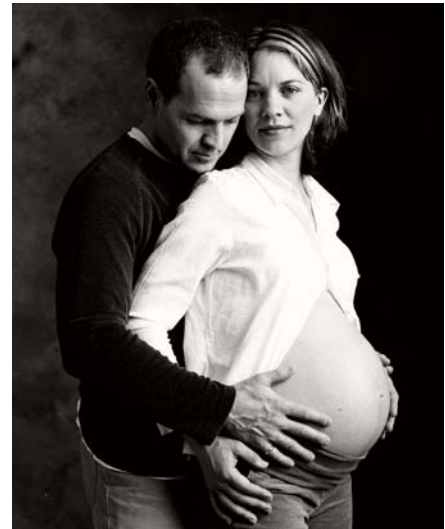
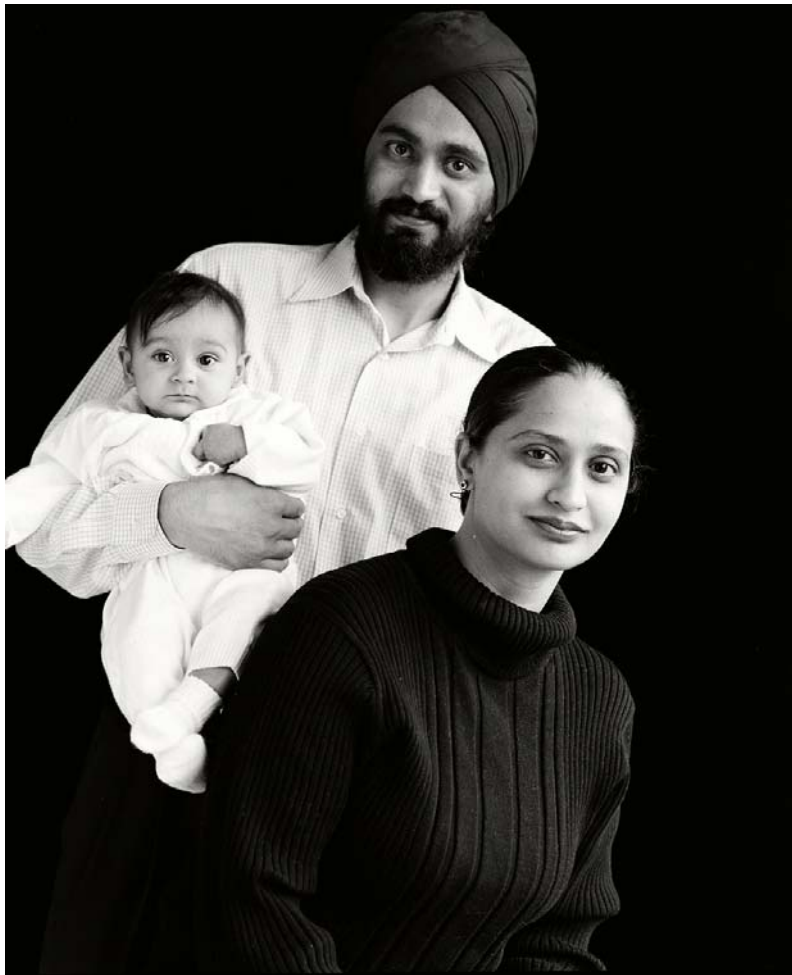


The South Community Birth Program Final Report: 2003 - 2006

A Primary Health Care Transition Fund Program



6405 Knight St.
Vancouver, BC ♦ V5P 2V9
604-321-6151
<http://www.scbp.ca>
info@scbp.ca



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Women and Their Families

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EXECUTIVE SUMMARY

The South Community Birth Program (SCBP) was established in October 2003 to pilot a unique maternity program to be situated in the South Community area of Vancouver, British Columbia. Funding was provided through the Federal Government Primary Care Transition Funds (administered by the Vancouver Coastal Health Authority, and the Provincial Services Health Authority/B.C. Women's Hospital). The goal of the SCBP is to improve the health outcomes of low-risk pregnant women in the underserved community of South Vancouver, by providing them with collaborative, multidisciplinary care from family physicians, midwives, community health nurses, and doulas. This is the first such multidisciplinary program of its kind in Canada. Care takes place in a community-based, culturally-appropriate, and woman-centered manner during pregnancy, birth and the newborn period.

The SCBP opened in December of 2003, and the first woman to enroll in the program gave birth in April 2004. At the South Community Health Centre (6405 Knight Street, Vancouver, B.C.), a space was remodeled to provide a home for the program. This space includes a large room for group meetings and two examination rooms. Members of the SCBP team (community health nurses, midwives, family physicians, and doulas) provide care and support for women at this site on an individual basis or in groups. The program also established a multidisciplinary education and research center for current and future health care professionals focusing on healthy pregnancy and birth. An electronic medical record was established to improve continuity and communication and facilitate quality improvement.

The goal of this initiative is to bring pregnancy and birth back to a community-based, peer-supported, primary care experience. More specific goals include improving the health outcomes of women and their families by;

- Developing an environment where the SCBP team and families work in partnership to meet the needs of childbearing women in their community
- Developing an environment where the SCBP team assists women and their families to identify their own strengths and build confidence in their ability to give birth and become parents
- Developing an environment that encourages women and their families to assume an active role in their own primary health care
- Developing a strong sense of peer support among the women and their families, helping them to build community, reduce isolation, and provide ongoing support for each other when their care at SCBP is complete
- Providing a safe, positive birth experience through the reduction of interventions
- Providing support following the birth so that women can have a shortened hospital stay.

The SCBP provides a multidisciplinary, clinical training site for midwifery, medical and nursing students by;

- Establishing a model of integrated, multidisciplinary primary care for the provision of women throughout the childbearing cycle
- Educating future midwives, physicians and nurses with a new vision and enthusiasm for collaborative, woman-centered maternity care

- Educating students that women and their families are at the centre of care, while teaching informed shared decision-making in the process of care
- Undertaking multidisciplinary research to increase our understanding of the multiple factors involved in the process of normal birth
- Developing protocols and guidelines that support normal birth.

Feedback from families, caregivers and students, as well as early evaluation of the outcome data suggests that;

- Women and their families can play an active role in their care. Through education they are given the tools and skills to empower them in their pregnancy, birth and after the arrival of their baby. More than half of the women now receive care through the Centering Pregnancy (CP) program, which includes medical assessment, education and peer support. Early data suggests that the women and their partners find this a highly effective and satisfying way to receive care
- Targets for reducing interventions, including lowering of cesarean section rates, shortening of length of hospital stay, and improved breastfeeding rates are being met. Evaluation to confirm these outcomes is ongoing
- A collaborative team of nurses, physicians, midwives and doulas can successfully develop a unique approach to care. Practice guidelines have been established by the group and there is regular opportunity for evaluation and improvement
- Multidisciplinary students are being mentored through the program and although the numbers to date are still small, early feedback has been very positive
- Use of OSCAR (the electronic medical record) allows efficient and effective communication among providers and greatly enhances the multidisciplinary teams' ability to plan client care. In addition, outcomes can be tracked on a day to day basis, which enables regular review and improvement of practice.

PARTNERS

A number of organizations have been key partners in this initiative:

- **The Vancouver Coastal Health Authority, Vancouver Community** - VCHA has provided SCBP with clinical office space at the South Community Health Office, as well as community health nursing services for the Centering Pregnancy Groups and postpartum visits, in accordance with the Healthy Beginnings Program guidelines.
- **The Provincial Health Services Authority** - PHSA provided Primary Health Care Transition Funds to cover a portion of SCBP's set-up and initial operating costs, based on the projected cost savings SCBP's care model could offer to PHSA's maternity care services.
- **B.C. Women's Hospital and Health Centre** - Provides accommodation for the intrapartum care of SCBP clients in existing labour and delivery suites, as well as support for the doula portion of the program.
- **The University of British Columbia: Department of Family Practice, Division of Midwifery, and School of Nursing** - SCBP has linked with faculty from these UBC departments and established a multi-disciplinary teaching program, where students from medicine, midwifery and nursing gain clinical experience in normal low-risk birth. This will be expanded in the future to include health professionals undertaking research into low-risk maternity care.
- **Doula Services Association of British Columbia** - The executive and members of this association continue to provide input and support regarding the advancement and promotion of labour support as an option for the childbearing families in SCBP.
- **Douglas College's Labour Support Course: Training Doulas** - Faculty from the doula training programs have provided input into the initiative and have trained doulas for the SCBP, according to the Doulas of North America (DONA) Standards of Practice and Code of Ethics.

RATIONALE AND BACKGROUND

Health policymakers in Canada face mounting challenges in the provision of maternity care services, while many communities are facing a shortage of primary maternity care providers.¹ Maternity care was traditionally provided by family physicians, with consultations made to specialist obstetricians as required. But research indicates that family physicians are opting out of maternity care due to lifestyle factors, fear of litigation, and insufficient obstetric training.² From 1989 to 1999, the percentage of family physicians in Canada who attended births decreased from 31% to 19%.³ Registered midwives entered the health care system as primary maternity care providers in Ontario in 1992, and 1998 in B.C. Although their numbers are rapidly growing, particularly in Ontario, they are currently attending only 5.0% of all births. Their numbers are unlikely to grow rapidly enough to meet the shortfall of maternity care providers for a few years to come.⁴ As a result, a growing number of women with healthy, low-risk pregnancies are receiving specialist care from obstetricians, a practice which is not very cost-effective.⁵

These shortfalls affect many communities in Canada. A case in point is South Vancouver, a culturally diverse community where, according to the 1996 census, half of the residents speak a language other than English at home and 10 percent have no knowledge of English at all.⁶ South Vancouver has more births per year than any other community in the Vancouver Coastal Health Authority (1,313 in 1999). Nevertheless, there are very few maternity care providers in the area. As a result, many women in South Vancouver are referred to obstetricians outside the area they live in, even though their pregnancies are considered low-risk. In August 2004, 64.5% of new moms from South Vancouver were attended at birth by an obstetrician.⁷ Meanwhile, there is a clear trend towards increasing use of medical interventions in the South community. The caesarean section rate has increased steadily, from 21.6 percent in 1999 to 27.0 percent in 2002, by far surpassing the World Health Organization's target rate of 15 per cent.^{8,9} The health system pays a high price for this trend towards surgical birth. For example, BC Women's Hospital estimates that the total cost for a caesarean section delivery is \$4,100, compared to \$2,200 for a single vaginal delivery.⁸ Women who have caesarean sections also have a hospital length of stay which is nearly double that of an uncomplicated vaginal delivery (4.2 days compared to 2.6 days).⁹ Women and their families also pay a high price for surgical birth in the form of delayed postnatal recovery, increased risks, and post surgical discomfort and fatigue.¹⁰

Preliminary research suggested that women in South Vancouver were not entirely satisfied with their maternity care. In February 2003, the SCBP research team conducted ten focus groups with pregnant and postpartum women living in South Vancouver. Discussions were facilitated in Punjabi, Hindi, Cantonese and Mandarin, as well as English, allowing a diverse range of women's voices to be heard. The focus groups revealed that many childbearing women in South Vancouver were dissatisfied with certain aspects of the standard model of maternity care. Many women felt that they were not receiving adequate support, information, or time from their care providers. *"You go to a doctor's office and [there are] people waiting in a bunch of different rooms; I would have questions but I would not get a chance to ask them,"* one woman complained. *"There was never any time to explain anything to my doctor; it was always too rushed,"* remembered another. A number of women described their care as fragmented and voiced a desire to receive care in one location, closer to home. *"It would be nice to have everything in the same spot; that way you build relationships with people."*

Clearly, there was a critical need in this community for improved access to primary maternity care services. The strong desire for change in the community also presented an opportunity to rethink the standard model of maternity care and implement a new model of care; one designed to create community among the women. The South Community Birth Program was developed with the aim of improving pregnancy and birth outcomes while creating peer support for women in South Vancouver, by establishing an innovative multidisciplinary model for comprehensive maternity care.

