SHEWAY'S SERVICES FOR SUBSTANCE USING PREGNANT AND PARENTING WOMEN: EVALUATING THE OUTCOMES FOR INFANTS

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ABSTRACT

Sheway is a single-access comprehensive street-front service to pregnant and parenting women with a history of alcohol and/or drug abuse that is located in one of Canada's poorest neighbourhoods, the Downtown Eastside of Vancouver. This investigation assesses the concurrent health and social problems clients report upon entry into the program, service utilization, and the impact of services on neonate and infant well-being. Data were collected through the review of files from the 9½ years of the agency's service. Findings suggest that the clients' concurrent health and social problems have increased over the years of operation while indicators of infant health have either improved or maintained steady rates.

INTRODUCTION

Drug and alcohol abuse during pregnancy is a significant risk factor for infant health. Comprehensive and specialized assistance to women addicted to drugs and/or alcohol can mitigate the effects of the teratogens on fetal development and enhance women's ability to care for their child (Roberts & Nanson, 2000; Uziel-Miller & Lyons, 2000). However, many programs are designed to treat women through either outpatient services with set hours of attendance or residential care. Such intensive and structured interventions may be less able to attract and/or retain disenfranchised women or those with a psychiatric disorder, and may not be appropriate for all cultural groups. Flexibility in the delivery of services is an important program characteristic for some populations. One example of a more flexible approach to treatment is Sheway, a comprehensive program for pregnant and parenting women

This research was funded by the YWCA and the British Columbia Ministry of Children and Family Development. The assistance of the following people made this project possible (in alphabetical order): Carla Alexander, Pamela Berg, Shannon Caldwell, Carolyn Charleyboy, Clifton Chow, Stuart Deyall, Angela Kim, Gayle Kwan, Hyejin Lee, Gladys Li, Kelly Page, Lisa Partaik, Laurie Schuerbeke, Becca Smith, Sandra Teves, Lyanne Westie.

with a history of drug and/or alcohol abuse located in the Downtown Eastside (DTES) of Vancouver, British Columbia.

Sheway's program has been described as effectively reducing barriers and enhancing clients' access to services (see Poole, 2000; Benoit, Carroll, & Chaudry, 2003). It is, however, important to ascertain whether and how the program's services are associated with the health of infants born to clients. Prenatal alcohol exposure can result in central nervous system alterations that have consequences for functioning (Kelly, Day, & Streissguth, 2000) while postnatal effects of living in a high risk family may elicit secondary disabilities (Streissguth, Barr, Kogan, & Bookstein, 1996). In utero exposure to drugs such as cocaine can cause impaired neuromotor function (Swanson, Streissguth, Sampson, & Olson, 1999) however it has been suggested that compromises in infant health associated with in utero exposure to cocaine could also be attributed to maternal tobacco and alcohol use or a stressful environment (Frank, Augustyn, Knight, Pell, & Zuckerman, 2001). Using data from a review of 9.5 years of client files, the purpose of this investigation was to describe the health and social problems reported by clients upon entry into the program, pregnancy outcomes, and indicators of neonatal and infant well-being for Sheway's clients and their infants.

CONTEXT

The DTES neighbourhood has been portrayed as overwhelmed with drug and poverty issues (e.g., Wild's 2002 documentary "Fix: the story of an addicted city") and has been described as one of the poorest in Canada (Vancouver/Richmond Health Board, 2000) with a shortage of affordable and suitable housing for families with young children (City of Vancouver, 2001). There is prevalent sex trade and drug trafficking (McLean, 2000; City of Vancouver, 1999) and associated health problems within the community. Patrick et al. (2001) estimated that 85% of 1345 injection drug users tested over the 1996 to 1999 period were positive for anti-HCV, a diagnostic marker for Hepatitis C. Drug-induced and alcohol-related deaths were higher in the Community Health Area #2 (this includes the DTES) in the 1991 to 1998 period than in any other health area in the Vancouver/ Richmond region (McLean, 2000). The Potential Years of Life Lost for external causes of death from 1993 to 1997 in this health area were statistically significantly higher than the provincial rate and one of the highest rates in the province (British Columbia Vital Statistics Agency, 1999).

Despite significant problems, the DTES has an active community centre and a number of agencies that serve the health and social needs of residents. Of the agencies serving the DTES, Sheway is the only pre- and postnatal program for women addicted to drugs and/or alcohol.

