, the actual group process and flow, and group size. The transition from one group as initially planned to including a second group by the second week resulted in several challenges and areas for improvement. In other areas where suggestions were made regarding flow, changes were able to be promptly implemented in order to improve the process. Other suggestions, such as time management and group size, remain a work in progress.

Quality of care.

Group size was also reported by the RN and NP to possibly compromise the quality of care; both clinicians reported challenges with time management, patient interaction and socialization, and covering all of the planned content, particularly with two full groups.

Mother suggestions regarding quality were often conflicting, including use of visual aids, group duration, and information exchange in question and answer format versus directed advice. Additionally, mothers suggested that social support is an area that can be improved.

Satisfaction.

Staff reported very few specific suggestions for improving their own satisfaction, except for those already covered in workload or quality. MA, PSR, and administration surveys even indicated "N/A", or "nothing" in response to this question. Mother suggestions for improvement included more privacy, comfort, clearer expectations, and more socialization. Mothers, as well, frequently indicated "N/A" or provided positive, rather than critical feedback.

Other.

PSR and administration surveys also suggested strategies for continue to grow the successful group well visits, including improved marketing of the visits and adding more groups. This is already being implemented at the time of publication.

Chapter Five: Discussion

This study sought to evaluate the process involved in the creation of a new group well visit for one-month-old infants by retrospectively analyzing data provided in 360-degree feedback on anonymous surveys from all patients and staff affected by the new program. The researcher answered evaluation questions related to workload, quality of care, satisfaction, and potential improvements.

Overall, the impact of the group well visits on workload of staff was neutral to positive, and the efficiency of the NP who provided care was greatly enhanced. The visits also improved quality of care, particularly in the realms of postpartum depression screening, social support, anticipatory guidance and information exchange, patient-clinician relationship, breastfeeding support, and benefit to the practice. Satisfaction of staff and of mothers was high. Mothers particularly enjoyed the validation of their experience as normal, the warm and respectful group environment, open discussion, and a longer visit. Staff and mothers provided suggestions for improving the visits, some of which were helpful and implemented, some of which remain under consideration, and some of which are conflicting and cannot all be accomplished.

Relationship of Findings to Prior Research

Generally, the findings in this study were very similar to prior research. In Jaber et al.'s (2006) qualitative review of group visit literature, the authors concluded that the data are sufficient to support the effectiveness of group visits in improving

patient and physician satisfaction, quality of life and quality of care. That was certainly echoed in this process evaluation. One important distinction in comparing to previous studies, however, is the evaluation of this novel single group visit for a specific age group, while previous studies such as Dodds et al. (1993), Osborn & Woolley (1981), Page et al. (2010), Rushton et al. (2015), and Saysana & Downs (2012) evaluated a series of group well visits at several age intervals. Another distinction is that many previous studies, including [look up studies on hard drive] were conducting with Medicaid or otherwise high-risk patients, while the majority of patients in this study were covered by private insurance.

Q-1: How do group-based well visits for one-month-old infants impact the workload of (a) reception staff, (b) administrator(s), (c) the weekly medical assistant, (d) the RN co-facilitator, and (e) the PNP group facilitator?

Group visits have been shown to improve efficiency and productivity, and staff from this study including PSRs, the RN, and the NP reported such gains. Osborn & Woolley (1981) reported that group well child visits required no more provider time per pair than individual visits, and at no income loss for the practice. While income was not specifically investigated in the context of this study, according to practice protocol, the NP would have been able to see a maximum of 4 individual well child checks in 80 minutes, whereas she could see up to 6 babies in 75 minutes of scheduled time for the group well child visit.. Using the same calculations as Noffsinger and Atkins (2001), this represents a maximum increase in productivity of 160%, not as robust as the average 256.4% increase in efficiency that providers saw

in their DIGMAs. The NP and RN also reported being able to cover anticipatory guidance within the context of this visit that they would not otherwise be able to cover, or would need to cover within the context of unplanned ill visits or advice phone calls. This increased productivity and efficiency is similar to Dodds et al.'s (1993) findings, where more content was covered in each anticipatory guidance category in group well visits than in individual visits, and with no additional time required per patient.

No previous study has attempted to determine the effect of group visits on all stakeholders affected. In this study, administrators and MAs reported that the group visits made their workload about the same, while the PSRs, NP, and RN reported a positive impact on workload. However, as in Norlin et al.'s study with providers of individual visits (2011), the group visit providers reported feeling time constrained, despite improved efficiency and effectiveness within the group format.

Q-2: How do group-based well visits for one-month-old infants affect the quality of patient care?

Quality of care was measured in this study by postpartum depression screening, social support, information exchange and anticipatory guidance, patient-centered care and clinician-patient relationship, breastfeeding and lactation support, and benefit to the practice. All of these were positively impacted according to mothers' reports on Likert scale questions and the question about one thing they really liked.

No previous studies known to this author examined postpartum depression screening, breastfeeding or lactation support, or administration's perceived benefit to the practice in the context of group well visits. Rice and Slater (1997) reported that mothers tended to recover faster from postpartum depression when their children were enrolled in group well childcare, but this measurement would require a subsequent point of data collection and is not feasible in this study. Similarly, Osborn and Woolley (1981) reported that parents of children who were enrolled in group well child care sought less advice between visits and were more likely to state that their children had not been ill. While this cannot be determined by parental feedback immediately following group, the NP and RN planned the content of this visit according to what they had determined to be a need for this age group based on advice calls and common illness visits, with the goal of reducing unplanned phone calls and visits.