VISION AND GOALS

The goal of the South Community Birth Program (SCBP) is to improve the health outcomes and create community among low-risk pregnant women and their families in the underserved community of South Vancouver. This is achieved by providing them with collaborative, multidisciplinary care from family physicians, midwives, community health nurses and doulas. Care is provided in a community-based, culturally-appropriate, and woman-centered manner, during pregnancy, birth and the newborn period. The program also aims to establish a multidisciplinary education and research center for current and future health care professionals focusing on normal, healthy birth. Ultimately, the goal is to work towards bringing pregnancy and birth back to a community-based, peer-supported, primary care experience. More specific objectives include the following:

To improve the health outcomes of women and their families by:

- Developing an environment where the SCBP team and families work in partnership to meet the needs of the childbearing women in their community
- Developing an environment where the SCBP team assists women and their partners to identify their own strengths and build confidence in their ability to give birth and become a parent
- Developing an environment that encourages women and their families to assume an active role in their own primary health care, and developing a strong sense of peer support within the community
- Providing a safe, positive birth experience through the reduction of unnecessary interventions, such as caesarean sections
- Reducing the intrapartum length of hospital stay by attending women in their homes in early labour
- Reducing the length of the postpartum hospital stay by providing home visits during the early postpartum period
- Providing postpartum support to enhance women's success with breastfeeding.

To develop a multidisciplinary educational model for students in midwifery, medicine and nursing by:

- Establishing a model of integrated, multidisciplinary care for the provision of low-risk maternity care
- Educating future professionals with a new vision and enthusiasm for providing maternity care
- Undertaking interdisciplinary research to increase our understanding of the multiple factors involved in the process of normal birth
- Involving students in the development of quality improvement initiatives.

PROGRAM TIMELINE HIGHLIGHTS

TIMELINE	ACTIVITY
November 2002	Consultative process for program development begins
February 2003	Focus groups conducted
March 2003	Letter of intent submitted to the Primary Health Care Transition Funds
April 2003	Funding proposal submitted
June 10, 2003	Funding approved
September 1, 2003	Initial Program Manager hired
September 2003	Community Advisory Committee established
October/November 2003	Caregivers recruited and hired (CHNs, RMs, FPs)
October/November 2003	Remodeling at the South Community Health Office
October 28, 2003	Final approval for funding
November 1, 2003	First funding transfer payment
November 24-25, 2003	All caregivers attend Centering Pregnancy (CP) training workshop
December 2003	Clinic opens, first clients seen
November/December 2003	Doulas recruited from community and trained to provide labour support
January 2004	First Centering Pregnancy group begins
March 2004	OSCAR – electronic medical record purchased and installed
April 2004	First baby born in SCBP!
Summer 2004	OSCAR – electronic medical record advanced training for caregivers
October 2004	Control group proposal submitted to B.C. Medical Services Foundation
December 2004	Funding granted by BCMSF for control group study
January 2005	First Anniversary SCBP Celebration and Open House
March/April 2005	Transit Shelter advertising donated by City of Vancouver
April 7, 2005	100 th client joins SCBP
June, 2005	“Meet the Team” night
September, 2005	“Meet the Team” night
October 5, 2005	100 th birth
November 1, 2005	Combined provider funding schedule approved by the Ministry of Health
November 1, 2005	OSCAR servers relocated to SCBP from Hamilton, Ontario
January, 2006	“Meet the Team” night
January 2006	Three-day caregiver retreat to consolidate practice guidelines, etc.
March 31, 2006	Completion of the PHCTF program funding

COLLABORATIVE MATERNITY CARE PRINCIPLES

The South Community Birth Program uses a collaborative, multidisciplinary, team-centered approach to providing low-risk primary maternity care services. Research demonstrates that team-based care not only improves the overall continuity of care for clients, it also creates an energetic and engaging working environment for health care professionals¹¹.

In Canada, considerable attention is being directed to the provision of collaborative maternity care. For example, the Multidisciplinary Collaborative Primary Maternity Care Project (MCP²)¹² is designed to address the human resource shortage crisis that exists in the provision of intrapartum care to pregnant women. The mission of this group is to collectively champion changes to the provision of maternity services and to shift the current model toward more collaborative models of primary maternity care. The partner organizations of MCP² include: the Association of Women's Health, Obstetric and Neonatal Nurses of Canada (AWHONN Canada), the Canadian Association of Midwives (CAM), the College of Family Physicians of Canada (CFPC), the Society of Obstetricians and Gynaecologists of Canada (SOGC), the Society of Rural Physicians of Canada (SRPC) and the Canadian Nurses Association (CNA). Features of true collaborative models have been described by MCP². SCBP has adapted these principles as outlined below.

Principles of the Multidisciplinary Primary Maternity Care Collaborative Model applied to the SCBP:

- **Woman-Centered:** Women are the center of the care, in both the Centering Pregnancy groups and also in individual care. Effort is made to address their care and educational needs as they identify them. Women complete self assessment sheets prior to the Centering Pregnancy group which are then used in the facilitation of the group
- **Quality Maternity Care:** Care providers constantly review and discuss case management and address issues of care in a continuous, quality improvement process; e.g. postpartum follow-up has been determined by the experiences with women who have delivered
- **Best Evidence and Practice Guidelines:** Team members review current literature and guidelines at regular retreats and team meetings
- **Professional Competence:** Team members were chosen for their experience and competence. Issues of concern are addressed in an open fashion at team meetings
- **Commitment to the Collaborative Model:** All team members are committed to the idea of working together as a team to provide better care. All of the providers regularly attend meetings and retreats in order to facilitate their role as a team member
- **Mutual Trust and Respect:** Team members learn from each other and value the input from others about practice issues
- **Shared Values, Goals and Visions:** Team members have spent considerable time developing a vision and philosophy that emphasizes woman-centered care
- **Honest, Open, and Continuous Communication:** Communication occurs daily and there is openness about any concerns. In addition, discussions about cases and issues of concern take place at monthly team meetings
- **Responsibility and Accountability:** Team members are accountable for the care that they provide and any actions which affect other team members

- **Scope of Practice:** Adjustments and compromises have been made to accommodate the different scopes of practice and philosophy of care of the midwives and family physicians
- **Common Protocols:** Protocols have been developed and adapted from the Department of Midwifery protocols at B.C. Women's Hospital, to reflect new evidence and women-centered care
- **Mutually Supportive Environment:** Team members all work together to support one another both personally and professionally
- **Acceptance to Discuss Financial Issues:** Financial issues are openly discussed and planned by the team. The midwives and physicians have adopted an equitable pay model; all monies earned are pooled and divided equally for antenatal care and 24 hour on-call work. This has greatly facilitated the reduction of barriers between the professions
- **Locally-based:** SCBP is located in the community and emphasizes continued care in the community and return to home as soon as possible after the birth
- **Effective, Integrated Regional Provision of Services:** Women are integrated back into their community when discharged from SCBP, through the Community Health Nurse link. They are also returned to their family physicians with a summary of the pregnancy and birth and any relevant information
- **Knowledge of Available Services:** SCBP works directly with the community and utilizes services that are close to home for the clients.



ADMINISTRATION AND TEAM STRUCTURE

As a participative, team-oriented program, SCBP's management structure encourages a broad base of input from its care providers and the community at large, along with ensuring clear lines of responsibility and accountability for financial and quality assurance matters. The administration and team structure of the program breaks down as follows:

Co-Directors

The Co-directors remain responsible for the finances, staffing, reporting and ongoing co-ordination of the program. They attend advisory, team and provider meetings. Neither director has assumed a full-time provider role but they have provided locum relief when needed. The Co-directors both have department head roles at BC Women's Hospital and it is expected that the unfunded Co-director positions will be phased out and replaced with a funded, part-time Medical Director position.

SCBP Clinical & Administrative Assistant

A Program Manager was hired for the first year to assist with the start-up of the program. The job description included managing all finances (including budgeting), quarterly reporting, and overall office management. The Manager was also responsible for the set-up of the information technology systems which provided the SCBP team and Advisory Board with relevant, timely and accurate information for the purposes of decision-making and goal setting.

Since the first year, a part-time Clinical & Administrative Assistant has been working out of the South Community Health Office. This person is responsible for phone inquiries, booking appointments, coordinating client care, billing provider fees to the Ministry of Health, and other organizational duties such as the implementation of IT systems and coordinating program evaluations.

In the second year, management activities (financial reporting, etc.) were distributed between the Co-directors of the program and the Administrator. The program now requires a full-time Clinical & Administrative Assistant.

Doula Program Coordinator

A part-time Doula Program Coordinator was hired at the outset of the program. Start-up entailed the development of a doula training program for women living in the community, and establishing a system for the matching of clients with doulas. The coordinator continues to support both the doulas and the clients throughout their involvement with the program, ensuring a doula is available and in attendance in labour. She is a member of the team, attends the monthly meetings, and discusses client care plans in OSCAR, the programs electronic medical record. This coordinator role is essential to the success of the doula program and it is planned that this position will continue part-time.

SCBP Advisory Committee

The Advisory Committee supports the multidisciplinary team by offering it guidance on the direction and overall operations of the program. Members of the Advisory Committee include a Community Representative, Head of the Division of Midwifery at UBC, Maternal/Child Health Manager for South Community Health Office, the Doula Coordinator, and the two Co-Directors for the SCBP. For the first year of the program, this committee also included women from the community who had recently given birth. Meetings were held on a monthly basis initially and are now held approximately six times a year. This committee continues to give valuable input to the program.

SCBP Team Meetings

The multidisciplinary monthly team meetings are attended by everyone involved in service delivery and administration of SCBP programs. This includes; family physicians, midwives, community health nurses, the doula coordinator, and the clinical & administrative assistant. The team meetings provide a forum for discussion and decision-making around client care and quality assurance issues. The team also works together to address challenges, implement positive changes, and ensures that care is provided in the most effective and efficient manner possible. Agenda items include updates on client issues, CP groups, electronic medical records, CHN and doula reports, marketing and evaluation.

SCBP Provider Meetings

In addition to the monthly team meetings, the primary care providers (midwives and family physicians) meet every month to discuss client care plans, call and clinic scheduling, finances and budget, and general quality of care issues. This is also the forum for the physicians and midwives to discuss inter-professional practice issues, and to formulate a collaborative vision for the program. As with the team meetings, provider meetings are essential to the building of a truly collaborative practice. The care providers also meet for a planning retreat two to three times a year.



THE PHYSICIAN/MIDWIFE COLLABORATIVE TEAM

SCBP is unique in Canada in that it offers inter-professional, collaborative maternity care. Midwives and family physicians provide shared care, such that women in the program could be attended at the birth by any member of the midwifery/family physician team. Antenatal care is coordinated by an identified lead provider. Women receive antenatal care in Centering Pregnancy groups or by single visit, individual care. When necessary, women are referred to an Obstetrician for a consultation or transfer of care. The SCBP providers function as a team, collaborating with CHNs, doulas, dieticians, physiotherapists, social workers, and translators, when necessary. Discussions about clients and care issues take place on a daily basis through the electronic medical record (OSCAR), and in more detail on a monthly basis at team meetings.