Sheway's Services

Sheway, which has been delivering services since 1993, provides integrated health and social services at a single-access site. Research findings suggest that women are more likely to enter into and remain in drug and alcohol treatment that provides ancillary services (e.g., health care, child care) within a women-only program (Ashley, Marsden, & Bradey, 2003). The use of a harm reduction approach also enhances pregnant and parenting women's entry into and retention in programs (Pepler, Moore, Motz, & Leslie, 2002; Roberts & Nanson, 2000). Harm reduction aims to reduce the harmful consequences of substance use rather than requiring clients to engage in abstinence (Marlatt, 1983; Marlatt, 1996). This type of approach

is less prescriptive than either criminal or disease models of treatment and provides clients with opportunities to set their own goals for change.

Consistent with the harm reduction approach, Sheway's clients access services they feel are useful and decide which staff will be involved in their care. Staff members do not decide which issues women need to work on; instead, they endeavour to be present in situations (e.g., hot lunch, drop-in sessions) when clients converse about the issues they face. Upon clients' assertion of a problem, staff introduce an appropriate range of choices for service (e.g., "Would you like to talk to [nutritionist] or [physician] about that?" in response to a client describing problems with nausea; "Do you need help with transportation?" when a client indicates the need to attend a custody hearing). This approach to interacting with clients provides an atmosphere of respect and presents women with ways of making choices and being in control of their circumstances.

In the early years of Sheway, there was a very informal intake process. If a woman sought services, a file was opened and the client was assumed to be in the program. Since 1998, the intake process has been formalized whereby women contact Sheway for services and staff members meet to discuss each case. The decision to admit is made depending on available space in the program and the suitability of the client for the services (e.g., if the woman is pregnant or parenting; if she lives in Vancouver). This process ensures that the number of clients does not increase beyond the capacity of the building and staff to deliver services.

A range of services is offered from 8:30 a.m. to 5:00 p.m. Monday through Friday. There is a drop-in session from noon to 4:00 p.m. that begins with a hot lunch. As part of the integrated services, staff members assist with the preparation and service of the hot lunches, generating an environment in which women receive social support as well as food. The 21 staff members (at the time of the file review) include an addiction counsellor, a registered dietician, social workers, outreach workers (including Aboriginal outreach workers), infant development consultants, community health nurses, peer support workers, receptionists, and physicians with training in methadone administration. Staff are employees of various agencies (e.g., Vancouver Native Health, provincial ministries) working as an integrated team, with a coordinator of services overseeing the link between the agencies and the operation of the program.

Prenatal Services. Primary medical care is provided by physicians and supported by two community health nurses. Access to food is made available through the hot lunch program, food bags, and food vouchers. Nutritional supplements and vitamins are available for prenatal women as well as access to nutritional counselling. Additionally, staff help women in a variety of ways, such as helping them to secure housing, supplying clothing for the infant, following up any required legal or social support, and offering counselling.

*Postnatal Services***.** Sheway offers postnatal services as an extension of the prenatal services for 18 months after the birth of the child. Women may continue to receive milk vouchers but not food coupons. The hot lunch program is available, as well as nutritional counselling and assistance with breast- or bottle-feeding of infants. Infants' immunizations are administered and tracked through the medical services. Services provided by the infant development consultants include the promotion and support of the social environment of the child (caregivers, day care) and coordination of early intervention services, if required, through the local pediatric health centres. Three therapists (speech, physical, and occupational) from one of the

centres attend Sheway once a month for three hours to provide specialized care for program clients.

In summary, Sheway provides access to a range of health and social services at a single site and respectfully engages women who have a history of drug and alcohol problems. This study examines whether and how these services and the health of maternal clients are associated with the infants' well-being.

METHODOLOGY

The research team recognized that although many evaluation protocols, such as standardized measures, could provide key information about infant and child development, they might elicit clients' apprehension or concern that their child might be removed. Such outcomes would be counterproductive to Sheway's objectives and ways of working with clients. Therefore, we employed a research method that avoided making unnecessary demands on clients yet still contributed information about infants' well-being. To this end, Sheway client charts were utilized to examine program efficacy.

Working with the Vancouver Coastal Health Authority and Sheway staff, permission was obtained to collect data through a chart review. Behavioural ethical review boards of the Health Authority and university at which the authors are employed approved the protocol for this study.

Data Collection

A data form was developed and pretested by the research team. All client files from the 9.5 years the program had been in operation were reviewed, with data collection being completed in April and May, 2003. Instead of documenting information about the adult clients, each pregnancy was recorded as a separate case (some clients had more than one child). Data were then entered into statistical software with no identifiers for each case. There were 1247 cases although not all cases contained complete information across all categories of information and data for 2003 was incomplete due to the date of collection.

The following information was collected from files: maternal demographic information, maternal concurrent health and social problems self-reported at intake, pregnancy and birth outcomes, neonatal and infant health, and service utilization.

Demographic information. Women's age at intake, intake date, self-reported cultural background, living circumstances, infant birth date.