Mothers in this study echoed the parents in Radecki et al.'s (2009) focus groups, who suggested wanted reassurance about their children and their parenting skills, an unrushed opportunity to discuss what they determined to be priorities in well child care, and who desired a clinician who is child-focused and has a personable and respectful demeanor. All mothers surveyed in this study reported feeling comfortable asking the care team questions, and noted "great information in a caring and open environment" "staff put worries at ease," and "Nurse Practitioner was wonderful!" Radecki's focus group mothers also suggested enhanced exchange of information as important to improving well child care (2009). Similarly, in response

to “one thing you really liked,” mothers repeatedly mentioned the value of “dialogue” and “discussion,” describing the environment as “relaxed” and “intimate.” This is also congruent with Watts et al. (2009), who described the role of NPs in group visits as a facilitator, with the goal of information exchange rather than information provision by the healthcare professional. The enthusiasm of mothers in this study to ask questions also resonates with the Dodds et al. (1993) families who took a more proactive role in group visits, more frequently initiating anticipatory guidance topics than in individual visits.

In Halfon et al.’s 2011 study, longer visits were associated with more anticipatory guidance provided, and so the longer visit duration in the one month groups may explain the quality of anticipatory guidance at least in part. Halfon et al. reported that visits greater than 20 minutes in duration were associated with 9.7 times higher odds of having enough time to ask questions. The seven families who participated in a series of group well child visits run by pediatric residents (Saysana and Downs, 2012), responded with agreement to measures of understanding the usefulness of information presented, having their questions answered, and having time to ask questions. Those studies are both consistent with the 100% of mothers in this study who reported feeling comfortable asking the care team questions, and the 99% of mothers who reported that all of the questions they asked were answered. In response to “one thing you really liked,” mothers in this study repeatedly mentioned enjoying the opportunity to ask questions and a chance to hear the questions of others.

As in Bethell et al.'s 2001 study, mothers in this study reported increased confidence due to the information received. The combined 98.7% of mothers who reported agree or strongly agree to receiving enough information at the appointment to take care of their babies well is in sharp contrast to Bethell et al.'s (2004) study where 94% of parents reported one or more unmeet needs for parenting guidance, education and screening in one or more content areas. Also in contrast to the Radecki et al. (2009) study parents, none of the mothers in this study commented on an increased emphasis on behavior and development as "one thing we can do differently or better." This could be due to the substantial discussion at each of these one month group well child visits on managing fussiness, which is the the primary behavioral concern of one-month-olds.

Q-3: How satisfied are (a) mothers and (b) office staff with group-based well visits for one-month-old infants?

As in previous studies such as Jaber et al. (2004), Noffsinger & Atkins (2001), Osborn & Woolley (1981), Page et al. (2010), Rushton et al. (2015), and Saysana & Downs (2012), mothers in this study were satisfied with the group well visits for one-month-old infants, with a total of 91.4% reporting satisfaction with receiving their baby's care in this type of setting. As mentioned in Q-2, the mothers in open-ended responses reported enjoying group visits for the aspect of reassurance about their children and about their parenting skills, and an unrushed opportunity to discuss what they deemed priorities in well child care. The mothers in this study also reportedly

enjoyed a personable and respectful clinician, as did the parents in Radecki et al.'s focus groups (2009).

In Schuster et al.'s survey of telephone respondents (2000), those who had discussed more anticipatory guidance topics were more likely to report that they had received excellent well child care. This is reiterated by the mothers in this study, 98.7% of whom reported receiving enough information at the appointment to take care of their baby well, and 91.3% of whom reported being satisfied with receiving their baby's care in this type of setting. Furthermore, 60.7% of mothers who responded to "one thing that could be done differently or better," provided positive feedback about their enjoyment with the visit.

In response to one thing they really liked, themes of maternal satisfaction included validation of their experience as normal and hearing other people's questions; these are nearly identical to Osborn & Woolley's 1981 mothers who reported that they preferred group well child visits because of the reassurance found in observing the range of normal development among similar age infants, hearing questions asked by other mothers, and because of sharing common experiences. The mothers in this study also reported satisfaction in social support and mutual learning from other parents, as did those in Coker et al.'s 2009 study. Finally, the themes in open response are quite similar to those reported by Page et al. (2010), whose maternal themes undergirding satisfaction included mutual support within the group, development comparisons among infants, learning from others, more parental involvement in the child's care, and more relaxed, personal time spent in the visit. In

contrast, however, all 11 of the women interviewed by Page et al. (2010) indicated that they would choose group visits for a future child, while 12.3% of the mothers in this study were unsure and 2.5% disagreed.

In addition to patients, previous group visit providers have stated that they are satisfied with providing group well child care, using phrases such as "highly satisfied," (Noffsinger and Atkins, 2001) and "pleasant and effective" (Rice and Slater, 1997). Similarly the RN and NP rated high levels of satisfaction in survey reports. While other studies have discussed the care providers, this study was unique in that it sought feedback from all staff members involved in the group well visits. The majority of MA surveys reported satisfaction with their role in the group well visits. PSR and administrator surveys did not directly ask about satisfaction with the visits, but in open response, administrators, PSR, and the NP all reported satisfaction particularly in helping patients and their parents and in meeting a need. Administrators and PSRs also commented on finding satisfaction in patients' satisfaction with and the growth of the visits.

Q-4: Are there changes that can be implemented within the process in order to improve quality, workload/efficiency, and/or satisfaction?

As previously mentioned, this study is unique in its 360-degree feedback approach to process evaluation of a group visit. There is no precedent with which to compare, because there are no previous studies that asked parents and staff how they can do better. This study aimed to do those things.

Most staff responses were related to process and flow of the visits and its impact on workload. Group visit literature focuses on enhanced productivity and efficiency, but does not inquire of the providers or staff how this impacts them or spell out suggestions for improving the process.