A core group of primary care providers were hired in the fall of 2003, which included two midwives and two family physicians. Individuals were selected who expressed interest and commitment to practicing in a new model of care, with midwives and family physicians sharing primary care, women receiving prenatal care in groups of ten or more, and doula support provided to every woman. The primary care providers, co-directors, and the doula coordinator held several retreats and many meetings establishing collaborative guidelines to practice, while solidifying the goals, targets, and vision for the program. As the number of women attending SCBP has increased, all of the providers have increased their workload with the program to accommodate the growing demands.

Responsibility and care of the clients is shared equitably among the primary care providers (midwives and family physicians). They are paid on a sessional basis for care provided in the clinics and CP Groups. Until March 2006, (end of the PHCT funds), they were also paid to attend team meetings and retreats for program development. On-call shifts are divided evenly, with each of the four providers doing one 24 hour shift a week and one 48 hour weekend shift a month. The fifth weekday shift had been covered by the co-directors or a locum physician or midwife, a fifth part-time provider has recently been hired to fill this shift. The providers are paid for each 24 hour shift with a sessional rate per diem, as well as a fee per birth done on the shift. As the program has grown, the per diem rate has increased and the per birth fee has decreased. For income stability, it is a goal of the program to pay the providers on a per diem rate only and projections indicate that this rate will be attainable in early 2007, when the program is fully subscribed at approximately 300 births per year. Fortunately, all of the providers have remained fully committed to the program while waiting for this rate to increase.

Until October 2005, the program billed each course of care through the standard Medical Services Plan billing codes for midwife and physician care. These billings were pooled into one account and distributed equitably among the providers for care provided. Since November 2005, in a negotiated agreement with the Ministry of Health, payments are now received using a course of care rate (as opposed to fee for service physician model) that was established by combining the midwifery and family physician fees and averaging this course of care fee in the middle of the amount paid to each. The program continues to divide the payments equally among the providers.

COMMUNITY HEALTH NURSE

Three Community Health Nurses (CHN) employed at the South Community Health Centre were initially selected to participate in the program by the Coordinator for Maternal Child Health. They co-facilitate the Centering Pregnancy (CP) groups with a physician or midwife, and provide postpartum home visits for clients living in the South Community Health district (also part of their job prior to their involvement in SCBP). All three CHNs remain committed to the program. Their role is being adapted and they are assuming more responsibility in Centering Pregnancy group sessions to facilitate discussion on topics such as breastfeeding, parenting issues and baby care. They attend team meetings and retreats and their input is valued and appreciated. They also communicate in OSCAR discussing client care issues with the team when they follow up on women in the community. Many of the women they follow will come to the Mother Baby groups that are offered at the South Community Health Centre. The salaries of the CHNs have been covered by their employment at the South Community Health Centre. These CHNs have contributed in numerous ways to the growth and success of this program.

*"It was great having the CHN, whom I knew through the CP groups, visit me after the baby was born. She was so knowledgeable about breastfeeding and helped me get started."
- SCBP Mother*



THE DOULA PROGRAM

The word Doula refers to a supportive companion (not a friend or loved one) experienced in attending childbirth and trained to provide continuous emotional and physical support during labour. Evidence suggests that doula support can have enormous benefits for the mother, newborn, and family. There have been several randomized trials confirming the benefits of the presence of a doula. The initial studies confirmed doula support reduces the overall cesarean rate by 50 percent, the need for forceps by 40 percent, the length of labor by 25 percent, oxytocin use by 40 percent, pain-medication use by 30 percent and requests for epidurals by 60 percent. Women randomized to receive doula support also report higher self-esteem and stronger feelings of attachment to their newborn six weeks after birth than women who did not receive doula support.¹³

In the fall of 2003, the doula coordinator began to recruit women from South Vancouver and the surrounding area, distributing flyers to local community centres, public health units, as well as holding public information nights. Interested women were interviewed and those selected attended a four-day DONA (Doulas of North America) Approved Training facilitated by the doula coordinator. This training was provided free of charge. In total, 19 women attended the first training. A second training was held in March 2005 with 15 women attending. In total, of the 34 women who have been trained as doulas, 18 are still active with the program.

The program's volunteer doulas receive further guidance and support from a team of dedicated and experienced mentor doulas. Initially, seven experienced DONA Certified Doulas were recruited as mentors; to date, four remain with the program to train and support new doulas. SCBP doulas are accompanied to three births by a mentor doula, or until they have demonstrated confidence in supporting labouring women. Currently, 15 of the program's volunteer doulas have completed the training period and demonstrated that they are confident to attend births without a mentor. Of these, two have gone on to fulfill the requirements for registration with DONA and can now act as mentors to new doulas in the program.

When the doulas training program is complete, they are assigned to women, being matched for language and "character fit" by the doula coordinator. The doulas, where possible, speak the client's first language and provide the woman with a one-on-one support throughout labour and the birth. They meet the women antenatally and provide one postpartum follow-up visit.

SCBP doulas speak over 14 languages including Cantonese, Mandarin, Tagalog, French, Spanish, Greek, Punjabi, Hindi, Urdu, Japanese, Gujrati, Farsi, Swedish, and American Sign Language. Whenever possible, clients are matched with a doula who speaks the language they feel most comfortable with.

The doulas have been an integral part of the SCBP and an enormous part of the program's success. The doula program has been generously supported by the Provincial Health Services Authority, by providing funding for the part-time coordinator and a small honorarium for the doulas to cover their expenses. Projected funding for translation services has not been required, as the doulas are able to provide language support during labour.

"Our doula changed our lives forever. She provided great emotional support and to date is a part of our lives. We couldn't have done it without her."

*"I don't think I would have done as well during labour without my doula. She was wonderful. I have been recommending to pregnant friends that they ought to consider getting a doula."
- SCBP Mothers*

CENTERING PREGNANCY PROGRAM

The Centering Pregnancy (CP) Program ¹⁴ alters routine prenatal care by bringing women out of exam rooms and into groups for their care. Women have their initial intake into SCBP care in the usual manner, with history and physical examination occurring within the office/clinic space. This usually takes place over two private visits. They are then invited to join 10-12 other women/couples with similar due dates. The groups meet for 2 ½ hours at varying times (but consistent for the individual group). The groups always start on time and nutritional snacks are provided. Evening sessions are popular with women and their families, but are limited due to scheduling. The groups form between 12 and 16 weeks of pregnancy and continue through the early postpartum period, meeting every month for the first 4 months, and then bi-weekly to term. One-on-one prenatal visits are added on when required, to further discuss complications or at the woman's request for privacy. Unless a woman develops medical problems, she would not re-enter an exam room until 38-40 weeks gestation (if she is undelivered) when her CP Group has ended. Reunions of the CP Group are held when everyone in the group has given birth. Women that have given birth prior to the sessions ending attend with their newborns to share their birth story.

One CHN co-facilitates the Centering Pregnancy groups with a midwife or physician. Community services are integrated into the groups, including dietitians, physiotherapists, massage therapists, the doula coordinator, and SCBPs evaluation coordinator. To date, 10 CP groups have been completed and seven CP groups are in progress. In addition, when people have come late into care we have set up Interim groups, with smaller numbers and a shorter curriculum.

Centering Pregnancy requires a certain critical number of due dates to be used effectively. It functions best when women in the group are due within as short a time span as possible. Currently we attempt to have all CP members due in the same month. Most groups have 10-12 clients in them. Organization of the groups remains a challenge and requires all caregivers and support staff using the electronic record optimally.

Initially, it was difficult to convince women of the benefits of group prenatal care. Uptake of the CP groups was slow to build with 39.3% of women participating in the first year. Once a few groups were established, word-of-mouth spread among women and this ratio of participation in CP groups reversed. To date, 2/3 (66%) of women receive their prenatal care in CP groups. However, there remains a number of women who choose not to participate and a number of women who cannot arrange their schedules to participate in the group. These women continue to receive prenatal care in the standard way, with one-on-one visits in the office, with either a midwife or physician. It is the feeling of the providers that women attending CP groups are better prepared for the birth and the arrival of the baby.

The Centering Pregnancy Program has three care components:

Assessment

Women enter a CP group after their initial prenatal intake visit/evaluation is completed. The standard prenatal assessment is completed within the group setting with a "three-minute belly check". Women participate actively by checking their own weight, blood pressure, and urine and record these findings in their charts. The women are seen in the group by the physician or midwife and the CHN to evaluate the health status of the baby and many questions and concerns are addressed within the group setting. Pilot data indicates that women enjoy hearing the heart beat of each other's baby, and feel reassured that all is progressing well. Primiparous women highly value the participation and input of the multiparous, or experienced mothers in their group who give advice based on their own experiences.

Education

A general curriculum is outlined in the Mother's Handbook, a binder which each woman receives at the first group. Topic areas are set for each session but may be altered to focus on specific needs identified by the women/couples. The education process occurs through a group discussion format and includes; exercise/relaxation, nutrition, pregnancy problems, pregnancy and birth comfort measures, childbirth preparation, infant care and breastfeeding, postpartum issues, communication and self-esteem, sexuality, violence and abuse, and general parenting and relationship issues.

Support

Given the sensitive nature of some of the topics, groups are closed to new members after the third session, which allows for the building of trust among the group and providers. Students placed at SCBP must commit to the CP groups for the full duration and cannot come and go. Outside observers are not permitted. Women and couples become invested in each other and build community as a result of their interactions. This leads to increased support and decreased feelings of isolation. Time for refreshments and socialization during the sessions helps to promote cohesion. The families in a number of CP Groups still meet as a group for reunions.

"I loved being able to relate to the other mothers in the group. As a result, I never felt alone and I always felt understood and assured that my concerns and questions were perfectly normal."

- SCBP Mother

"When we came to the first group and everyone was sitting around in a circle, I was worried that this would not be for me. However, I loved the groups and felt very well prepared for not only the birth but the baby as well. I looked forward to attending. We never missed a single group."

- SCBP Father



THE INTAKE CLINIC

All of the midwife/physician providers lead CP groups with the CHNs, as well as provide one-on-one care at the intake clinics. A woman is seen at the intake clinics when she first comes into care, where a physical and history are completed. She is invited to join a group and may continue to be seen at the intake clinics until her group begins. Women choosing not to join a group continue to be seen at the intake clinics for the duration of the pregnancy. Antenatal visits range between 15 and 30 minutes long. If her CP group ends before she is delivered, the woman will continue to be followed at the intake clinic.

Initial postpartum visits take place in the woman's home. After that, all postpartum visits take place at the intake clinic. Appointment time is booked to see both the mother and her baby. If more intensive counseling and support is required for breastfeeding, women can also spend time with one of the programs CHNs, whom have advanced skills with breastfeeding problems.

There is a strong request from women to continue the group format of care into the postpartum and early newborn period, a time when many women feel isolated and alone. A model for this has been developed called Centering Parenting¹⁵. It is our hope that the program could one day expand to include this postpartum support.



INTRAPARTUM CARE

At term when a woman goes into labour, she pages the midwife or physician on-call, as well as her assigned doula. Before labour becomes active, the doula is often in attendance in a supportive role at the woman's home. She is in contact with the on-call provider, updating on the progress of labour. The doula acts as a companion only and does not perform any clinical assessments. Frequently, the provider first attends the woman in her home during labour, assessing cervical dilation, fetal heart, blood pressure and labour progress. All of the providers carry the equipment necessary to assess maternal and fetal well-being out-of-hospital. Admission to hospital is postponed until the labour is active, which is often around four to five centimeters dilated. This plan, of course, varies depending on the labour progress. Both the provider and the doula attend the woman in labour in the hospital, and both stay until the birth is completed. CHNs are not involved in the intrapartum care of women.



