AT-RISK ALCOHOL USE IN PREGNANCY:

A PROJECT TO DEVELOP A BRIEF INTERVENTION MODEL

WITH HEALTH CARE PRACTITIONERS

BY

PATRICIA LYNN MEDD

A Practicum Project
Submitted to the Faculty of Graduate Studies
in Partial Fulfillment of the Requirements
for the Degree of

MASTER OF NURSING

Faculty of Nursing
University of Manitoba
Winnipeg, Manitoba

THE UNIVERSITY OF MANITOBA

FACULTY OF GRADUATE STUDIES

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ABSTRACT

Fetal alcohol exposure has been associated with growth restriction, physical abnormalities, abnormal neurobehavioral function, and fetal alcohol syndrome. Practitioners in prenatal care settings are well positioned to help prenatal women reduce or eliminate alcohol use during pregnancy. The Stages of Change Model has been used to help clients change behavior, and is commonly used within the alcohol and smoking cessation field. Brief intervention by health care practitioners for drinking problems is recommended as the first approach for treatment in the general population (Institute of Medicine, 1990). Research supports interventions that are matched to a person's stage of change in the general population, but has yet to be applied specifically to the prenatal population using alcohol.

The purpose of the practicum project was to utilize the extensive research literature that supports stage-matched interventions and, with community practitioners' clinical expertise, develop a model that would help guide them in their work with prenatal clients using alcohol.

Practitioners from a variety of health professions who work with prenatal clients attended two sessions. The principles of participatory action research (PAR) provided the framework for the development of the proposed model. PAR was an effective approach in meeting the goals of the project, and may have set the stage for further work in this area. The findings from the project support existing literature on stage-matched intervention. A stage-matched intervention model was developed and adapted

to this population and setting and was endorsed by the practitioners. Further refinement and evaluation of the model are recommended.

ACKNOWLEDGEMENTS

I would like to thank the following people.

- My practicum committee: Dr. Karen Chalmers, Chairperson, Dr. Loretta Secco, Internal Member, and Dr. Morag Fisher, External Member, for generously sharing your knowledge and expertise. The supportive guidance and encouragement always managed to inspire.
- To the Norman Regional Health Authority for their assistance and support, physicians and practitioners for their sharing of knowledge, Dr. Van DeMerve, preceptor for the practicum, your invaluable guidance, clinical expertise and support. To the practitioners who participated in the project for sharing their vast clinical experiences that made this project possible.
- To Sherry Ripak for transforming the words into the final typed copy whose skills and thoroughness are exemplary.
- To my husband, Tom, for your endless support, knowledge, editing skills, humour and love.
- To my youngest, Julia, you have truly been that "beautiful" girl. Thank you for your patience and gentle way.
- To my older children, Matthew, Sam and Colleen, for being unique individuals and always a reminder of what is important.
- To my friends, Angie, Lorie, Fran and Sue, for your encouragement and friendship.

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CHAPTER 1

Overview of the Project

An abundance of research links fetal alcohol syndrome (FAS) with prenatal alcohol consumption. FAS is one of the leading causes of birth defects and mental retardation (Abel & Hannigan, 1995; Geurri, Riley, & Strömland, 1999; Jones & Smith, 1973; Smith, 1991; Sokol & Clarier, 1989). Prenatal alcohol consumption can result in alcohol-related birth defects (ARBD) (Huebert & Rafts, 1996). ARBDs exhibit a continuum of severity, with spontaneous abortion, intrauterine growth restriction and fetal alcohol syndrome being among the more severe (Abel, 1998; Aronson & Olegard, 1987; Huebert & Rafts, 1996). Fetal alcohol syndrome is a medical diagnosis that refers to a specific cluster of anomalies associated with the use of alcohol during pregnancy. Three essential traits of FAS are prenatal and/or postnatal growth restriction, characteristic facial features, and central nervous system involvement that may involve neurologic abnormalities, developmental delay and learning disabilities (Aase, 1994; Health Canada, 1996; Streissguth, Martin, Martin, & Barr, 1981). Identification of FAS and other ARBDs is difficult because of limitations in the application of diagnostic criteria during the neonatal period. Also, neurodevelopmental outcomes are not easily measured during infancy (Coles, 1996). A glossary of terms are outlined in Appendix A.