Maternal self-reported health and social problems. Health and social problems reported at intake included HIV, Hepatitis B and C status; current drug, alcohol, and cigarette use; difficulties accessing appropriate housing, food, and income; mental and physical health problems; and current or recent family violence. Problems were recorded as binary variables (0 = recorded, 1 = not recorded).

Pregnancy and birth outcomes. Pregnancy and birth outcomes were recorded from birth records in the files as well as from client records. Information was gathered regarding the outcome of the pregnancy (e.g., termination, birth), gestational age, and birth weight.

Neonatal and infant well-being. Birth records and client records provided Apgar scores, records of treatment for withdrawal immediately after birth, and mortality (and reason for death).

Removal. Any removals of children from maternal care by child protection authorities were recorded if the child was not returned to the parent by the time the file was closed.

Service utilization. Visits to Sheway are recorded in files however the documentation of specific services received during visits did not appear to be as systematic in the early years as it was in later years. Therefore, we counted entries of visits to gain a frequency of visitation and assessed specific service use as a binary variable (0 = no record of use in the file; 1 = use recorded in file). Service utilization is categorized as follows: lunch program, food vouchers, and food bags (containing milk, bread, and other goods made available through donations).

Analytic Strategy

The data from the review were analyzed in two ways. First, descriptions of patterns across years were generated by calculating either a mean or percentage (using cases with data) for the specific calendar year. Findings related to 2003 should be considered with caution as the data does not cover a full 12 month period and a small change (e.g., incident of low birth weight) may inflate the percentage or rate. Second, to assess relationships among service utilization, maternal concurrent health and social problems, and birth outcomes, data was collapsed across all years and correlations were calculated.

The data from Sheway files are also compared to information from Loock et al. (1993). The purpose of Loock et al.'s study was to determine the prevalence of drug and alcohol exposed infants and to determine the need for interventions for families. The data were gathered from records of all births between January, 1989 and December, 1990 in the Downtown Eastside Core and Mount Pleasant area (adjacent to the DTES) of Vancouver, BC. Where it is appropriate and available Loock et al.'s data are presented as a baseline comparison against which changes related to the implementation of Sheway's services in 1993 can be estimated.

RESULTS

Results are organized into two sections to describe (a) the maternal clients being served, (b) maternal use of services, and (c) birth outcomes and neonatal and infant well-being.

Who Is Being Served?

An assessment of the average maternal age across the years of operation revealed that the minimum, maximum, and average maternal ages have remained fairly constant, based on records for 1152 women. The average age of clients upon entry into the program is 26.4 years (standard deviation = 6.3); the minimum age is 14; and the maximum age is 55 years.

Self-identified First Nation, Inuit, or Métis women comprise a substantial portion of the clients at Sheway; the proportion ranges from 63.6% (in 1993) to 80.7% (in 1996) over the years of operation.

Various indicators of maternal concurrent mental and physical health problems and adequacy of access to daily living requirements are displayed in Table 1. The figures represent the percentage of women reporting at intake within the calendar year. The summaries indicate a general increase over the decade in reported drug and alcohol use and income inadequacy. The reports of mental illness and family violence

peak in the late 1990s and then drop slightly. Infectious diseases related to drug use and the sex trade increase until the late 1990s and then level off. Death of a previous child, removal of a child and inadequate housing fluctuate over the years. The information in Table 1 is critical to consider when assessing the infant outcomes reported in the last section of the results.

TABLE 1

Percentage of Women, by Year, Reporting Health Problems and/or Needed Basic Living Requirements

Year	Current Drug/ Alcohol Use	Family Violence	Mental Illness	Previous Death or Removal of a Child	Inadequate Housing	Inadequate Income	Hepatitis B and/or C, HIV
1993	44.25	17.10	3.54	18.58	38.05	36.28	2.65
1994	55.86	9.01	1.80	23.43	26.13	20.72	6.31
1995	64.41	19.49	6.78	26.27	36.44	25.42	17.80
1996	70.43	20.87	10.43	42.43	40.87	19.13	31.30
1997	61.06	25.66	15.04	32.74	51.33	33.63	23.89
1998	63.16	18.80	10.53	41.35	65.41	61.65	31.58
1999	57.50	32.50	27.50	37.50	48.33	56.67	36.67
2000	57.41	26.85	18.52	37.96	53.70	52.78	37.04
2001	61.11	25.00	17.59	39.81	68.52	58.33	38.89
2002	64.96	23.08	19.66	34.19	56.41	68.38	33.33
2003	75.47	22.64	15.09	30.19	60.38	69.81	37.74

Use of Services

Client visits to Sheway represent the use of informal (e.g., drop-in) and formal (e.g., drug and alcohol counselling) services. Reported in Figure 1 are the mean numbers of visits, per client, grouped by year of admission and by year of the infants' birth. Assessing visits in these two ways allowed us to capture information regarding mothers who did not stay with Sheway until the birth of the infant as well as those who remained during the postnatal period.