POSTPARTUM CARE

For a normal birth, early discharge from hospital is encouraged and supported. Women informed us that they would feel safer leaving the hospital early if the provider were to visit the next day at home. We adjusted our postpartum visit schedule so that when the woman is discharged from the hospital under 24 hours following the birth, the provider on-call will see her at home the next day. This plan has been very well received and our early discharge rates increased following its implementation. The woman and her baby are then seen by the CHN at home the following day, and then again by the on-call provider on the third day following the birth. The physicians in the program were trained to do the newborn PKU blood test (midwives were already performing this test), thus preventing a prolonged stay in hospital waiting for this test to be done (it cannot be done until 24 hours after the birth).

CHNs continue to follow up with the woman in her home if there are problems, and particularly for breastfeeding support. The woman is then discharged back to the intake clinic for continued postpartum care with a physician or midwife.



EDUCATIONAL INITIATIVES

Multi-disciplinary students have been placed with SCBP since January of 2005. Students with longer clinical placements with SCBP (midwifery and medical) have attended a Centering Pregnancy Group, which they report on very positively. Medical, midwifery, nursing, and nurse practitioner students have attended intake clinics, CP groups, as well as births and postpartum visits. To date, student feedback has been very positive. Further evaluations will be needed to confirm the value of this experience as an educational initiative. It is hoped that with some creativity we may also be able to involve family practice residents in the program possibly as a horizontal elective. Student placements to date include;

- ❖ January - April 2005: Third year midwifery student
- ❖ September - December 2005: Two second year midwifery students
- ❖ January 2006: Three nurse practitioner students
- ❖ January - March 2006: Labour & delivery nurse working on her degree; community placement
- ❖ March 2006: Fourth year medical student, one month elective
- ❖ April 2006: Fourth year medical student accepted for residency in obstetrics and gynaecology
- ❖ September 2006 – April 2007: Fourth year/clerkship midwifery student



OSCAR - ELECTRONIC MEDICAL RECORD

Part of the initial SCBP proposal included the implementation of an Electronic Medical Record (EMR). We wanted to adapt current maternity care forms already in use in the province of British Columbia, simply for all around ease of use. In addition, we required that all client information be entered electronically and accessed at the SCBP clinic, via the web from the providers' homes, and at B.C. Women's Hospital. These features were key factors in the choice of an EMR vendor for the SCBP. Vancouver Coastal Health Authority (VCHA) supported this initiative and hosted an EMR Health Fair where screened EMR vendors could be viewed by the prospective PHCTF applicants. Ultimately, a decision was made that the Open Source Clinical Application Resource (OSCAR) best met the requirements of the SCBP. This vendor had already adapted the maternity forms in use in the province of Ontario These were being used at the McMaster Maternity Clinic and were evaluated positively by the staff in this clinic.

OSCAR was developed in Ontario by Dr. David Chan at McMaster University. Advantages of OSCAR included free software without royalties or licensing fees, no vendor lock-in, free source code that could be modified to suit our needs, and room to develop such that improvements could be circulated to colleagues. In B.C., a nucleus of providers as well as the SCBP, signed on in early 2004. Initial implementation went smoothly and providers received training in the summer of 2004.

VCHA and the PHCTF both supported the development of OSCAR, including the establishment of a Medical Health Summary. However, this process became somewhat derailed when it was discovered that OSCAR did not have a licensing agreement with McMaster University. It took over six months for this to be resolved and this left OSCAR users in B.C. somewhat isolated and without support. Fortunately, VCHA assisted with bringing together the users and offering adequate support to move the projects ahead. In the meantime, the SCBP contracted with the McMaster team to get the necessary maternity forms developed. OSCAR is now able to link with Pathnet (for lab results). To date, the SCBP Clinical & Administrative Assistant and the Providers continue to receive training to make full use of the features in OSCAR. We are using the appointment scheduler and tracker, provider billing feature, message board system, electronic record keeping and charting, electronic documents, which include templates for consultations and referrals, and reporting functions for outcomes and demographic reports. We are now beginning to scan labs and reports into clinical charts, in order to more thoroughly access records on-line.



POPULATION SERVED BY SCBP

South Vancouver (CHA 6) is a diverse community where, according to the 2001 census, 63% of residents speak a language other than English at home (Figure 1). Accordingly, clients of the South Community Birth Program are a culturally, ethnically and linguistically diverse group. Although 65% speak English at home (Figure 2), only 33% are Caucasian (Figure 3).

Figure 1. Home languages, Stats Canada 2001 Census

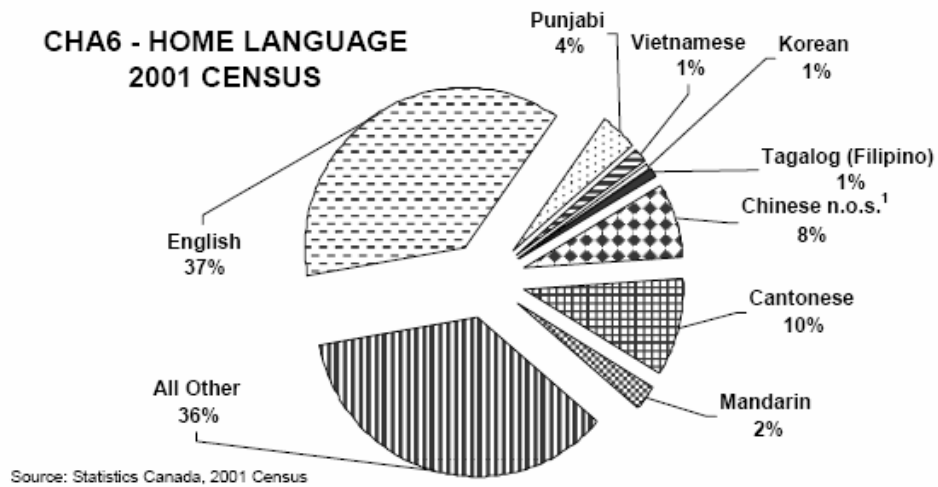


Figure 2. SCBP Client Ethnicity

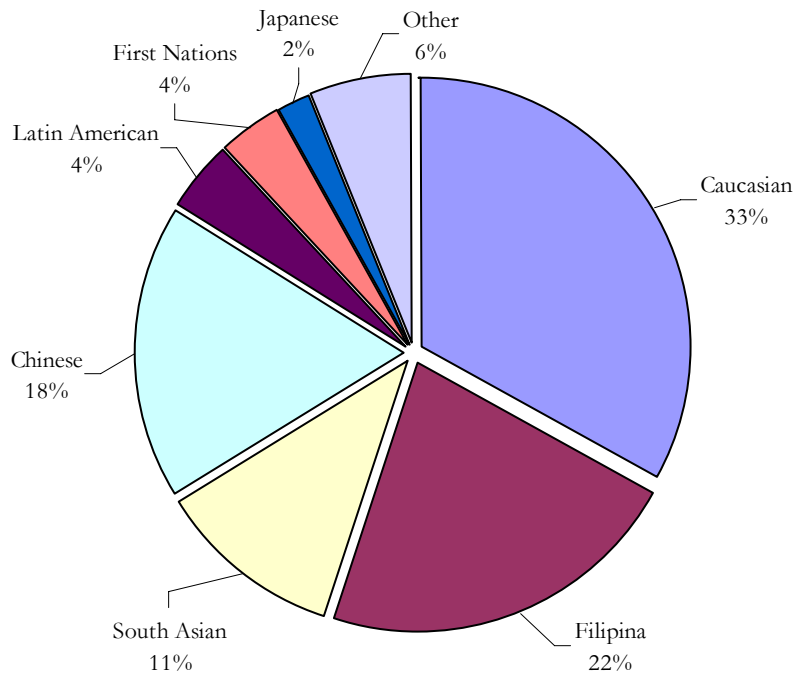
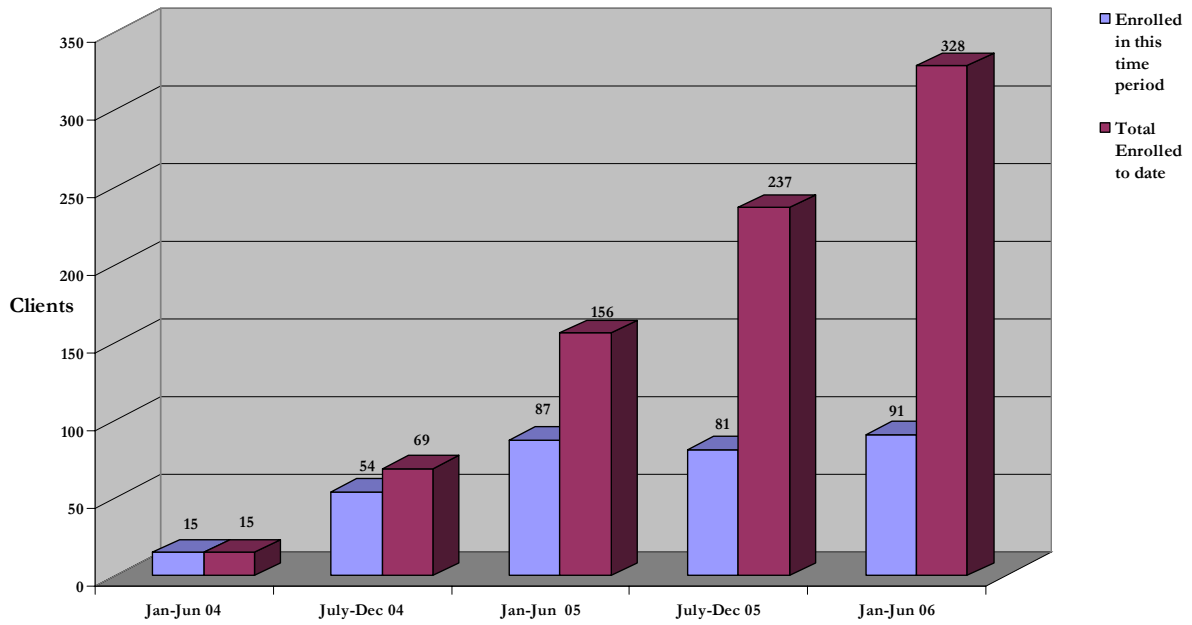


Figure 3. Enrolment in SCBP



Enrolment continues to increase; in July 2006 alone we registered 31 women.

SCBP OUTCOMES 2004 TO 2006

The outcome data below has been collected from the birth of the 1st baby in SCBP (April 2004) to the 192nd baby born on May 26, 2006. The OSCAR EMR database compiles outcomes for the program. In addition, a random selection of charts has been audited to validate this data.

Clients of the SCBP are predominantly primiparous - 65% of clients are giving birth to their first child. This is significantly higher than the proportion of primiparous women giving birth at BC Women's Hospital (50%). The implications of this higher proportion of primiparous women should be taken into account in any analysis of perinatal outcomes for the program.