The effects of prenatal alcohol exposure vary. Though FAS is thought to be the result of heavy maternal alcohol use, the threshold of exposure which results in fetal damage has not yet been determined (Passaro & Little, 1997). A number of factors

are thought to be involved and include: quantity of alcohol consumed, the times or stages of pregnancy when alcohol was consumed, the woman's ability to metabolize alcohol, and the genetic makeup of the fetus. It is suggested that alcohol consumption during the first trimester is more likely to lead to structural and anatomical defects, whereas drinking alcohol during the second and third trimester increases the risk of growth restriction and functional impairment. Binge drinking (over five standard drinks per occasion) has been linked to more severe negative outcomes, compared to low level, more frequent consumption (Godel, Pabst, & Hodges, 2000; Jacobsen & Jacobsen, 1994).

The worldwide incidence of FAS is estimated at approximately .97 per 1,000 births (Abel, 1995; Chavez, 1988). The United States National Institute of Alcohol Abuse and Alcoholism (1990) reports an incidence of 1-3 per thousand live births.

To date, there are no national data on the incidence of FAS in Canada (Casiro, 1997). The national rate is estimated to be 1-2 per 1,000 live births (Health Canada, 1992). Regional studies in Canada have been done on FAS and five studies continue to examine rates. One by Robinson, Conry and Conry in 1987 found a prevalence rate of 190/1,000 FAS on an Aboriginal reserve in British Columbia. Two different studies on separate northern Manitoba reserves found FAS prevalence rates of approximately 95/1,000 (Square, 1997). The North American Aboriginal population has estimated rates of 2.8-6.6/1,000. Results from these studies and others suggest FAS in Canada may be more prevalent among children in some Aboriginal communities and quite variable (Williams, Odaibo & McGee, 1999).

Studies have not been able to conclude the frequency and amount of alcohol consumed that will result in an alcohol related birth defect child. There is general agreement the risk of ARBD increases with the amount of alcohol consumed. In children of women who reported heavy alcohol drinking during pregnancy (two or more per day, or 5-6 drinks per occasion), the incidence of FAS has been estimated at 43 per 1,000 live births (Abel & Hannigan, 1995).

The economic costs have been estimated at 2.4 billion dollars per year in the United States. This represents special education, training, and support for children diagnosed with FAS (Abel, 1998). The Canadian Centre for Substance Abuse has estimated the lifetime extra health care, social services and educational costs associated with the care of an individual with FAS to be 1.4 million (Square, 1997).

FAS is irreversible, but is entirely preventable. The physical, psychological and social costs are significant for those affected by FAS.

It is difficult to assess the many factors involved in adverse pregnancy outcomes and what proportion of these are attributable to prenatal alcohol exposure. There are difficulties in ascertaining maternal alcohol consumption, as this is often noted as the disadvantages of self reports. Their validity and accuracy are questioned, especially when subjects are asked to report socially unpopular behaviour. In addition, many adverse pregnancy outcomes are associated with multiple risk factors. The use of multiple substances (including cigarettes and alcohol) especially in conjunction with poor nutrition, inadequate prenatal care, and the distal effects of poverty are consistently correlated with more negative consequences than no maternal substance

use (Handwerker, 1994).

To date, prevention efforts that address prenatal risk drinking have generally included the following:

1. Primary prevention: actions to avert a health problem. In the case of FAS, this has included public education, bottle labelling, and on a broader level, addressing determinants of health.