Group visit literature also reports the satisfaction of mothers in group well visits, but does not inquire of mothers how the group process could be improved. In Radecki et al.'s focus groups (2009) about well care in general, parent suggestions for improving well child care included better social marketing about the value of well child care. In this study, the planning task force recognized the importance of marketing the value of this extra well visit prior to launch, and notified the entire staff of their individual role and responsibilities in the processes. Still, the PSRs commented on the need for our medical providers to continually market the visit, and also referred to specific recommended intervals for discussion. This can be challenging whenever a novel element is introduced into what experienced practice pediatricians and NPs may have viewed as a satisfactory status quo.

Observations

Answers to the evaluation questions were generally unsurprising to the researcher. Staff and parents frequently provided spontaneous positive verbal feedback once visits were launched. While the researcher had noted that staff particularly might be hesitant to provide feedback, the response rate, where it could be calculated, was robust, ranging from 88.9 to 100 percent. However, monthly group

enrollment reflected an average of only 31.1% of newborns born to the practice. As mentioned above, the researcher attributes this to insufficient provider marketing of the visit, as she observed in preparing for visits that most of her patients had been seen by the same providers for their newborn visits, and there were very few referred by other practice providers. Observations specific to each evaluation category follow below.

Workload

Feedback regarding the impact of the group visit on workload in both Likert scale questions and in open response was generally positive. Administrators were the only category to report that group visits made their job harder (26.7%), while the remainder reported about the same. Prior to group launch, the practice administrator(s) self-selected to set up and tear down the conference room weekly for group. This entailed a set of extra tasks previously not included in their job descriptions or generally related to their daily workload. It is unsurprising, therefore, that the group visits did make their job harder. At the same time, all administration surveys indicated agree or strongly agree that providing group-based well visits is beneficial to our practice. Additionally, in open response, administration reported really liking making a difference, seeing the groups grow, and observing patient satisfaction. Nonetheless, the impact of any new program on a group whose workload may increase should be monitored. It was helpful in this case to provide such a group the opportunity to comment on what could be done differently or better, in order to mitigate the increased workload as much as possible.

It is also unsurprising, since the NP and RN helped to create visit content, that all RN and NP surveys indicated agree or strongly agree to covering content not covered at the two week or newborn visit, and typically seen at ill visits or discussed in advice phone calls at around the same age. The NP and RN specifically aimed to address these concerns; it is helpful to see that they were successful in meeting their goals. At the same time, ten percent of reports indicated that the NP was unsure whether she was able to successfully meet the objectives of the visit within the time constraints. While each group visit was alike in objectives, groups differed particularly in level of patient complexity and parental learning needs and participation. Group size also varied, from two to six infants. This impacted both the time required for all patient exams as well as the volume of discussion. The RN and NP frequently commented on the challenges with large group sizes. The challenge for this and other practices is to find the balance between excessive perceived workload on care providers, or compromise in the quality of care provided, with economically efficient and beneficial practice protocols. The researcher recommends further investigation to determine whether a trial of adding 10 minutes to group, for example, might provide better balance.

Quality of Care

Quality of care was measured by postpartum depression screening, social support, information exchange and anticipatory guidance, patient-centered care and clinician-patient relationship, breastfeeding and lactation support, and benefit to the practice. One area that is not clear to the researcher is why mothers (2, or 2.5%)

indicated that they were not screened for postpartum depression, and 6, or 7.4% were unsure if they were. The NP researcher completed a progress note on each patient seen in the EMR following the group visit, and this included the mother's EPDS score. Ultimately, the researcher is also unsure whether it is important that the mothers know they are screened for postpartum depression. Prior to launch, the NP had hoped that more of the group discussion could include family changes and coping. However, it quickly became clear that there was not sufficient time for this discussion once topics were prioritized. Additionally, contrasted to the NP's prior experience with Centering Parenting, a program in which the same group of mothers and babies remain together for group well visits for the first year of life, these mothers met only once, which limits how deeply personal of a nature conversations might be. The researcher concludes that screening for postpartum depression, with subsequent referral of mothers with an EPDS of 10 or greater remains important, but a group discussion about feelings and coping should be offered in a different format than the one month group well child check.

Additionally, the researcher was surprised that 9 out of 81 mother surveys (11.1%) answered no, that other mothers did not talk to them, or that there was not socialization in the group, and that one mother did not respond. Social support is theorized to be one of the factors that make group visits successful. However, as previously mentioned, prior studies, as well as the NP's prior experience, were with a series of group visits over time. Social support is likely to be more robust once mothers have more than one opportunity to meet one another. However, re-

structuring the group flow to encourage more socialization could be considered. Additionally, the RN co-facilitator, in response to "one thing we can do differently or better," mentioned that she would like to see more time for the mothers to interact. It is worth considering whether a longer visit would provide more socialization opportunity.

Additionally, the researcher the 66.7% of mothers who reported that they were exclusively breastfeeding their babies at the one month group visit is lower than the NP researcher expected. The practice website reports that its breastfeeding support program "improves success rates by over 20%." However, the actual rate of exclusive breastfeeding at one month across the practice was not available. At the same time, the *Healthy People 2020* goal for ever breastfeeding is 81.9%, and exclusive breastfeeding through 3 months is 46.2% (United States Breastfeeding Committee, 2015), so these numbers are well within the national desirable range.