Figure 4. Parity

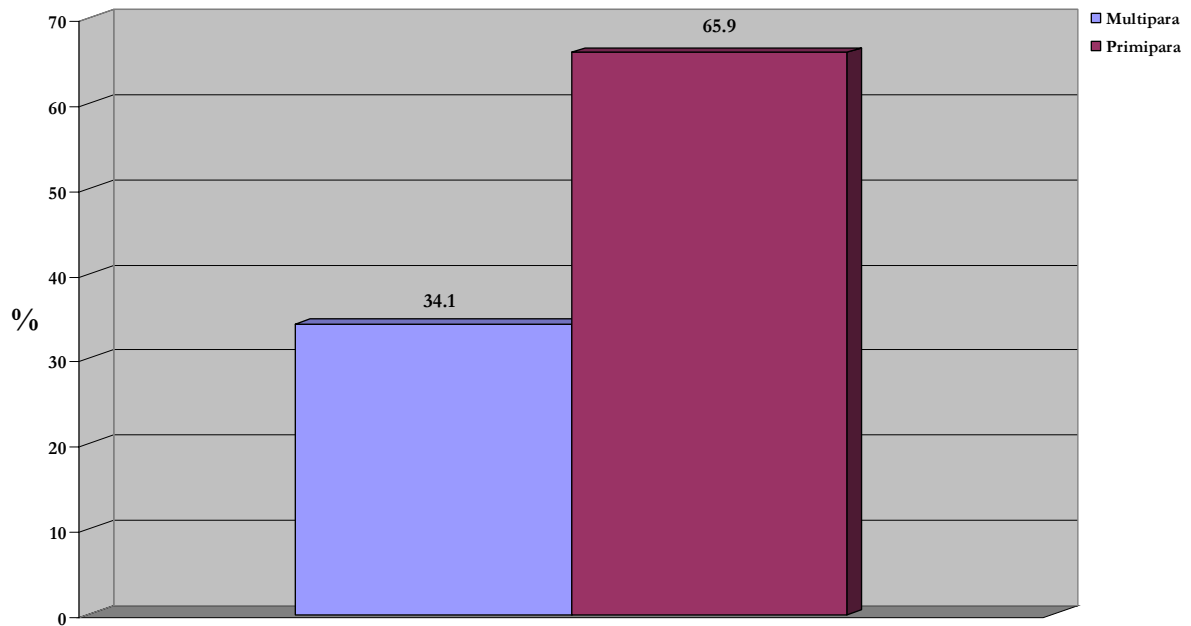


Figure 5. Maternal Age at Time of Delivery as Compared to BC Women's Hospital

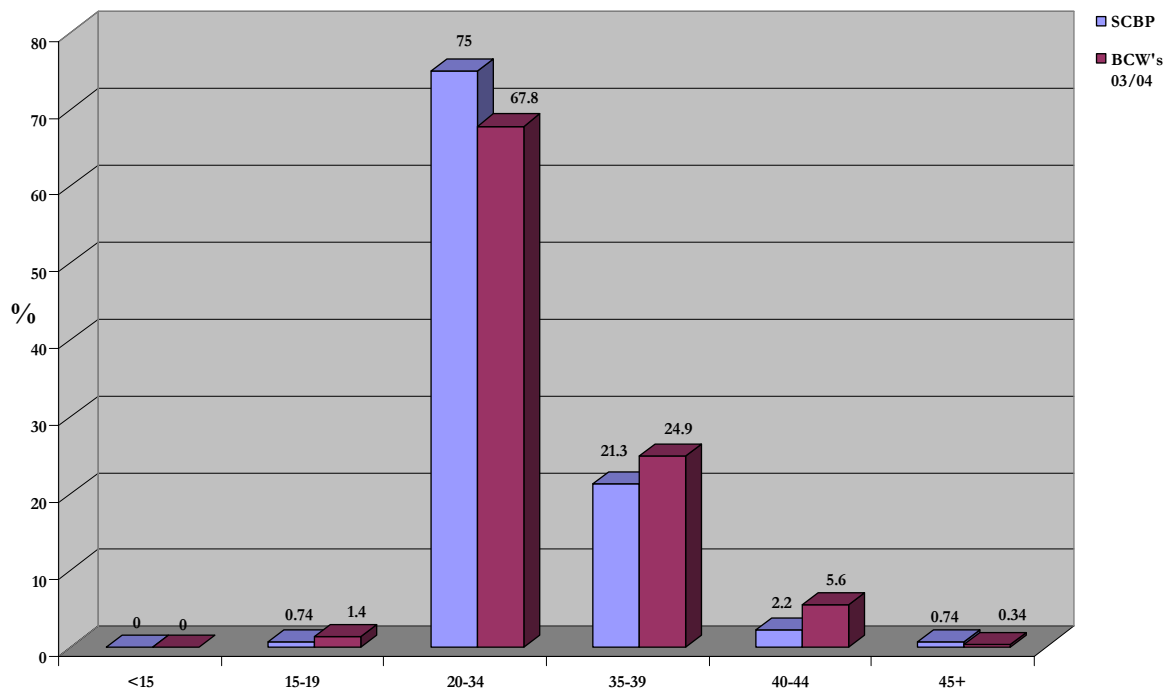


Figure 6. Centering Pregnancy vs. Standard Prenatal Care in SCBP

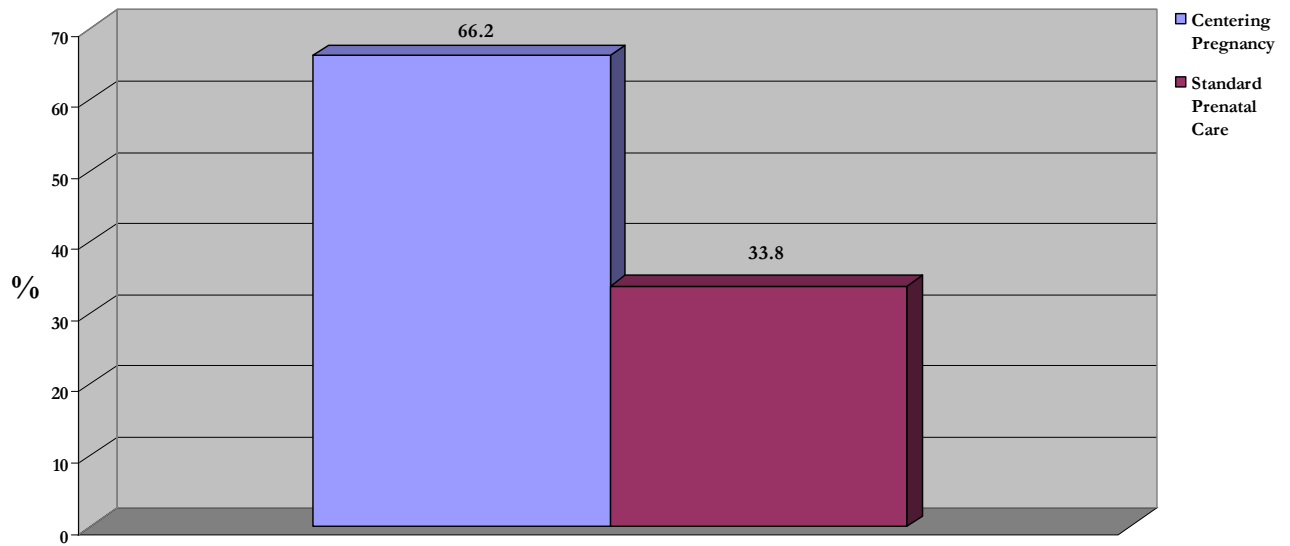


Figure 7. Mode of Delivery

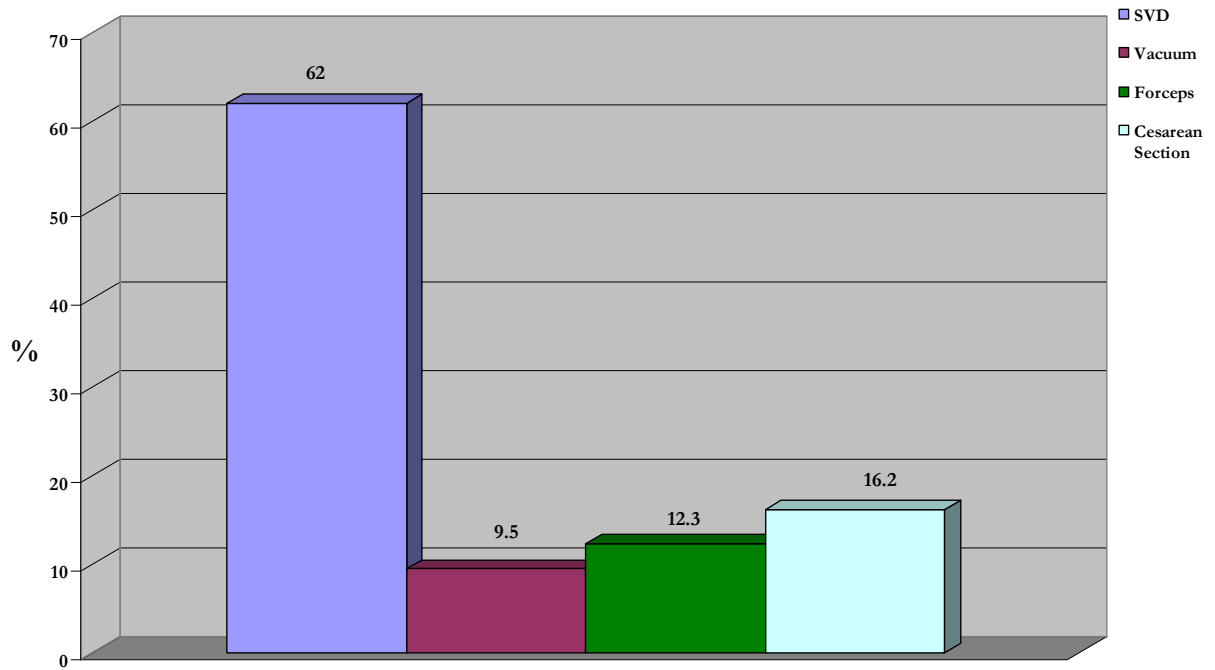


Figure 8. Cesarean Section Rate: Health Region vs. SCBP

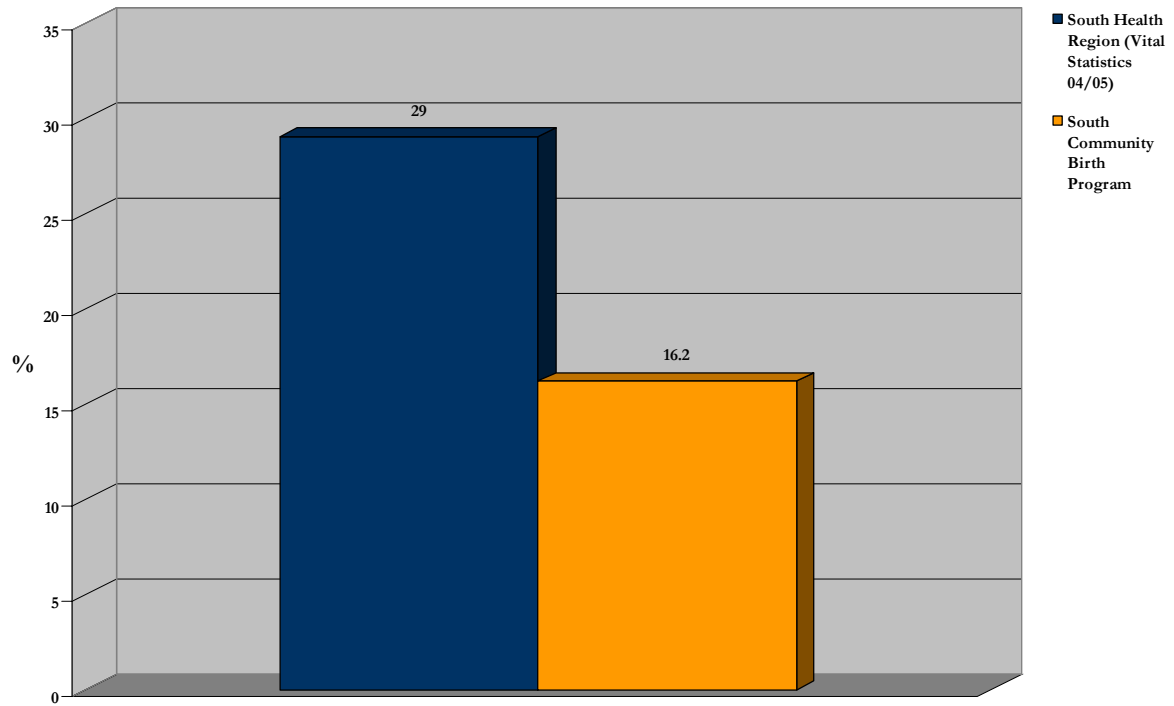


Figure 9. Mode of Pain Relief in SCBP