2. Secondary prevention: actions that identify persons at risk. Strategies include screening and early intervention programs and services for pregnant women who may be at risk for having a child with FAS.

3. Tertiary prevention: actions to prevent recurrence of the condition. Strategies include FAS diagnosis and programs designed for children with FAS, and programs designed for intensive management for women identified with a previous child born with FAS.

Little is known about the effectiveness of prevention programs in reducing the incidence of FAS. Studies have shown that prevention programs have been successful in raising awareness of FAS levels across groups. However, this awareness has not been translated into behavioral change in high risk pregnant drinkers (Murphy-Brennan & Oie, 1999).

At the secondary prevention level, brief interventions in a variety of health care situations have demonstrated effectiveness in reducing alcohol consumption among high risk drinkers in the general population (Babor & Grant, 1992; Bien, Miller & Tonigan, 1993; Heather, 1995; Miller & Heather, 1998). It is designed as a clinically

effective strategy by health care practitioners to initiate change in individuals who are not seeking help for behaviour that may pose current or future negative health outcomes. Brief intervention has been described as simply brief advice, or as Miller and Sanchez (1993) have suggested in their review of several studies, six elements have commonly been included in brief intervention and are summarized by the acronym FRAMES: Feedback, Responsibility, Advice, Menu, Empathy, and Self-efficacy. Effective brief intervention generally requires more than simple words of advice (Bien et al., 1993). Health care workers may require training to increase their comfort, confidence and competence in brief motivational counselling (Heather & Bell, 1992; Rollnick & Bell, 1991). Implementation of brief intervention presupposes routine substance use assessment. This may or may not involve the use of a screening tool or questionnaire.

Brief motivational interviewing or counselling is often paired with a "stage of change" model. This was initially used in the alcohol addiction field and more recently utilized with smokers and other behaviours where change is desired. The Stages of Change Model is a model for change developed by Prochaska and DiClemente (1982). Six stages through which people pass as they incorporate lifestyle change are the first construct of the model. These stages, precontemplation, contemplation, preparation, action, maintenance and relapse, represent when particular shifts in behaviour occur.

Programs in smoking cessation and exercise adoption that were targeted to participants' stage of change showed more success than traditional action-oriented

programs in modifying problem behaviour. Increased success in helping people change behaviour can be achieved by appropriately targeting interventions to match the person's stages of change (Prochaska & DiClemente, 1983). The significance of the transtheoretical model is that it assists health care providers to develop interventions that are specifically focused for the client, depending on the identified stage of change.

Research data clearly supports the use of brief intervention in decreasing the amount of alcohol intake in high risk drinkers in the general population. Justification to support the utility of health guidance and brief intervention to prevent or treat at-risk alcohol use in pregnancy, comes from the belief that interventions provided by practitioners, as sources of credible information, can affect behaviour change in alcohol use. Studies have shown that women who drink at moderate or heavy levels are amenable to interventions offered in conjunction with prenatal care and have led to a decrease in drinking (Stratton, Howe, & Battaglia, 1996). Support also exists, especially in the smoking cessation area for the use, of a stage of change matched model of intervention. To date, there are few or no studies to support the use of brief intervention by practitioners utilizing a stage of change matched model with women who are drinking alcohol in pregnancy.

Brief intervention for at risk drinking levels have been recommended as the first approach to treatment (Institute of Medicine, 1990). Pregnant women may be an especially appropriate group to receive them, given the potential consequences of prenatal alcohol use. Many women with at risk alcohol use first come to the attention

of the health care system when they seek prenatal care during pregnancy. Prenatal care providers have an opportunity to screen, assess and provide intervention. Given the diversity of individual client needs, practitioners must also provide diverse responses, so that interventions can be tailored to the individuals. The Stages of Change Model utilized within a brief intervention framework may be well suited to serve this population. Matching the intervention to a woman's stage of change or readiness, may enhance the probably of a successful outcome.