Prenatal service delivery was assessed by calculating the number of days between the opening of the client file and the date the infant was born. Cases in which women terminated the pregnancy or miscarried were not included in the analysis. Data from 2003 are not included because a significant number of clients were receiving prenatal care at the time of data collection. The average length of prenatal service over all years was 136 days (*SD* = 11.79). The average length of prenatal service has remained stable over Sheway's years of operation with minor fluctuations from year to year (minimum = 118 in 1995; maximum = 152 in 1999).

Pregnancy and Birth Outcomes

Pregnancy Outcomes. Of the 1247 cases recorded in the maternal file review, 132 pregnancies did not result in live births. There were 62 miscarriages, 62 abortions, and 8 stillbirths. The remaining 1119 cases resulted in live births.

Gestational Age and Birth Weight. Two birth outcomes (gestational age and birth weight) are broad indicators of neonates' health. A gestational age of less than 37 weeks (preterm birth) and/or a birth weight of less than 2,500 grams (low birth

weight, LBW) are risk factors for long-term health problems and infant mortality (Canadian Institute of Child Health, 2000; Berkowitz & Papiernik, 1993). Unfortunately, only just over 50% of files contained information on birth outcomes.

FIGURE 1

Average (per Client) Number of Sheway Visits versus Birth/Admission Year

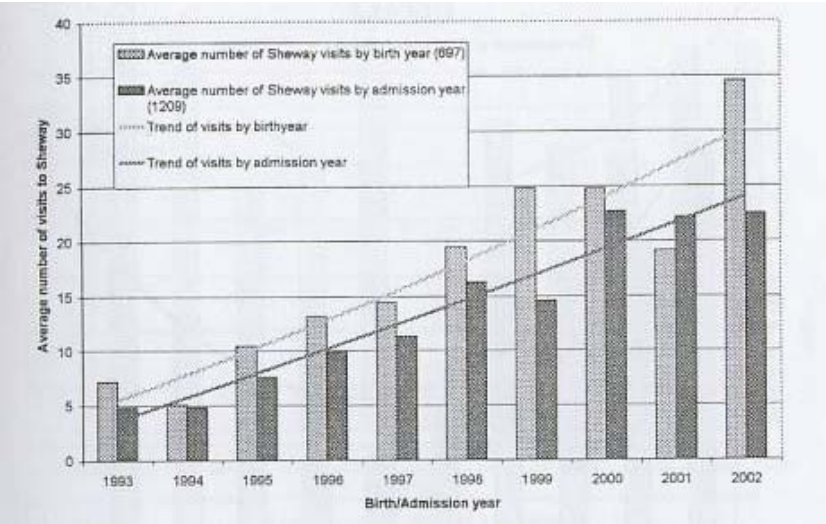


Figure 2 displays Sheway's yearly rates of preterm births. The U shaped pattern (available data for 518 cases) shows the lowest rates are in 1998, a year in which rates were also low across the province (BC Vital Statistics, 2001). Recall that Loock et al. recorded the gestational age of infants exposed to drugs and/or alcohol prior to the opening of Sheway. The percentage of preterm infants who were exposed to drugs and/or alcohol in Loock et al.'s (1993) study was 25.3%.

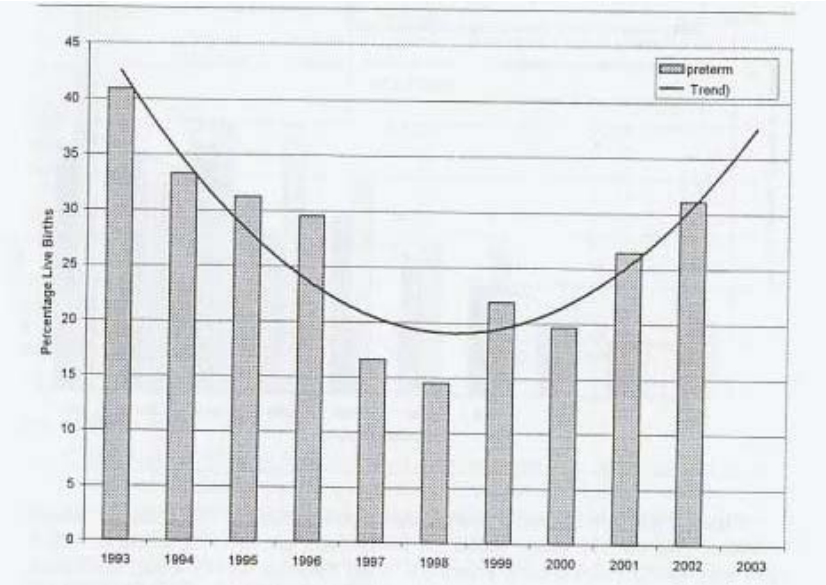
Birth Weights. Figure 3 illustrates the frequency of LBW infants born to Sheway clients. This figure contains the 584 cases for which the data were available with the average rate of LBW across years being 18%. The drop in LBW infants in 1998 reflects a similar pattern found for preterm infants; LBW rates were also low in 1998 across the province (BC Vital Statistics, 2001). Loock et al. (1993) found that 18% of infants exposed to, or at risk of exposure to, drugs or alcohol were less than 2500 grams.