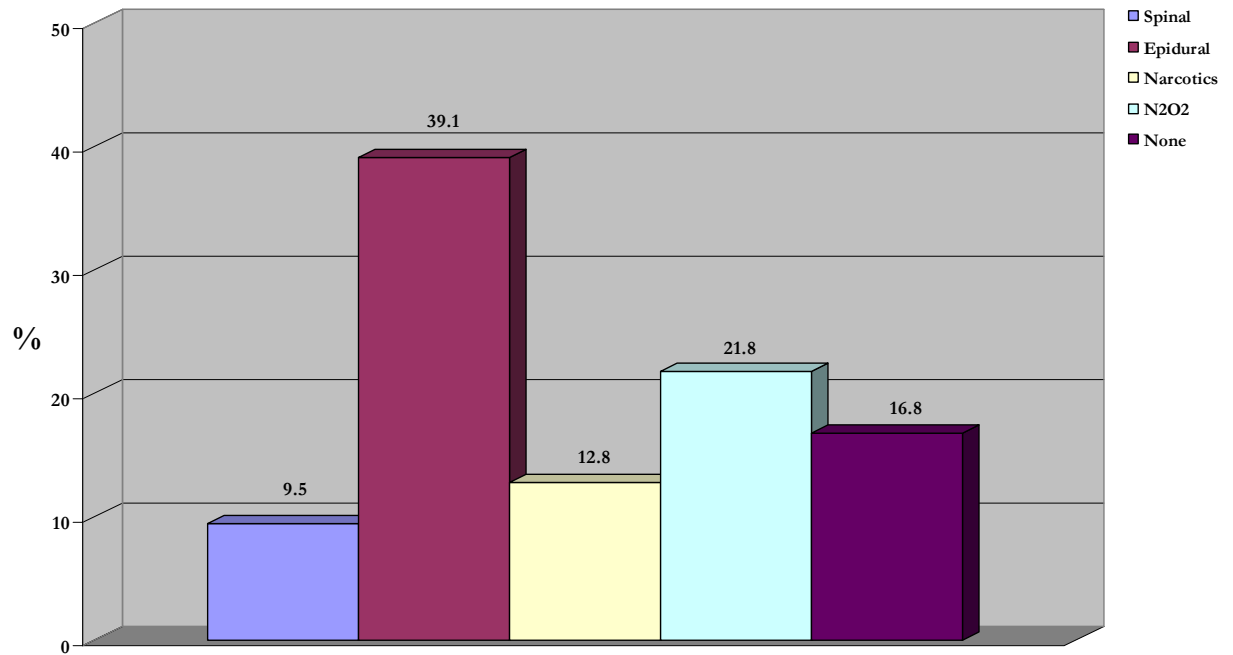


Figure 10. Average Length of Stay (SCBP vs. BCWH)

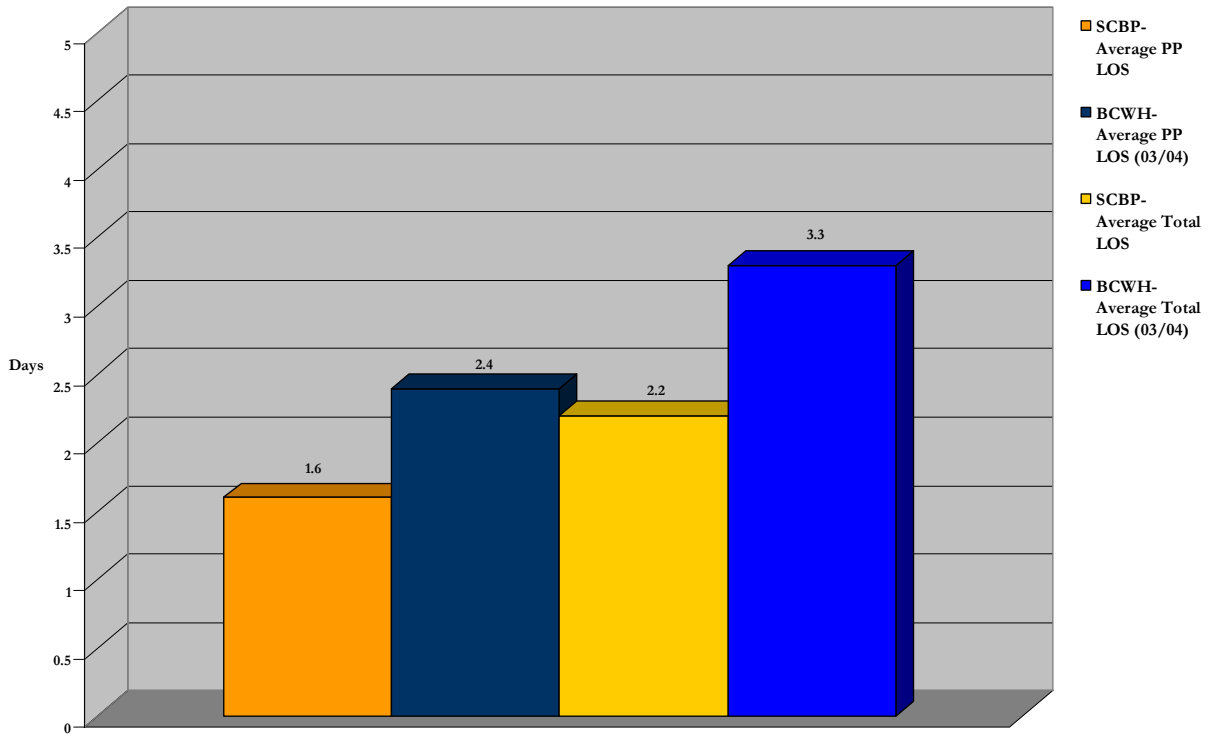


Figure 11. Type of Infant Feeding (BCWH vs. SCBP)

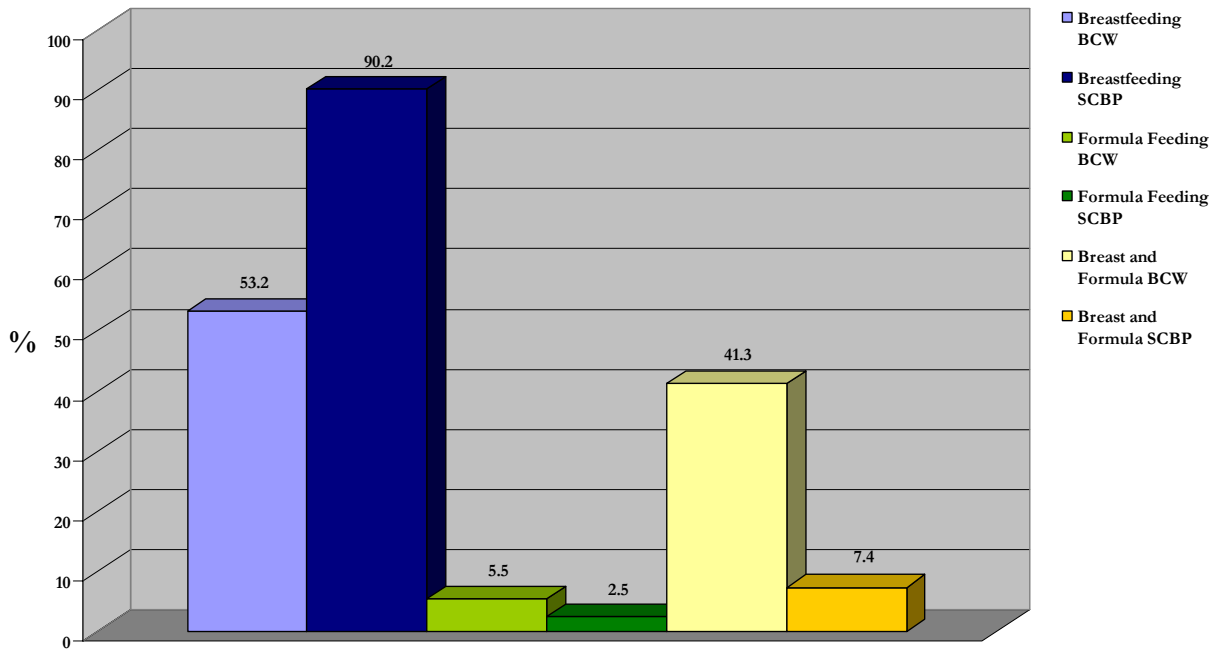
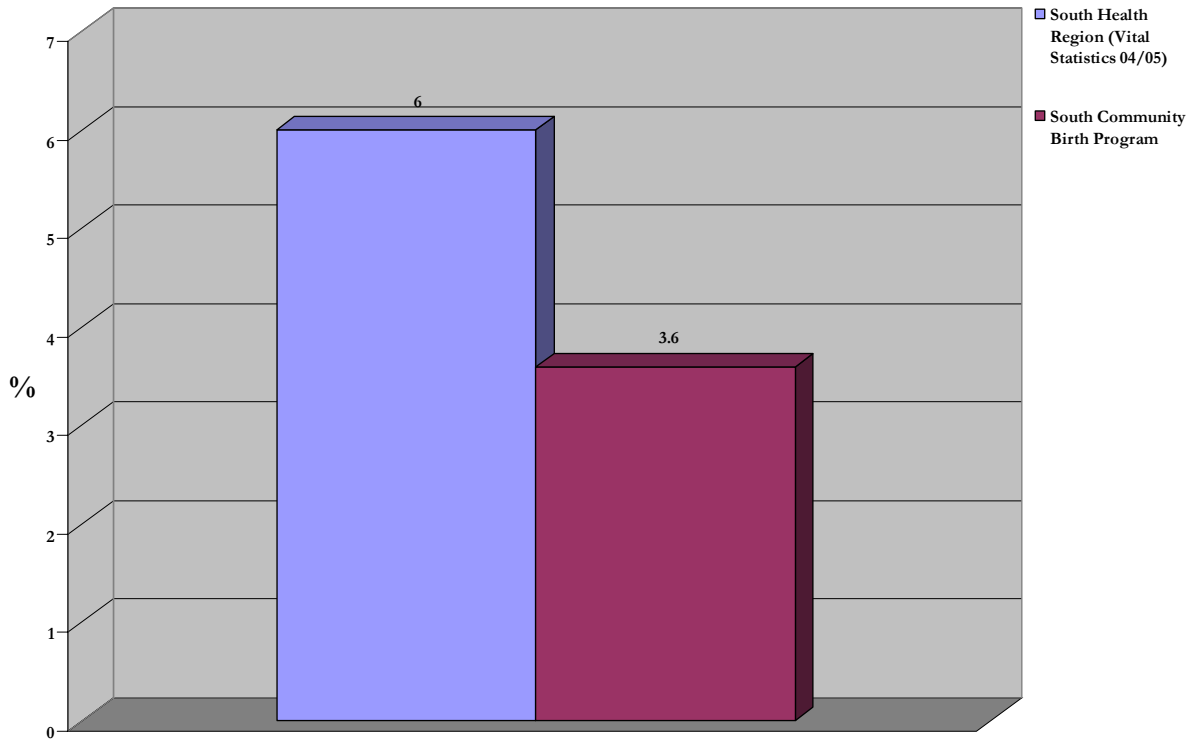


Figure 12. Low Birth Weight <2500 gm



CLIENT SATISFACTION

Feedback to date from clients has been overwhelmingly positive. The following are quotes from families receiving care in SCBP;

About the team of caregivers...