The purpose of this practicum project was to develop and define a model with health care practitioners for brief intervention with pregnant women using alcohol.

The participants were interested practitioners working with the defined group. Community health nurses, general practitioners, social workers and community workers were involved. The setting in which the project was carried out was in the Norman Region of Manitoba in the town of The Pas.

The project design was a descriptive practicum project, and focused on practitioners who work with the defined prenatal group. The methodology was one that incorporated participatory action research principles. Participatory action principles support local, creative ways to obtain new insights and foster the implementation of change in practice. This framework allowed for collaboration between practitioners and focused on a practical problem and looked at a change in practice (Holter & Schwartz-Barcott, 1993).

The project was carried out in phases. The initial phase involved notification of managers and participants. The subsequent meetings involved a presentation,

discussion, distribution of current approaches and refining and review of the proposed model.

The project has significance for individuals and the community in that any knowledge or insights gained may increase understanding and help to effectively intervene with at risk alcohol use in pregnancy, and thus improve pregnancy outcomes. Although an evaluation was not completed, the stage was set for an evaluation to be completed at a later date. As practitioners are in an optimal position to screen, assess and provide brief intervention, this project may have potential value for nursing, primary care practitioners and other prenatal care providers in the community. The practice community was brought together to address this issue, therefore this may help engender a spirit of cooperation and collegiality which, in turn, may help to facilitate subsequent community projects.

CHAPTER 2

Background Literature

Fetal Alcohol Syndrome (FAS) has been recognized as one of the leading causes of preventable birth defects and developmental delay in children (Canadian Centre on Substance Abuse, National Working Group on Policy, 1994; Geurri et al., 1999; Smith, 1991; Jones & Smith, 1973; Streissguth et al., 1981). Much of the literature has focused on linking alcohol use in pregnancy to specific birth defects, along with specific criteria for diagnosis by practitioners. There is an abundance of literature on intervention strategies at the primary, secondary and tertiary levels. The vast majority of the literature uses an epidemiological framework. Research has documented support for the use of brief intervention by practitioners in utilizing a Stages of Change model with individuals who are at risk for alcohol abuse. To date there has been little or no examination of brief intervention, guided by the Stages of Change framework, in women using alcohol in pregnancy.

Findings of the literature will be discussed under four main headings:

1. Alcohol Use and Pregnancy - incidence, fetal alcohol syndrome, and high risk populations/conditions.
2. Interventions - Primary, Secondary and Tertiary.
3. Models - Epidemiological to Ecological.
4. Brief Intervention and Stages of Change.

Alcohol Use and Pregnancy - Incidence, FAS, High Risk Populations/Conditions

Current literature suggests that the prevalence of alcohol use among pregnant

women ranges from 12 - 14% in the U.S. Binge drinking or daily drinking (defined as two standard drinks per day) is reported by 1 - 2% of pregnant women (Goodwin & Zahnisu, 1994) but higher rates of 4 - 6% have been reported in some screening studies (Russell, Martier, Sokol, Mudar, & Jacobson, 1994).

The level of alcohol consumption that poses a risk during pregnancy is controversial, but is generally accepted that a dose-response relationship exists. Fetal development is thought to be impaired directly by fetal exposure to either alcohol (ethanol) or its metabolite, acetaldehyde, at specific times during gestation. Teratogenic effects are linked to timing and level of exposure (Geurri et al., 1999), with greater effects related to exposure early in pregnancy and frequent binge drinking (U.S. Preventative Task Force, 1994). Genetic and physiological factors may mediate the risk (Smith, 1991).