Finally, the researcher was surprised by mothers' responses to "one thing you really liked." While the value of open discussion and dialogue was frequently cited, many more mothers specifically reported enjoying hearing other parents' questions, rather than the ability to ask their own or have them answered. Mothers commented that they may have forgotten or not thought of bringing up questions that other mothers asked. This strongly reinforces the value of the group setting, as mothers would be able to ask their own questions (albeit at a lower rate in shorter, individual visits according to prior research) in an individual visit.

Satisfaction

Satisfaction scores from mothers and staff were generally very high. In some staff satisfaction results, however, there was an interesting dichotomy in responses. For example, a majority (16, or 88.9%) of MA surveys indicated strongly agree to being satisfied with their role in providing group-based well visits, while the remaining 2, or 11.1% indicated strongly disagree. Throughout the surveys, "strongly disagree" appeared on the far left, and "strongly agree" on the far right of the Likert scale. Commonly, respondents in various groups would circle "strongly disagree," then scratch that out and mark "strongly agree." It is possible that the "strongly disagree" outlier responses were in error. Alternate explanations could be that a different person than usual completed the survey on that day, especially in groups where one person per role completed almost all of the surveys (i.e. MA and RN co-facilitator), or that on a particular day, the respondent was strongly dissatisfied with group visits for an unknown reason.

There was also a discrepancy among mother responses that the researcher found noteworthy. 91.3% of mothers indicated agree or strongly agree to being satisfied with receiving care in this type of setting; only one mother answered disagree, and the remainder were unsure. However, 85.1% of mothers indicated that they would participate in group care for their babies again if given the chance; in this case, 2 mothers disagreed, and the remainder were unsure. The researcher would like to know more about the mothers who were satisfied with receiving their care in this type of setting, but would not participate in group care again. The researcher is

especially interested in the rationale of the one mother who answered either agreement or unsure to satisfaction, yet noted that she would not participate in group care again.

Finally, the researcher was surprised by how few mothers commented on the "extra features" of the group, such as being brought right back to the conference room, rather than waiting in the waiting area, as well as snacks and water bottles. Only one mother commented on enjoying the snack; however, 2 mothers indicated a different preference for snack choice. It is possible that the snack type provided is simply not desirable to mothers. Visit literature did advertise the availability of snack in group, so it is unlikely that the mothers forgot and arrived satiated. It is also possible that mothers were simply too busy to enjoy the snack, or that snacks are not an important draw to these mothers. The researcher would expect a different result in a lower socioeconomic status patient population.

Improvements

In response to "one thing we can do differently or better," most staff surveys commented on process objectives, or those related to the process and flow of group(s).

There were two administrator surveys that recommended fewer persons responsible for set-up and leadership tasks. Similarly, there was one NP survey that mentioned not knowing whom to ask for what. Although surveys were anonymous and not dated, it is possible that these surveys were from early in the process when

the chain of command and responsibilities per role were not as well delineated. Additionally, one administrator left the practice early in the process, and it is also possible that this represented a conflict in personalities. Finally, the administrator commented on the tear-down process, requesting that people let her know when the group is over and all the patients are gone, and for everyone to clean up the room. After group, the NP typically has to go immediately from group two to resuming other individual appointments on her schedule; the RN co-facilitator resumes her role as phone advice nurse. There needs to be a better process in place for concluding the group so that administrators are notified that it is ready for clean up, and if assistance is needed with that task, there should be non-clinicians designated to assist.

Also noteworthy was the volume of staff responses referencing scheduling issues or errors; these came from administration, PSRs, MAs, and the NP. Interestingly, only two total PSR responses referred to scheduling issues, while the majority of PSR surveys were blank on this question. It appears that these scheduling issues may have been a blind spot for the PSRs. When issues occurred with scheduling, in addition to marking responses on the surveys, the NP and MA especially generally emailed the "One Month Group" email group, and revised these processes in collaboration with the lead PSR promptly.

The RN co-facilitator and the mothers reported concerns with the arrival process. Specifically, they found it challenging for the mothers to undress the babies (which is office protocol for obtaining weights at this age, but mothers reportedly perceived as being required for the exam), then wait with an undressed baby until

their turn for exam, while also attempting to complete the paperwork on the clipboard. The RN co-facilitator was able to adapt the process in this area to an extent, providing one-on-one assistance and discussion with mothers as the babies were called back by the NP in a revolving fashion for examination. This remains an area of continued improvement for the group process. It is best for overall flow for the babies to be undressed as quickly as possible, since the MA is calling them to be weighed and measured in a rotating fashion, and the NP calls them next to be examined in a rotating fashion. It is most helpful when some parents electively arrive a little early, so that these tasks can be staggered. The solution of scheduling babies in five-minute increments was proposed. However, an early arrival cannot be dismissed from the group discussion early, and these parents may not be satisfied with being at the appointment for so long. The planning task force is finalizing communication that will be given to all mothers in person and via email upon scheduling that helps to better delineate the process of the group visit, with the hopes that this also will facilitate a more streamlined and less stressful process for all.

Several staff responses also centered on issues related to two groups. Initially, there was only one group planned. However, the group quickly became full, and it became apparent that a second group would be needed. With only two weeks' notice, a second group was added, but the best process for managing two groups continued to evolve. Although the first group was scheduled to conclude at 2:15 p.m., there were times that it ran over. The second group was scheduled to begin at 2:40 p.m., but

some patients arrived early. This left the MA and PSRs unsure of what to do with the second group if they couldn't be brought right to the conference room.

Other changes that were implemented in response to feedback from parents and staff included a changing area for babies within the room; a changing pad with changing paper was a simple, easy to clean, and well-appreciated addition to the conference table.