"There was always someone available to answer questions and respond quickly. Everybody was personal, I never felt rushed and always felt assured and confident after speaking with somebody."

"My doula, midwife and doctor were awesome."

"I thought I had a midwife for the birth and then found out she was a doctor. I loved the consistency between them."

About Centering Pregnancy group prenatal care...

"I loved being able to relate to the other mothers in the group. As a result, I never felt alone and I always felt understood and assured that my concerns and questions were perfectly normal."

"If we had it our way, we'd make the classes longer because they were so stress-free, fun and informative. I liked being able to share information, concerns, and stories."

"At first introduced to the program I was a bit hesitant because Chris and I aren't much for "group" anything really. However, our view was quickly changed a couple of classes into it. Now in retrospect, we realize that it was the best experience of our lives and we couldn't possibly imagine birthing our child any other way."

About the labour and birth experience...

"I felt 100% confident with my doula and doctor. The experience was absolutely magical! Knowing I was so well cared for allowed me to be confident in myself and I believe it is what contributed to a fast and completely natural childbirth."

"Being new immigrants, you made us feel so welcome to Canada. The caring support at the birth was more than we could have hoped for. Thank you."

"I felt so calm going into the birth. Thank you for helping me overcome my fears to have a great experience. I could not have done it without the midwife and the doula."

About the doulas...

"My doula was amazing. She always remained calm and quick to answer my questions/concerns in an educated and loving way. She also had a number of helpful remedies that helped during the labour process."

"My doula stands out the most for me because labour is such an intense time and she made it easier to manage the whole ordeal."

"Our doula changed our lives forever. She provided great emotional support and to date is a part of our lives. We couldn't have done it without her."

About the program...

"This is the only way I can imagine going through labour, pregnancy, and childbirth. I truly loved the whole experience and wish that everybody could have access to this type of program."

"The whole team was great. I loved the whole experience and felt supported every step of the way."

"SCBP is a fabulous program, & I do hope it can be replicated & continued in the future. Thank you for helping make my pregnancy & birth experience so wonderful!"



EVALUATION

Collaborative Practice, Peer Support and Doula Care: Evaluating a New Model of Maternity Services

The purpose of this study is to evaluate the model of maternity care utilized by the SCBP versus a standard model of maternity care provided by a midwife or physician practicing at B.C. Women's Hospital. This evaluation of the SCBP is being led by Elaine Carty, Susan Harris, Patti Janssen, and Lee Saxell.

Demographic and Outcome Data Collection

Demographic and perinatal outcome data have been tracked from the beginning of the program. Through OSCAR (the electronic medical record) reports can be generated at any point and include all of the items currently tracked in the provincial database collected by the B.C. Reproductive Care Program. This includes antenatal, labour and delivery, and newborn care data. In addition, SCBP outcome data includes information on hospital length of stay.

Qualitative Data Collection

Women in SCBP are requested to complete a series of validated questionnaires during pregnancy and following the birth. The six questionnaires take a combined total of one hour to complete and are as follows:

- 1) Demographic Information Questionnaire (36 weeks gestation)
- 2) Patient Participation and Satisfaction Questionnaire (36 weeks gestation)
- 3) Perception of Birth Scale (1 week postpartum)
- 4) Care in Obstetrics: A Measure for Testing Satisfaction (COMFORTS Scale; 1 week postpartum)
- 5) Breastfeeding Self-Efficacy Scale (4 and 8 weeks postpartum)
- 6) Edinburgh Postpartum Depression Scale (4 weeks postpartum)
- 7) Health Services Questionnaire (4 weeks postpartum)

Control Group

A control group of low-risk women receiving care from either a midwife or physician at B.C. Women's Hospital will be matched with women in SCBP. Perinatal outcomes will also be compared to evaluate whether the SCBP model has any impact on outcomes.

The control group portion of this evaluation has been funded by the BC Medical Services Foundation administered through the Vancouver Foundation.

FINANCIAL STATEMENT

South Community Birth Program -			
Operating Revenue (Z1)	Nov 03-Mar 04	Apr 04-Mar 05	Apr 05-Mar 06
Funding - Provincial Health Services Authority	\$100,000.00	\$100,000.00	\$100,000.00
Funding - Vancouver Coastal Health Authority	\$124,650.00	\$38,624.00	\$30,078.00
Total Revenue	\$224,650.00	\$138,624.00	\$130,078.00
Operating Expenses (Z1)			
Accounting and Bookkeeping	\$513.14	\$993.20	\$1,405.40
Advertising and Promotions	\$360.00	\$4,758.74	\$7,244.66
Advertising and Promotions Printing	\$915.08	\$7,559.35	\$3,195.94
Program Manager/Administration	\$15,733.99	\$19,451.57	\$26,287.30
Doula Coordinator	\$11,691.00	\$19,800.00	\$28,237.50
Marketing/Outreach	\$0.00	\$0.00	\$6,000.00
Evaluation Coordinator	\$0.00	\$16,749.40	\$13,907.00
Team Meeting/Planning/Promotion/Education	\$3,030.48	\$14,083.93	\$48,389.99
Team Retreats	\$0.00	\$3,300.00	\$15,621.65
Doula Services	\$0.00	\$9,519.50	\$25,260.00
Doula Training	\$379.66	\$1,034.29	\$0.00
Translation	\$465.00	\$1,427.84	\$240.00
Courier and Postage	\$0.00	\$259.64	\$359.45
Interest	\$0.00	\$0.00	\$22.77
Bank Service Charges	\$6.00	\$20.00	\$58.50
Over/Under Bank Clearing	\$0.00	\$0.00	\$9.83
Office Supplies	\$945.38	\$1,146.54	\$3,601.48
Educational Material	\$345.19	\$255.02	\$4,399.04
Answering Services	\$486.49	\$2,357.15	\$5,012.73
Internet Service	\$0.00	\$0.00	\$491.09
Licenses and Dues	\$140.00	\$25.00	\$1,783.81
Medical Supplies/Equipment	\$369.81	\$891.26	\$14,383.77
Conferences and CME	\$10,817.69	\$5,356.78	\$28,583.23
Information Technology Software/Management	\$1,925.25	\$17,291.29	\$0.00
Computer Training	\$1,686.06	\$3,834.94	\$5,587.02
Computer Maintenance/Software Development	\$0.00	\$1,863.00	\$8,764.85
Computer Hardware	\$0.00	\$13,889.55	\$20,767.98
Renovation/Repair and Maintenance	\$6,839.59	\$0.00	\$0.00
CP Group Expenses	\$0.00	\$2,017.96	\$4,312.60
CP Group Printing Expenses	\$0.00	\$0.00	\$236.10
Mom's Notebooks	\$668.68	\$0.00	\$3,637.00
Custom Fees	\$25.59	\$0.00	\$1,455.19
Total General and Administrative Expenses	(\$57,344.08)	(\$147,885.95)	(\$279,255.88)
Funding Less Expenses	\$167,305.92	(\$9,261.95)	(\$149,177.88)

CHALLENGES, SUCCESSES, AND LESSONS LEARNED

COMMUNITY INVOLVEMENT AND FEEDBACK

Challenges

- SCBP feasibility focus groups were held in the Community Health Centre (CHC) and valuable information was obtained through this process to shape the development of the service. Women were recruited from the CHC to participate in the Advisory Group. However, despite our best efforts to involve them in an ongoing process, they were unable to remain in an advisory capacity due to other commitments or relocation. This has also been the finding when other institutions like B.C. Women's Hospital have attempted to involve women in an advisory capacity.
- We have been unable to engage family physicians practicing in the area in any meaningful way, despite planned breakfast meetings at the CHC and SCBP open houses. These physicians often practice solo or in small groups and are not necessarily attached to any hospital or facility. This remains a challenge for new programs launching in community settings.

Successes

- We have had consistent involvement and strong support from the South Community Health Society, an advocacy group. One executive member of this group actively participates on the SCBP Advisory Committee.
- Presentations and linkages have been made with a number of community groups such as SUCCESS, South Vancouver Neighborhood House, MOSAIC, Pacific Association of First Nations Women, Immigrant Services, Multicultural Helping House Society, Family Services of Greater Vancouver, and other groups.
- We have developed a strong core group of doulas who reside in the South Vancouver community. The doulas themselves have become powerful community representatives of the program.
- Through the volunteer program at the CHC, we have been provided with support for the Intake Clinics. Many of these volunteers are students enhancing their experiences for future studies, but a number have been with the program for longer periods of time.

Lessons Learned

- Building community support takes time and considerable energy to nurture and maintain.
- Focus groups may be a more effective way to receive consistent feedback from women who have received their care with SCBP.
- Establishing links with community groups and services is important for both ensuring cultural sensitivity and for generating referrals.

COMMUNITY REFERRALS TO SCBP

Challenges

- Referral patterns are very well established among family physician in the area that do not provide maternity care. Many have a pattern of referring their patients to obstetricians and may have longstanding relationships with these specialists.
- There has been some concern about Health Authority involvement in primary care, expressed by family physician leaders. The introduction of family physicians in the Community Health Centre (CHC) where SCBP is located may have been a problem as local physicians feared losing their patients to these physicians.
- For some women, pregnancy care by “non-specialists” such as family physicians and midwives was not seen as desirable.
- Language issues have been raised as a barrier. Some family physicians mention that their patients need caregivers who speak their first language. They therefore refer to obstetricians who speak these languages, despite the fact that at the birth they may have a provider who only speaks English. Translation has been available at SCBP through various resources, including the doulas. As well as English, the CHNs speak Punjabi and Chinese, while the primary care providers speak English, Spanish, and French.

Successes

- Marketing and promotion of the program has been done by the entire team. Presentations have been made at various CHC’s, physician meetings, Multicultural Agencies, and various Community Health Fairs. We have received media coverage through community newspapers, radio, mainstream media, and medical journals. SCBP was awarded an opportunity to receive free advertising through the Transit Shelter Advertising Program, and posted pictures advertising the program at bus stops throughout the city.
- Establishment of website early in program development has facilitated growth.
- Word-of-mouth amongst women in the community has been the strongest marketer of the program. Women satisfied with their care are referring their family members and friends. Also, women are starting to return with their subsequent pregnancies.
- Some family physicians in the community are starting to refer to the program due to the enthusiastic response expressed from their returning patients. The program continues to involve the community physicians by providing personal links for those who do refer in order to maintain positive relationships.

Lessons Learned

- The timeline imposed by the PHCTF for sustainability is probably unrealistic for building a maternity care program. Given that a pregnancy takes nine months to complete, maternity programs should probably be reviewed in four to five years, rather than the three years assigned. It must also be noted that, because of funding delays in the first year, SCBP did not actually start providing care until two years before the end of the funding period of March 2006.
- Changing community practice referral patterns is very difficult and multifactorial. We have found that ultimately, the best referral source comes from the women themselves.

ADMINISTRATIVE SUPPORT

Challenges

- Implementing a comprehensive program such as this has involved considerable administrative support and we underestimated the amount of time this would take. Fortunately there has been enough flexibility in the budget to support this.
- Location of the program in the Community Health Centre (CHC) has provided some challenges for administrative support. The CHC provided us with very part-time staff lacking in computer skills (problematic with EMR) or maternity care training. Initially, staff hindered the client intake process and there were challenges with scheduling, organizing urgent referrals, and producing reports. Again, fortunately, there has been enough flexibility in the budget to address this problem.

Successes

- We now have well-trained staff who have assisted considerably in the promotion of the program.
- We have been able, over time, to simplify the reporting functions by integrating as many of these as possible into OSCAR.
- We are happily housed in a convenient community setting and have been able to create a space and environment that is both convenient and welcoming to clients and their families.
- A full-time Clinical & Administrative Assistant has recently been hired to support the program.