Average consumption over a particular time period, rather than disaggregating the specific kinds of drinking patterns that are associated with FAS are most frequently found in the literature. A woman who has 1 drink a day, every day, and a woman who binges once a week, consuming 6 or more drinks, both average 7 drinks a week. Yet each of these drinking patterns represent very different levels of alcohol exposure for the woman and her fetus. Since peak blood alcohol levels (BALS) reached per drinking episode are a crucial factor in FAS (Abel, 1999), the average drinks measure may distort the relationship between alcohol and teratogenesis and can confuse our perceptions of risky drinking. Many researchers recognize the significance of binge drinking as a risk factor for FAS, however the distinction

between the number of drinks per occasion and the number of drinks per week or month has not been made clearly. Perhaps this has distorted our perception of risk or dangerous drinking.

Fetal exposure to alcohol may result in alcohol-related birth defects (ARBD) (Huebert & Rafts, 1996). ARBDs exhibit a continuum of severity, with FAS being among the more severe (Abel, 1998; Aronson & Olegard, 1987; Huebert & Rafts, 1996). FAS refers to a constellation of congenital and functional anomalies occurring in children born to women who used alcohol (Corse, 1998). First documented in 1973 by Jones and Smith, the diagnosis of FAS is characterized by the presence of a number of dysmorphological characteristics in a child, particularly:

- Pre and postnatal growth restriction.
- Facial dysmorphia characterized by short palpebral fissures, narrow forehead, small nose, deficient philtrum, thin upper lip.
- Evidence of central nervous system effects characterized by a complex of mental and behaviour problems and deficits (Gladstone, 1997).

An accurate determination of the incidence of fetal alcohol syndrome is difficult because the syndrome is not reliably recognized. Although the term FAS has widespread acceptance, several researchers have been critical of the term. Abel in 1998 has suggested the term of fetal alcohol abuse syndrome to replace FAS. He emphasizes the fact that alcohol abuse (heavy per occasion or frequent drinking) rather than alcohol consumption causes FAS. It has been reported that 8 - 11% of childbearing women in the U.S. are problem drinkers. The precise incidence and

prevalence rate of FAS is not known in Canada, but is estimated between 1 and 2 per 1,000 live births in the general population (Casiro, 1997).

Studies that have produced FAS prevalence rates have been carried out in a number of countries. The worldwide incidence is estimated at .97 per 1,000 live births (Abel & Hannigan, 1995). Several studies in urban communities in the U.S. have produced various rates that ranged from .33 per 1,000 births to 2.2 per 1,000 (Abel & Sokol, 1987, 1991). They also found a rate of 3.0 per 1,000 in a study that looked at 8,331 pregnancies in a Midwest clinic. It was a prospective hospital study that yielded 25 FAS cases over 33 months.

A large study by Chavez, Cordero and Becerra (1989) examined all birth certificates from 1,236 U.S. hospitals over a 5 year period. They found lower levels of FAS, 1 per 10,000 or less.

A population based study by Robinson, Conry and Conry (1987) found a prevalence rate of 190/1,000 FAS on an Aboriginal reserve in British Columbia. A similar study in a northern First Nations Manitoba community found a FAS/FAE prevalence rate of 95/1,000 (Square, 1997).

Each of these studies has drawbacks. The population based studies utilizing active case findings from a variety of sources may aid case discovery, but generalizability is limited due to the unique, high risk populations.

Birth certificate based studies that find lower levels of FAS may have several limitations. Underreporting and underdiagnosis are likely. The surveillance systems lack sensitivity; as May (1995) points out "FAS is a complex syndrome even for

skilled diagnosticians and also require monitoring over time" (p. 29). However, Abel (1998) points out that prospective/active surveillance systems yield the most accurate estimates of all birth defects, including FAS. He reviewed 29 studies from around the world that used this methodology to document the incidence of FAS. From this he determined a world-wide incidence of .97/1000 of FAS. As noted with birth certificate studies, there are several limitations to this approach, such as difficulty with early diagnosis and lack of recognizing and recording of a diagnosis in medical records.