One challenging area is the conflicting suggestions from mothers in response to "one thing we can do differently or better." For example, in mothers who commented on visit duration, half requested a shorter session, while half requested a longer session. It is important to remember that mothers attending these visits were only about a month removed from vaginal or cesarean deliveries and with new babies who may not be patient for a longer session. This was taken into consideration and is a large part of the rationale to keep the visit duration at 75 minutes as currently scheduled. These conflicting suggestions from mothers are likely indicative of personal preferences, and it is wise for practices to act upon patterns of responses rather than individual leanings. Ultimately, the balance between patient satisfaction and quality can be at times precarious, and both should be continually monitored.

Staff groups including MAs and PSRs as well as mothers, in response to "one thing we can do differently or better, noted "N/A;" the researcher interprets this "not applicable" as meaning that the respondent is fully satisfied. Likewise, one administrator survey indicated "nothing," which the researcher interprets as there is

nothing that we could be doing any better. At the same time, two administrator surveys suggested “no more surveys” and “not having surveys.” This could be interpreted as the administrator having already given all the feedback desired, and already being satisfied, or could indicate that less paperwork would increase satisfaction.

Finally, the NP and RN did not have any specific suggestions for improving their own satisfaction. However, given the volume of their responses around group size and time management, it appears that these may be indirectly related to overall satisfaction; the NP and RN appear to enjoy the process more when it is runs more smoothly.

Evaluation of Theoretical Model

This study included a process evaluation utilizing 360-degree, or multisource feedback in order to answer the research questions. According to the WHO, process evaluation includes process objectives, the planned activities or services, and outcome objectives, the expected changes that will occur (WHO, 2000a). In this case, the program was developed first with process and outcome objectives established. The process evaluation was done after the program had already been launched for six months. By obtaining feedback from all stakeholders involved in the development of this new program, the practice received well rounded feedback from a variety of perspectives. This feedback was invaluable to continuing to improve upon the

program, recognizing the impact on groups that may otherwise have been overlooked or misunderstood.

Major Contributions

This study provided a process an evaluation of the creation of a new one month well child check at a large, private pediatric practice and PCMH in an inner-ring suburb of a medium sized Midwestern city. Utilizing retrospective analysis of anonymous feedback provided by all stakeholders in the process, including mothers of the one-month-old patients and all staff, the researcher was able to provide a well-rounded synthesis of perspectives on the new program. The program was well received across the range of busy office staff including reception staff, medical assistants, RN, NP, and practice administrators; feedback provided in response to the open-ended questions "What is one thing you really liked?" and "What is one thing we can do differently or better?" may be particularly valuable for this practice in its continuous improvement, as well as other practices looking to implement a similar program.

Additionally, this was the first study to evaluate a group well child visit at only one interval, and at an interval that previously did not exist for the practice. This information is tremendously beneficial to the practice that developed the program, as they seek to continually improve upon the program, and also extrapolate whether a one month well visit should become standard practice protocol. It is also noteworthy that the single group well visit had such a powerful impact on the mothers who may

not have previously met the NP nor one another. Especially clinician-patient rapport has been reported as important by parents, and can be done in a single visit, even in the context of a group. Finally, this study strengthened the generalizability of the positive impact of group well child care across populations. Previous studies have primarily investigated socioeconomically high risk patients, and/or have looked at group well child care in combination with other interventions, such as home visits. In this study, with 96.3% of babies privately insured, and with a combination of first-time and experienced mothers, the group well visit was well received with reports of high quality and satisfaction.

Limitations

A limitation of this study was that the researcher is also the PNP group facilitator, and therefore could have a vested interest in positively evaluating the process. This potential bias was be minimized by using objective statistics for all numerical data and including another coder for qualitative data. Additionally, it is possible that employees of the practice were unwilling to provide critical feedback for fear of repercussions; this limitation is most relevant for positions in which generally only one person met inclusion criteria to complete the survey weekly. To minimize this limitation, surveys were anonymous and were placed in a folder on the researcher's desk without supervision. In the convenience sample, self-selection bias could also be present, since not all mothers whose infants were eligible for the one month group visit chose to enroll, and those who did participate may have been inherently different from those who did not. This may have been seen in the group-

visit VFC rate of 3.7%, compared to the overall practice Medicaid rate of 12%. However, the practice has stopped accepting new Medicaid patients unless they are siblings of existing patients, and so it would be helpful to compare to the practice newborn VFC rate when available. Finally, the researcher recognizes that the creation of a group well child visit for one month olds introduced two novel themes to her pediatric practice: group visits, and a one month well visit. Generalizability of the process evaluation may therefore be limited as these two components may have overlapping benefits and/or challenges.

Implications for Future Research

Additional statistical analyses could be done to determine whether correlation between variables exists. For example, on mother surveys, one could determine whether there is a relationship between perceived social support and overall satisfaction; between EPDS score and satisfaction; or with overall satisfaction with receiving care in the group format, and whether one would choose to participate in group care again. Given the discrepancy between satisfaction and future group participation, it might be particularly helpful to review the qualitative response to "what is one thing we could do differently or better," and the response to whether one would choose to participate in group care again. The correlated responses might be particularly relevant if one were to research the difference between individuals receiving the one month well child check in a group versus individual format.

If a one month well visit were to become the standard of care for this practice, a study comparing outcomes between group well visits and individual visits would be helpful for specifically evaluating the group component. Individual visits should be compared to group visits in order to ascertain the differences in outcomes between the two, which could range from measures such as clinician or patient satisfaction, to breastfeeding rates, to unplanned illness visits or advice phone calls.

Implications for Practice

Based on this process evaluation, group well child visits should be considered a viable format of well child care, particularly for one-month-old infants. Group well child care is an innovation of care aimed at improving productivity, quality of care, and staff and patient satisfaction. This process evaluation can help to serve as a guide for practices seeking to incorporate group well child care.