Lesson Learned

- Working in the CHC has some distinct benefits but can also add challenges. The lack of full administrative support has been the biggest frustration of the physicians and midwives in SCBP, who have all been used to a private business model of running an efficient office and practice.
- Good communication with key CHC administration is essential to the smooth running of a maternity care program. In addition, positive working relationships need to be developed with staff in this setting in order to ensure that they promote and further the goals of the program.

COLLABORATIVE TEAM PRACTICE

Challenges

- There have been some challenges in working together, many of which have been addressed in meetings and retreats with all of the team participating. This process requires considerable team building and time spent. These team building meetings would not have been possible without the support offered through the Primary Care Health Transition Funds.
- In the early days, concerns were expressed around differing scopes and patterns of practice. The physicians and midwives held a retreat early in the program development and adopted protocols to practice developed by the Department of Midwifery at B.C. Women's Hospital and the College of Midwives of B.C. Dialogue on practice issues remains ongoing and regularly scheduled meetings to address practice issues remain imperative to the programs success.
- CHNs were not accustomed to primary care provider's active involvement in the care of women and their babies in the postpartum period. Home visits are shared between the providers and the CHNs, which is not usual practice in the community. They have come to recognize the value of the team when problems arise.

- It has been helpful to identify the special skills of one or the other provider, particularly with issues such as breastfeeding, computer literacy, organizational skills, etc.
- Trust among the primary care providers had to be built when it came time to hand over to a provider with a different scope of practice.
- Due to the slower than anticipated growth of the program providers have not had the amount of work (and hence income) initially projected at the start of the program. We anticipate reaching this goal by 2007, but we are very aware that the program continuity has benefited from the exceptional commitment and dedication of the providers.

Successes

- We have a strong and dedicated team of care givers that has remained consistent throughout the program. This includes three CHNs, two physicians and two midwives, plus the co-directors. We have recently hired a new part-time provider staff.
- Providers comment consistently about what they have learned from the women and from each other.
- In particular, the role of the CHNs has evolved and they are integral to the program at all levels. They have become more involved in the assessment of women in the CP groups and collaborate with the providers on postpartum care. They actively participate in the message board on client care issues and plans.
- We have adopted practice protocols and goals that all of the providers feel comfortable with and this has added to consistency of practice.
- We have modified the Centering Pregnancy 'Mother's Workbook' to include local and Canadian content. This adaptation will also be useful to other providers who wish to implement this model of antenatal care.
- The team has helped women achieve the goals and outcomes set by the program.

Lessons Learned

- Collaborative practice takes time, commitment, and considerable energy. Funding for the development of a maternity program such as this is essential, as many hours have been spent establishing truly collaborative practice. We believe that the benefit of the development of a cohesive team outweighs this cost.

EVALUATION AND CONTROL GROUP STUDY

Challenges

- Evaluation has been hindered by the slower than anticipated growth of the program.
- The start-up program development, administration, and IT challenges occupied much more time than anticipated, leaving little time for full development of the evaluation.
- Women's consent to participate in the qualitative study was initially very low.

- Enrollment in the study control group has been hampered for two reasons:
 - 1) it has been difficult to extract relevant information from the B.C. Women's Hospital database;
 - 2) there has been resistance from other providers, particularly obstetricians, to enroll their patients into the control group. There has been concern that the SCBP study may "make standard care look bad."

Successes

- More time is now available to focus on the research evaluation.
- The program's Clinical & Administrative Assistant began attending the CP groups to speak about the study and enroll women. Women were also offered a \$25 honorarium. Participation in the second year has greatly increased.
- The program's Clinical & Administrative Assistant is working closely with decision-support services at B.C. Women's Hospital to extract accurate outcome data.
- Women are now enthusiastically participating in the study with the knowledge that it will support the health and growth of SCBP.
- The Department of Obstetrics and Gynaecology has given SCBP time at their research rounds to present the control group study and answer questions.
- We anticipate that in the next two years we will be able to launch extended evaluations of the program, such as a more detailed study on the role of the Doula to complement the literature in this area.

Lessons Learned

- Undertaking extensive evaluation of a new program requires adequate time, support and staff. In hindsight, our timeline for completion of this was unrealistic.
- Introducing a new model of care can be seen as threatening to providers offering a standard model of care.
- It is, of course, important to collect outcome data and qualitative questionnaires, but since SCBP is a new and innovative model of care, it is also important to collect data from a control group receiving standard care for comparison.

OSCAR – ELECTRONIC MEDICAL RECORD IMPLEMENTATION

Challenges

- Despite the support of Vancouver Coastal Health Authority at the outset, a number of problems arose which slowed and delayed the EMR implementation. Chief among these was lack of licensing of the EMR provider.
- Because of the above problem, there were considerable delays in establishing the server location. We also had to negotiate early program development through McMaster University, which was difficult given the limitations of e-mail and telephone communication.
- There are still issues to be resolved such as working through some of the other functionalities of the EMR.
- There could be a point in the future where linking with other systems, such as hospital EMRs, may become an issue. Hopefully, this transition will be facilitated by provincial standards.
- It has been a challenge for some of the providers and support staff to fully utilize the EMR. Varying skill levels with computers effect the individual time needed to use the system.
- For providers, there is a frustration in needing to chart twice in hospital as B.C. Women's Hospital records are not yet networked into an EMR.
- With all charts and records stored electronically, panic ensues when the system goes down or is not functioning properly.

Successes

- Through initiatives led by the SCBP team, an EMR now replicates the provincial records for perinatal care (BCRCP antenatal record 1 & 2, labour and birth summary, newborn record 1 & 2). OSCAR is being promoted throughout the province and many providers are interested in this product, particularly as it is an open source record, with potential for use in a variety of settings.
- All providers can access the web-based EMR from the CHC, their homes, and the hospital. Data can be accessed and entered at any of these locations.
- Documents such as protocols, provider schedules, contact lists, and practice resources can be stored in the EMR.
- Since the server has been moved to Vancouver, episodes of inability to access the EMR have been greatly reduced.
- SCBP has taken the EMR one step further so that reporting functions can give outcome data at any point in time. This offers enormous potential to improve practice through up-to-date audit.
- All of the providers have attended workshops on using the EMR as well as other supportive computer programs such as EXCEL. As the providers have become more familiar and proficient at using the EMR tool, the burden of charting twice has been greatly reduced.
- All team members communicate in the secure EMR message board. Client concerns and birth stories are posted daily. This method of communication has the added advantage of keeping the team up-to-date on client issues. Women then feel that all of her care providers know her, and therefore she does not have to repeat information over and over.

Lessons Learned

- Implementation of an EMR also takes considerable money, time and energy. At this point in the history of EMR in Canada, the purchaser is often critical to the development process and, in fact, programs require considerable “tweaking” before they fit the needs of those providing care.
- Considerable time was spent in assisting the EMR vendor with the development of the templates and reporting functions required by the program. Ideally, these features would be in place when purchasing an EMR.
- As with several other implementation issues, the political context becomes important at times.

Figure 13. BCRCP Birth Summary Form from OSCAR (via the Internet)

The image shows a screenshot of a web browser window displaying the 'British Columbia Labour and Birth Summary Record' form. The browser title is 'Birth Summary (Mother:) - Microsoft Internet Explorer'. The form is divided into several sections:

- 1. IDENTIFICATION:** Includes fields for NEWBORN ID NUMBER, Gest. Age (wks.), GRAVIDA (Term, Preterm, Abortion, Living), DATE (26/01/2005), MOTHER'S I.D. NUMBER, SURNAME, GIVEN NAME, SCBP, ADDRESS, PHONE NUMBER (604-), BC, PERSONAL HEALTH NUMBER, and PHYSICIAN / MIDWIFE NAME.
- 2. LABOUR:** Includes checkboxes for SPONTANEOUS, AUGMENTED (ARM, OXYTOCIN, OTHER), INDUCED (ARM, FOLEY, PROSTAGLANDIN, OXYTOCIN, OTHER), MEMBRANE RUPTURE (SPONTANEOUS, OBVIOUS, QUERIED, CONFIRMED), AMNIOTIC FLUID (CLEAR, BLOODY, MECONIUM), TIME MECONIUM NOTED (HRS.), FETAL SURVEILLANCE (INTERMITTENT AUSCULTATION, EXTERNAL EFM, FETAL ECG, IUPC), and FETAL BLOOD SAMPLING (NO. OF TIMES, LOWEST: pH, B.E.).
- 3. DELIVERY:** Includes checkboxes for SVD, FETAL POSITION AT DELIVERY, ASSISTED DELIVERY (VACUUM, FORCEPS, MOD. DIFFICULT, MID, DIFFICULT, FORCEPS ROTATION), VBAC ATTEMPTED/DECLINED/NOT A CANDIDATE, CESARIAN SECTION # (PRIMARY, ELECTIVE, REPEAT, EMERGENCY, LOW TRANSVERSE INCISION, OTHER), ANALGESIA/ANESTHESIA (NONE, NARCOTICS, EPIDURAL, N2O2/O2, LOCAL, SPINAL, CSE, PUDENDAL, GENERAL, OTHER), OXYTOCIN POSTPARTUM (IV, IM DOSE(S), OTHER), PLACENTA AND CORD (SPONTANEOUS, ASSISTED COMPLETE, NO, MANUAL/OPERATIVE REMOVAL), ABNORMALITIES, PLACENTA SENT TO PATHOLOGY, PERINEUM/VAGINA/CERVIX (INTACT, LACERATION), and ESTIMATED BLOOD LOSS (<500 cc, <500-1000 cc, >1000 cc).

PRESENTATIONS, ARTICLES AND MEDIA COVERAGE

Team members have presented SCBP in a number of settings including the following:

Collaboration for Maternal and Newborn Health Conference, Vancouver, B.C., February 2005. “The South Community Birth Program.” Jag Gill, Sue Harris, Lee Saxell

Family Medicine Forum, Toronto, November 2004. “New Models of Maternity Care: South Community Birth Program.” Sue Harris

Canadian Association of Midwives Annual Conference, November 2005. “The South Community Birth Program: A New Model of Care” Jalana Grant, Linda Knox, Valerie Perrault, Joan Robillard, Lee Saxell

Family Medicine Forum, Vancouver, December 2005. Poster - “South Community Birth Program.” Jalana Grant

Group Health Care Conference, North Carolina, March 2006. “Centering Pregnancy in a Multicultural Setting.” Sue Harris, Lilah Rossi

Collaboration for Maternal and Newborn Health Conference, Vancouver, B.C., May 2006. “Centering Pregnancy Group Prenatal Care.” Joan Robillard

The South Community Birth Program has been described in a number of media. Some of the highlights include the following:

“New multicultural birth centre opens in B.C.” - *The Medical Post*. September 16th, 2003

“The South Community Birth Program: Supporting women through their pregnancy.” - *South Vancouver Connector*. Summer/Fall 2004

“Help on way for new moms in South Van.” - *Vancouver Courier newspaper*. August 5th, 2004

“Birth program developed to address dissatisfaction with maternity care.” - *East Side Revue*, February, 2005

“South Community Birth Program delivers expert care to pregnant women” - *Vancouver Courier*. April 3rd, 2005

“Birth of a notion.” - *Vancouver Courier*. December 4th, 2005

“It takes a special woman’ to be a doula.” - *Vancouver Courier*. December 4th, 2005

“Birth Program Supports Immigrant Women.” - *The Epoch Times*. March 9th, 2006

Radio Interviews

South Community Birth Centre Opening. *CBC Coverage*. December 2003

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- ¹⁵ www.centeringpregnancy.com