Birth Weights and Service Utilization. Associations between infant birth weights and use of Sheway services were examined. Collapsing data for all clients across the years, correlations were calculated between length of prenatal care and infant birth weight and point biserial correlations were conducted between food distribution (food bags, vouchers, hot lunch) and infant birth weight. Higher infant birth weight is significantly associated with longer prenatal care ($r = .14$, $p < .01$) and reception of food bags from Sheway ($r = .12$, $p < .01$). Interestingly, food vouchers and hot lunches do not show a significant correlation with birth weight. It is possible that food vouchers are used as a form of currency to trade for other goods in the DTES and

not used for food, or that the amount allotted to clients is not enough to meet women's dietary needs. Similarly, the hot lunch program may not have a measurable effect on infant weight although it appears to serve as a means of informal interaction and support between the women, and between the women and the staff.

FIGURE 2

Percentages of Preterm Infants (< 37 Weeks)



Birth Weights and Maternal Health. Maternal health was also correlated with infant birth weights. Again, using point biserial correlations, the association was calculated between the recording of a health problem reported to staff at intake and infant birth weight. Consistent with extant research on drug use, infant birth weight was significantly negatively associated with maternal prenatal reports of substance use when they entered the program (r = -.25, p < .01). Women's mental and physical health were also associated with the infants' birth weight. Birth weight was negatively associated with maternal mental illness (r = -.11, p < .05), Hepatitis C (r = -.12, p < .01) and B (r = -.10, p < .05) and HIV (r = -.10, p < .05).

Neonate Health

Apgar Scores. Apgar Scores are recorded in maternal files for 498 infants. Newborns are rated at one minute and five minutes after delivery on five aspects: appearance (color); pulse (heartbeat); grimace (reflex); activity (muscle tone); and respiration (breathing). A score of 7 or higher indicates the infant is in no danger. These scores provide a broad indication of the infants' condition after delivery.

FIGURE 3

Low Birthweight Infants (< 2500 Grams)