The impact of group visits on the workload of staff should be considered, particularly on those for whom involvement with group visits is completely different or additional to normal daily tasks. In this process evaluation, for example, administration surveys indicated that providing group-based well visits made their job harder or about the same. Simultaneously, all administrators agreed that group-based well visits are beneficial to our practice. Performing a 360-degree process evaluation helps to obtain well-rounded feedback from multiple groups and may highlight areas where getting buy-in from staff is most critical. The practice in this study plans to continue the group-based well child visit for one month old infants. It is

recommended that the group planning committee discuss the results of this process evaluation and establish new specific, measurable, achievable, realistic, and time-phased objectives for continued improvements in the process.

Conclusion

The purpose of this study was to evaluate the process involved in the development of a new group-based well child visit for one-month-old infants at their current practice. The researcher performed retrospective analysis on feedback provided in the form of anonymous surveys by all patients and staff impacted by the creation of the new visit. The researcher specifically aimed to determine the impact of the group-based well child visit for one-month-olds on the workload of office staff and the quality of patient care, and to determine the satisfaction of patients and staff with the new visit. Additionally, the researcher aimed to uncover what changes could be made in the process in order to improve it.

This process evaluation uncovered a neutral to positive impact on the workload of reception staff and medical assistants, a neutral to negative impact on the workload of practice administrators, and a positive impact on the workload of the NP group facilitator and RN co-facilitator. The positive effect on workload was diminished when the group was perceived as too large to effectively accommodate within time constraints. There was also a positive impact on the quality of care provided, including postpartum depression screening, anticipatory guidance, information exchange, clinician-patient relationship, and social support. Mothers of

the one-month-old infants and office staff were very satisfied with the new program. Suggestions for improvement included from staff centered on process and workflow; many of these changes were able to be implemented as the program progressed, and some remain under consideration, particularly as the practice balances cost efficiency with workload and quality. Mothers' suggestions for improvement were often conflicting and reflective of individual preferences. Some of these requests, however, such as more comfortable accommodations and better communications prior to the visit of what to expect, were able to be implanted or are in process at the time of publication.

This process evaluation gives strong support for utilizing group-based well visits in well care, particularly for one-month-old infants. Strengths and weaknesses of the program uncovered in the process evaluation may serve as a guide for this or other practices to create group visits for well or focused ill care. Future research should be done on the impact of group visits versus individual visits in one-month-old infants. Additionally, future research could attempt to determine whether a particular type of parent is most attracted to or benefited by group visits, and if there are modifiable variables to make group well visits universally successful and satisfactory.

Table 1

Perceived Impact of Group-Based Visits on Job by Role

Impact on Job	Role		
	MA	PSR	Admin
Easier	3 (16.7%)	9 (18.8%)	--
Harder	--[a]	--	4 (26.7%)
About the Same	15 (83.3%)	39 (81.3%)	11 (73.3%)

Note: MA = medical assistant; PSR = patient service representative; Admin = Administrator(s)

[a]No responses

Table 2

Measures of Group Visits on RN Workload

Content representative of phone calls	
Agree[a]	Strongly Agree
6 (37.5%)	10 (62.5%)
Able to provide lactation support	
Agree	Strongly Agree
1 (6.3%)	15 (93.8%)

Note. RN = Registered Nurse Co-Facilitator

[a]No surveys responded strongly disagree, disagree, or unsure.

Table 3

Measures of Group Visits on NP Workload

Addressed WCC content missed at newborn and 2 month WCC		
Strongly Agree[a]		
19 (100%)		
Addressed common ill concerns		
Strongly Agree[a]		
19 (100%)		
Met objectives within time constraints		
Strongly Agree	Agree	Unsure[b]
4 (21.1%)	13 (68.4%)	2 (10.5%)

[a]No surveys responded strongly disagree, disagree, unsure or agree.
[b]No surveys responded strongly disagree or disagree.

Table 4

Quality of Care as Measured by Mother Surveys

	I felt comfortable asking the care team questions	All the questions I asked were answered	I received enough information to care for my baby well
N	81	81	81
Mean	4.7778	4.7222	4.6420
Median	5.0000	5.0000	5.0000
Std. Deviation	.41833	.59161	.50766
Minimum	4.00	1.00	3.00
Maximum	5.00	5.00	5.00

Note. All responses were on a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree.

Table 5

I felt comfortable asking the care team questions				
		Agree	Strongly Agree	
		18	63	
		(22.2%)	(77.8%)	
All the questions I asked were answered				
Strongly Disagree				Both Agree and Strongly Agree
1		Agree	Strongly Agree	1
(1.2%)		18	61	(1.2%)
		(22.2%)	(75.3%)	
I received enough information to care for my baby well				
	Unsure	Agree	Strongly Agree	
	1	27	53	
	(1.2%)	(33.3%)	(65.4%)	

Note. All responses were on a 5-point Likert scale, where 1 = strongly disagree, 2 = disagree, 3 = unsure, 4 = agree, and 5 = strongly agree. Categories without responses were omitted from the table.

Table 6

Measures of Breastfeeding from Group Visits

Respondent	Mother N = 81					RN N = 16	
	I am exclusively breastfeeding my baby			I have enough support from my care team to breastfeed if I want to		I am able to provide lactation support in this context	
	Yes	No	I was never breastfeeding	Yes	No	Agree	Strongly Agree
	54 (66.7%)	21 (25.9%)	4 (4.9%)	78 (96.3%)	--[a]	1 (6.3%)	15 (93.8%)

[a] There were no "no" responses; 3 surveys did not answer this question.
[b]There were no responses of Strongly Disagree, Disagree, or Unsure.