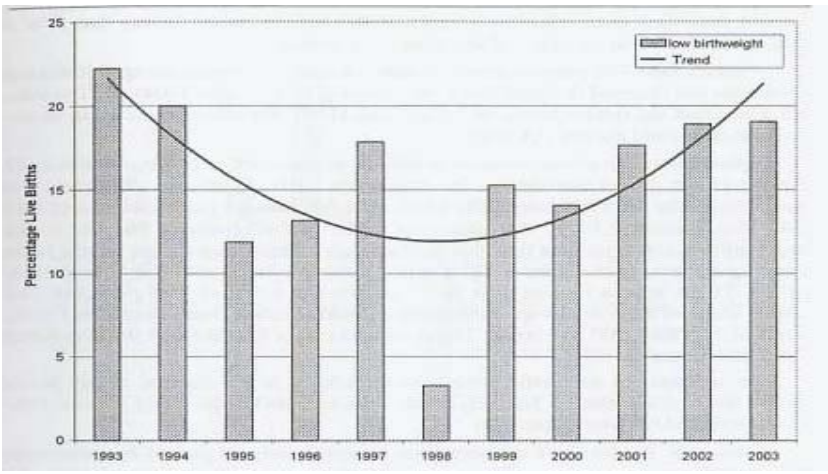


FIGURE 4

Apgar Score < 7 at 1 and 5 Minutes

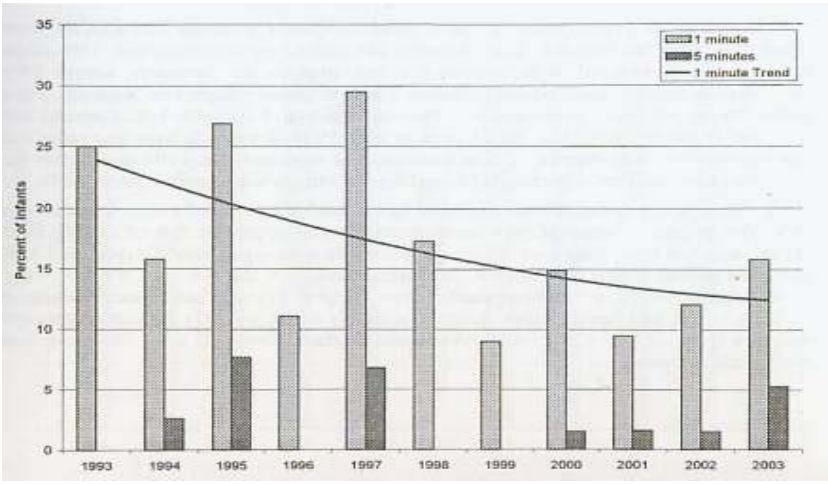


Figure 4 displays the low (below 7) Apgar scores at 1 and 5 minutes for each year of Sheway's operation. The trend suggests the rates of low Apgar scores at one minute have diminished over the years of operation. The rates of Apgar scores less than 7 at 5 minutes have remained low and infrequent. Of the infants exposed to drugs and alcohol described in Loock et al. (1993), 16.8% had an Apgar of less than 7 at 1 minute and 2.1% had an Apgar of less than 7 at 5 minutes.

Withdrawal. The percentage of infants recorded as experiencing withdrawal symptoms has dropped in recent years after peaking in 1996 (see Figure 5). The rates are lower than the rates reported by Loock et al. (1993) for infants reported to be exposed to drugs and alcohol (18.8%).

Infant Mortality. Infant mortality is defined as the death of children less than 12 months of age. Infant mortality in the Downtown Eastside between 1995 and 1999 was 5.89 deaths per 1,000 live births which is higher than the provincial rate of 4.68 (BC Vital Statistics, 2001). Assessment of infant mortality among Sheway clients using information from files provides only a rough estimate since some clients leave the program prior to the infant's 12th month. Of the live births recorded with Sheway (n = 827), six infants died in their first year yielding a rate of 7.25 per 1,000 live births. Three of the 6 deaths are attributable to Sudden Infant Death Syndrome (SIDS), a rate of 3.63 per 1,000 live births. The provincial rate of SIDS is 5 in 1,000 live births (BC Vital Statistics, 1999).

An indicator of successful protection of children is the absence of any infant deaths due to maltreatment. No such deaths were recorded in the client files over the entire period of Sheway's operation.

Removals. Removals of children from maternal care are plotted by percentage within each year in Figure 6. Recorded removals are those that occurred while the women's files were active at Sheway (between 0 and 18 months post partum). Cases in which the mother planned for her infant to be adopted or in which she transferred the infant's care to another family member are not included.

Loock et al. (1993) recorded how infants exposed to drugs and alcohol were discharged from the hospital. The following circumstances were recorded: 73% of the infants were discharged with their mother indicated as the caretaker; almost 19% were discharged to a local pediatric hospital; and 8% were adopted or discharged to a foster home. While not comparable to Sheway data which includes both neonatal and the first 18 months postnatal data, Loock et al. (1993) do provide base line rates that are comparable with Sheway's first two years of operation. In 1993 and 1994, the percentage of children apprehended from Sheway clients was approximately 30%.

Care status was correlated with maternal health and adequacy of resources recorded at intake to gain a sense of why some women were at greater risk of having their infant removed from their care. Recorded removals were significantly associated with maternal mental illness ($r = .10$, $p < .05$), Hepatitis C ($r = .22$, $p < .01$), HIV ($r = .14$, $p < .01$), drug ($r = .12$, $p < .05$) or alcohol ($r = .38$, $p < .01$) use, inadequate housing ($r = .14$, $p < .01$), and having other children in care ($r = .28$, $p < .01$). Infants of younger mothers ($r = -.17$, $p < .01$) and Aboriginal mothers ($r = -.14$, $p < .01$) were less frequently removed.

FIGURE 5

Symptoms of Withdrawal in Infants

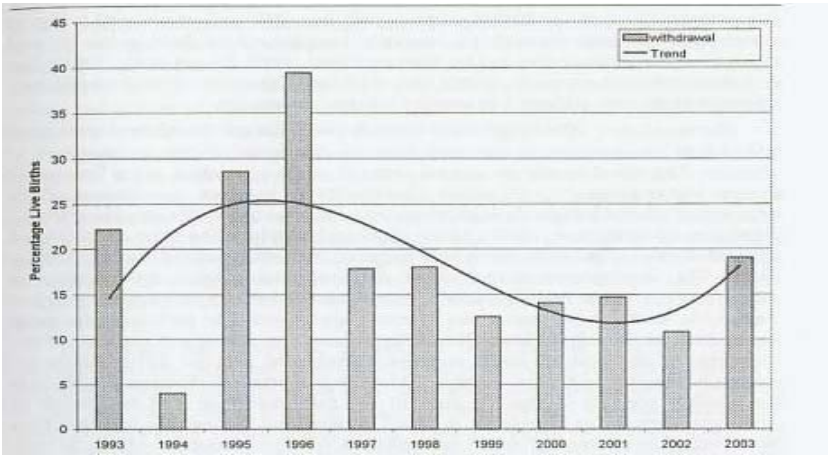
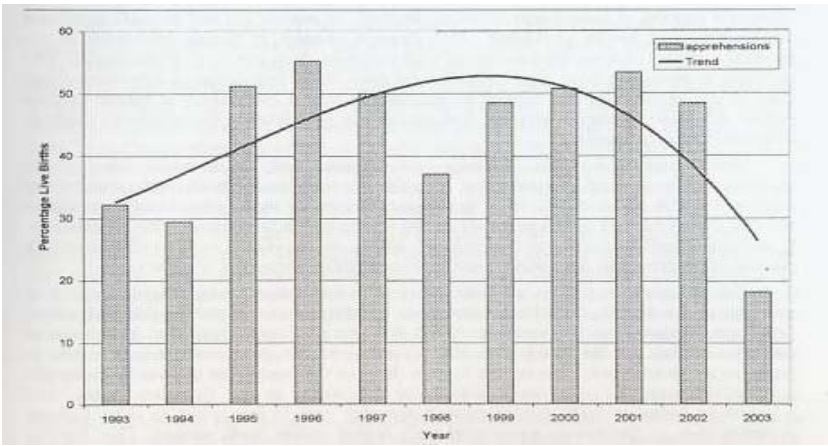


FIGURE 6

Ministry Apprehensions of Infants, 1993-2003



Discussion

This investigation describes a single-access integrated service program for pre- and postnatal women with a history of drug and/or alcohol addiction. Evaluation of the program focused on birth outcomes and neonatal and infant well-being to complement previous research on women's perspectives of their access to and engagement in services provided by Sheway (Poole, 2000; Benoit et al., 2003). The evaluation involved a review of client files to gather information on mothers and their infants over the nine and one-half years of Sheway's operation.

Sheway clients, on average, are in their mid-twenties and the majority of women self-identify as Aboriginal. The proportion of Aboriginal clients is important to consider. Aboriginal people are a small minority of the population in the Vancouver Census Metropolitan Area (Statistics Canada, 2003), however, descriptions of the DTES suggest that Aboriginal people make up a large portion of the neighbourhood's population (Benoit, et al., 2003). Most Aboriginal people in the DTES are displaced from other areas of the province or have migrated from other parts of Canada (Currie, 1995). The disproportionate settlement of Aboriginal peoples in the DTES in comparison to other neighbourhoods in Vancouver reflects Aboriginal peoples' inequitable access to resources that promote opportunities to participate in social arenas such as the labour force (Royal Commission on Aboriginal Peoples, 1996). Additionally, jurisdictional issues compound Aboriginal peoples' difficulties in accessing health care and social services. Thus, the proportion of Aboriginal women in the Sheway program is due, in part, to the marginalization and oppression of Aboriginal peoples in Canada. It is useful to note that the agency has also been described as being respectful and accessible to Aboriginal women which, in turn, contributes to the utilization rates (Benoit et al., 2003).

Over the years of operation, the clients' self reporting has changed in the areas of health and access to living requirements. There has been a steady increase in women's reports of inadequate housing, income, or access to food as well as mental and/or physical health problems. The clearest change in health problems is the gradual increase in diseases associated with injection drug use (e.g., Hepatitis C). The increase in problems with housing and food may be an indication of enhanced client trust in the agency and associated willingness to report difficulties at intake or may reflect diminishing social services and increasing competition for resources such as affordable family housing.

Assessment of women's service use suggests that, on average, client visits increased each year of the program. The rise in visits is probably reflective of the increased needs of the clients (e.g., inadequate resources such as food and housing) as well as the credibility of the program in the minds of the women and the community. It is further indicative of staff members' ability to provide a safe environment for clients as described in previous research (Poole, 2001; Benoit et al., 2003).

The program has been able to maintain a consistent, considerable period of prenatal contact with the clients despite a clear increase in the health and social problems reported by the women. Over the years of operation, the frequency of preterm infants has declined since the opening of the program but has begun to increase in recent years. There has been a drop in the incidence of low birth weight infants although the rates have also been increasing in the past few years. The association between birth outcomes and prenatal care is important to note. Longer prenatal care at Sheway is associated with higher infant birth weight. This finding may be due to services that specifically target infant well-being. For example, the provision of food bags is positively associated with infant birth weight.