Table 7

Satisfaction with Group Visits: Mothers

I am satisfied with receiving my baby's care in the group setting			
Disagree	Unsure	Agree	Strongly Agree
1 (1.2%)	6 (7.4%)	33 (40.7%)	41 (50.6%)
I would participate in group care for my baby again			
Disagree	Unsure	Agree	Strongly Agree
2 (2.5%)	10 (12.3%)	33 (40.7%)	36 (44.4%)

Note. All responses were on a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. Categories without responses were omitted from table.

Table 8

Satisfaction with Group Visits: Staff

I am satisfied with my role in providing group-based baby care						
Staff role	MA		RN		NP	
N	18		16		1	
	Strongly Disagree	Strongly Agree	Strongly Disagree	Strongly Agree	Agree	Strongly Agree
	2 (11.1%)	16 (88.9%)	1 (6.3%)	15 93.8%	10 (52.6%)	9 (47.4%)

Note. All responses were on a 5-point Likert scale, where 1 = strongly disagree and 5 = strongly agree. Categories without responses were omitted from table.

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Appendix A

2054 SOUTH GREEN ROAD
SOUTH EUCLID, OHIO 44121
CALL 216.291.9210
FAX 216.291.9422
CARE@SENDERSPEDIATRICS.COM

Please circle or fill in your answer that best fits for each question.
This is an *anonymous* survey. Please do not include any personal or identifying information.
Thank you for your contribution to our continuous improvement!

1) I was screened for postpartum depression today.

Yes No Unsure

2) Other moms talked with me at my appointment; there was socialization within the group.

Yes No

3) I felt comfortable asking the care team questions.

Strongly disagree Disagree Unsure Agree Strongly Agree

4) All of the questions I asked were answered.

Strongly disagree Disagree Unsure Agree Strongly Agree

5) I received enough information at the appointment to take care of my baby well.

Strongly disagree Disagree Unsure Agree Strongly Agree

6) I have enough support from my care team to breastfeed my baby if I want to.

Yes No

7) I am exclusively breastfeeding my baby.

Yes No I was never breastfeeding

8) I am satisfied with receiving my baby's care in this type of setting.

Strongly disagree Disagree Unsure Agree Strongly Agree

9) If given the chance, I would participate in group care for my baby again.

Strongly disagree Disagree Unsure Agree Strongly Agree

10) What is one thing you really liked?

11) What is one thing we could do differently or better?

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Survey for Nurse Practitioner

Please circle or fill in the answer that best fits for each question.
This is an *anonymous* survey. Please do not include any personal or identifying information.
Thank you for your contribution to our continuous improvement!

1) I am satisfied with providing group-based well baby care.

Strongly disagree Disagree Unsure Agree Strongly Agree

2) I was able to address content at this one month WCC that I cannot always cover at the newborn or 2 month WCC.

Strongly disagree Disagree Unsure Agree Strongly Agree

3) I was able to address concerns at this one month WCC that I commonly see at ill visits around this age.

Strongly disagree Disagree Unsure Agree Strongly Agree

4) I was able to successfully meet the objectives of the visit within the time constraints.

Strongly disagree Disagree Unsure Agree Strongly Agree

5) What is one thing you really liked?

6) What is one thing we could do differently or better?

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Survey for Co-Facilitator

Please circle or fill in the answer that best fits for each question.
This is an *anonymous* survey. Please do not include any personal or identifying information.
Thank you for your contribution to our continuous improvement!

1) I am satisfied with providing group-based well baby care.

Strongly disagree Disagree Unsure Agree Strongly Agree

2) The content included in the one month WCC is representative of many of the advice phone calls I receive at this age.

Strongly disagree Disagree Unsure Agree Strongly Agree

3) I am able to provide lactation support in the context of the group WCC.

Strongly disagree Disagree Unsure Agree Strongly Agree

4) What is one thing you really liked?

5) What is one thing we could do differently or better?

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Survey for Medical Assistant

Please circle or fill in the answer that best fits for each question.
This is an *anonymous* survey. Please do not include any personal or identifying information.
Thank you for your contribution to our continuous improvement!

1) I am satisfied with my role in providing group-based well baby care.

   Strongly disagree Disagree Unsure Agree Strongly Agree

2) As an MA, providing group-based well child care makes good use of my time.

   Strongly disagree Disagree Unsure Agree Strongly Agree

3) Providing group-based well child care makes my job:

   Harder Easier About the same

4) What is one thing you really liked?

5) What is one thing we could do differently or better?

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Survey for Patient Service Representative

Please circle or fill in the answer that best fits for each question.
This is an *anonymous* survey. Please do not include any personal or identifying information.
Thank you for your contribution to our continuous improvement!

1) It is easy to schedule group based well visits.

Strongly disagree Disagree Unsure Agree Strongly Agree

2) Providing group-based well child visits makes my job:

Harder Easier About the same

3) What is one thing you really liked?

4) What is one thing we could do differently or better?

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Survey for Administration

Please circle or fill in your answer that best fits for each question.

This is an *anonymous* survey. Please do not include any personal or identifying information.

Thank you for your contribution to our continuous improvement!

1) Providing group based well visits is beneficial to our practice.

Strongly disagree Disagree Unsure Agree Strongly Agree

2) Providing group-based well child visits makes my job:

Harder Easier About the same

3) What is one thing you really liked?

4) What is one thing we could do differently or better?

Appendix B

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Your Group Healthcare Visits

To get the most out of your group visit...

ASK—Ask for information about anything you need! If you don't understand what the provider or other members of the group are saying, ask them to explain.