Use of the agency does not seem to have reduced the number of infant removals across the years of operation and the pattern of child removals is more likely to reflect political and procedural changes than the impact of service delivery. The rise in 1995 reflects procedural changes that occurred after a provincial inquiry into the death of a child (Gove Inquiry, 1995) and the subsequent implementation of a risk assessment model. The decline in 2003 may reflect recent changes in protocol to

reduce the number of children in care, but because the data for 2003 were collected from January to May only this is only a speculative observation.

The pattern of stability in removals over time should be interpreted in light of a significant increase in the social and health problems indicated by mothers at intake. The increase in reported problems could have resulted in an increase in the removal rate. The stability over time in removals may, therefore, imply a defacto decrease in infant removals. Interestingly, younger mothers and Aboriginal clients are less likely to have their children removed. With regard to age differences in removals, it would be helpful to discern whether services have a greater impact on younger (and perhaps primaparous) women than multiparous women with a history of difficulty in parenting children.

The finding that Aboriginal women are less likely to have their children removed should be interpreted with regard to the proportion of Aboriginal children in care in the city of Vancouver. Aboriginal children are disproportionately represented in care in comparison to all other ethnic groups (British Columbia Ministry for Children and Family Development, 2002). Further research is required to ascertain why Aboriginal clients are more likely to maintain the care of their children despite high rates of removals in the surrounding region.

Limitations and Future Directions

There were a number of limitations associated with collecting data from the agency's files. While recent files are of a higher quality, many of the files, especially from earlier years, were often missing information. There was a marked inconsistency in intake and discharge data in some files while others contained what appeared to the research team to be contradictory information. In the experience of the evaluation team, this is not unusual, especially in the early years of a program, however, it did somewhat hinder the evaluative process. For example, given the lack of intake data in some cases, the health and social problems reported by the clients as they first contacted the service were likely to have been more significant than the team was able to determine.

Findings from the chart review must be interpreted with caution. It is not unusual to come across errant data in files due to human error in recording information. For example, there are charts containing conflicting demographic information or omissions (e.g., infant Apgar scores or birth weights) that led to incomplete data collection forms. While it is highly unlikely that any of the results from the file review were over-reported, there is a possibility that certain information was under-reported, especially in the earlier years of the program when attention to file completion was not as rigorous.

The reason that broad indicators of birth outcomes and neonate health are reported here is that no consistent and standardized assessments are available. This is not a criticism of the Sheway program since such standards and measures have not been an expectation of the program at any time in its history. However, it is critical for the agency and research collaborators to work toward employing assessment tools that can be used effectively with this population and without jeopardizing client-staff relations. For example, staff could be trained to complete standardized observational tools such as the Nursing Child Assessment Satellite Training Teaching Scale (Barnard & Eyres, 1979) to ensure a low level of burden on clients for completing assessments.

Future research needs to discern the systematic changes in maternal client behaviours that impact infant development and well-being as a result of the program. While the results of this study show patterns over time, they do not provide a clear picture of the links among specific aspects of the program's services, maternal behaviours, and infant outcomes.

CONCLUSION

Sheway provides a valuable service to a vulnerable population. The program has created a safe and nurturing environment in which the women and their children can access needed supports (Poole, 2000; Benoit et al., 2003). Sheway has been able to either help the client group improve upon key prenatal or postnatal health indicators or, at the very least, maintain existing levels. In summary, the present findings are noteworthy in at least two respects. First, the increase in client issues at intake is an increase in risks for poor infant outcomes and yet the health indicators of infants suggest the risks are somehow offset in most cases. Second, the utilization of services is client-driven. That is, women select and attend the services they want to use at Sheway. Therefore, the association between service utilization and infant well-being can be interpreted as a combined influence of clients' motivation and self-understanding of their needs, their ability to access services, and the agency's service delivery. This latter point speaks to the resiliency and resourcefulness of the client population and the appropriateness of the service delivery in supporting mothers' care of themselves and their infants.

RÉSUMÉ

Situé dans un des voisinages les plus pauvres du pays, le Downtown East-side de Vancouver, Sheway offre une gamme complète de services à accès direct, sur le terrain, aux femmes enceintes et aux mères ayant un passé marqué par l'abus d'alcool ou de drogue. L'enquête présentée ici mesure les problèmes sociaux et de santé parallèles déclarés par la clientèle au stade d'entrée au programme, le profil d'utilisation des services ainsi que l'impact des services sur le bien-être des nouveaux-nés et nouvelles-nées et des jeunes bébés. Afin de colliger les données, les auteurs ont passé en revue des dossiers couvrant les 9½ années de services de l'agence. L'analyse des résultats révèle que les pro-blèmes sociaux et de santé parallèles éprouvés par la clientèle se sont inten-sifiés au fil des années d'existence de Sheway, alors que les indicateurs de santé pour les jeunes bébés se sont améliorés ou ont conservé un taux stable.

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