SHARE—Share your experiences with the group and they will share their experiences with you. The moms in the group are here to support each other by sharing, and the providers are here to support the group.

Group Guidelines

To make group sessions fun, safe, and productive, please follow these guidelines:

- Personal information share in the group space is not shared outside the group.
- Only one person talks at a time. Respect others and listen to what they are saying without interrupting.
- Come on time for group. Groups start and end on time.
- Call us if you can't make your session.
- Turn off all phones and electronics in the group space.
- Do not bring other children to group.

Appendix C

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Group Visit Participant Confidentiality Agreement

The purpose of this policy is to maintain patient confidentiality regarding protected health information and confidential and proprietary research related information.

Group visit participants acknowledge that during the course of their appointment they may have access to protected health information, proprietary research related information or may obtain or create protected health information on behalf of other patients/or providers. The protected health information is subject to protection under the provider's policies, Ohio law and the privacy standards of the Health Insurance Portability and Accountability Act (HIPAA) of 1996 and the Privacy Rule.

Group visit participants shall not use or disclose protected health information or confidential and proprietary research related information in any manner outside of this visit or as required by law.

Group visit participants shall not disclose protected health information or confidential and proprietary research related information in any manner which would violate HIPAA regulations, or that would violate the minimum necessary policies and procedures of the provider.

Group visit participants agree not to disclose any protected health information or confidential and proprietary research related information to third parties or persons outside of this office, including family and friends, unless they are specifically authorized to do so by the patient in writing. Group visit participants understand that this restriction extends to revealing any information over the phone or computer.

Group Visit Participant Signature Date

Appendix D

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Feeding My Baby

Please circle the best answer:

The way I feed my baby is:

- All breast
- Mostly breast
- Mostly formula
- All formula

The time it takes to feed my baby is:

- Too short
- About right
- Too long

My baby is happy and content after being fed:

- Not often
- Usually
- Always

Feeding my baby is:

- Harder than I expected
- What I expected
- Easier than I expected

My partner and family show me support for how my baby is being fed:

- Little support
- No support
- Lots of support

The way I feed my baby works with my life:

- Not well
- Well
- Very Well

Appendix E

EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)

The EPDS was developed for screening postpartum women in outpatient, home visiting settings, or at the 6 –8 week postpartum examination. It has been utilized among numerous populations including U.S. women and Spanish speaking women in other countries. The EPDS consists of 10 questions. The test can usually be completed in less than 5 minutes. Responses are scored 0, 1, 2, or 3 according to increased severity of the symptom. Items marked with an asterisk (*) are reverse scored (i.e., 3, 2, 1, and 0). The total score is determined by adding together the scores for each of the 10 items. Validation studies have utilized various threshold scores in determining which women were positive and in need of referral. Cut-off scores ranged from 9 to 13 points. Therefore, to err on safety's side, a woman scoring 9 or more points or indicating any suicidal ideation – that is she scores 1 or higher on question #10 – should be referred immediately for follow-up. Even if a woman scores less than 9, if the clinician feels the client is suffering from depression, an appropriate referral should be made. The EPDS is only a screening tool. It does not diagnose depression – that is done by appropriately licensed health care personnel. Users may reproduce the scale without permission providing the copyright is respected by quoting the names of the authors, title and the source of the paper in all reproduced copies.

Instructions for Users

1. The mother is asked to underline 1 of 4 possible responses that comes the closest to how she has been feeling the previous 7 days.
2. All 10 items must be completed.
3. Care should be taken to avoid the possibility of the mother discussing her answers with others.
4. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.

Name:
Date:
Address:
Baby's Age:

As you have recently had a baby, we would like to know how you are feeling. Please UNDERLINE the answer which comes closest to how you have felt IN THE PAST 7 DAYS, not just how you feel today.

Here is an example, already completed.

I have felt happy:
- Yes, all the time
- Yes, most of the time
- No, not very often
- No, not at all

This would mean: "I have felt happy most of the time" during the past week. Please complete the other questions in the same way.

In the past 7 days:

1. I have been able to laugh and see the funny side of things
   - As much as I always could
   - Not quite so much now
   - Definitely not so much now
   - Not at all

2. I have looked forward with enjoyment to things
   - As much as I ever did
   - Rather less than I used to
   - Definitely less than I used to
   - Hardly at all

*3 .I have blamed myself unnecessarily when things went wrong
   - Yes, most of the time
   - Yes, some of the time
   - Not very often
   - No, never

4. I have been anxious or worried for no good reason
   - No, not at all
   - Hardly ever
   - Yes, sometimes
   - Yes, very often

*5. I have felt scared or panicky for no very good reason
   - Yes, quite a lot
   - Yes, sometimes
   - No, not much
   - No, not at all

*6. Things have been getting on top of me
   - Yes, most of the time I haven't been able to cope at all
   - Yes, sometimes I haven't been coping as well as usual
   - No, most of the time I have coped quite well
   - No, have been coping as well as ever

*7. I have been so unhappy that I have had difficulty sleeping
   - Yes, most of the time
   - Yes, sometimes
   - Not very often
   - No, not at all

*8. I have felt sad or miserable
   - Yes, most of the time
   - Yes, quite often
   - Not very often
   - No, not at all

*9 I have been so unhappy that I have been crying
   - Yes, most of the time
   - Yes, quite often
   - Only occasionally
   - No, never

*10. The thought of harming myself has occurred to me
   - Yes, quite often
   - Sometimes
   - Hardly ever
   - Never

EDINBURGH POSTNATAL DEPRESSION SCALE (EPDS)
J. L. Cox, J.M. Holden, R. Sagovsky
From: *British Journal of Psychiatry* (1987), 150, 782-786.