In clinical based studies, FAS may be underreported, and may be selective given the treatment or service population assessed. Women's drinking levels are usually dependent on self-report which may also add to underreporting. As noted, estimates of the prevalence of FAS and related effects vary widely, depending on the diagnostic criteria, method of case assortment, and the population surveyed. Use of more rigorous criteria (such as only cases of FAS) will yield lower estimates compared to studies that have investigated specific communities or groups. Generally these groups or communities participate because of a concern with high rates of alcohol use during pregnancy. Both of these types of studies have been carried out in Canada, mainly in Aboriginal populations.

Abel and Sokol (1987) reviewed over 20 published studies on the prevalence of FAS, some of which recorded no FAS cases. Critical medical anthropology literature has looked at the initial 10 years of FAS research, and starting in 1973, documented many studies using small sample sizes and non-controlled and nonrandomized methods

(Jones & Smith, 1973). Armstrong (1998) suggests that FAS emerged as a medical disease with weak evidence but was embraced as an example of social construction of clinical diagnosis, and that FAS is a moral as well as a medical diagnosis. Factors that may also put the fetus at risk, such as malnutrition, poverty, inadequate prenatal care, smoking, and whether alcohol itself is the causative agent, have been noted as lacking in the research on FAS.

The Centre for Disease Control in the United States (1995) reports a six-fold increase in the rate of infants born in the U.S. with FAS since 1979. This may reflect an actual increase in frequency of FAS, or, increased awareness, detection and reporting. The rate of frequent drinking by pregnant women has increased substantially in recent years (Centre for Disease Control, 1997). Armstrong and Abel (2000) state that the increase in FAS is a North American phenomena, and report how quickly FAS achieved prominence as a social problem. They suggest this concern escalated beyond the level warranted by existing evidence and that FAS took on the status of a social and "moral panic." They state that North Americans have a stronger individualistic framework, and as a result, place increased responsibility and "blame" on individuals and less focus on the social conditions that may contribute to illness or disability.

Some ethnic groups report a higher incidence of FAS than the population as a whole. According to the Centre for Disease Control and Prevention, incidence of FAS per 1,000 births for different ethnic groups is as follows: Asians 0.3, Hispanics 0.8, Whites 0.9; African American 6.0; and Native Americans 29.9 (Chavez, Cordero &

Becerra, 1989). Tores (1995) estimates that the FAS rate among some native groups is six times the national average in the U.S. Regional studies in Canada suggest FAS may be more prevalent among children in some Aboriginal communities (Williams, Odaibo, & McGee, 1999). Alcohol use during pregnancy remained high for women already at greater risk for poor outcomes: young and poorly educated women, smokers and unmarried women (Serdula, Williamson, Kendrick, Cinde, & Byers, 1991).

Offord and Craig (1994) report the incidence in Canada is increased in native populations, and in poor inner city neighbourhoods, as well as remote rural villages (Center for Disease Control, 1997). Godel et al. (1992) studied 162 Native, Inuit and Caucasian women in ten communities in the Northwest Territories. Thirty-four percent drank alcohol during pregnancy, with binge drinking most prevalent among Native and Inuit women.

A Manitoba addiction treatment agency report from April 1, 1999 to March 31, 2000 documented a total of 1,055 female clients. Of these, 47 (4.5%) were pregnant, and 38 (80.9%) were of aboriginal ancestry (Additions Foundation of Manitoba, 2000). A study funded by Health Canada determined a northern Aboriginal community had a 9.5% rate of school-age children affected by alcohol exposure (Square, 1997). As noted earlier, these "captive" community studies have documented higher rates of FAS, up to one in four pregnancies, but these rates cannot be generalized to other communities (Godel et al., 2000; Robinson et al., 1987; Williams et al., 1999).

The major focus in the literature on FAS examines the outcome of women's alcohol use in pregnancy, rather than the influences on drinking. FAS literature is mainly medical in nature, limited to a narrow range of variables with the data collected primarily in prenatal or obstetrical clinics (Plant & Plant, 1998; Serdula et al., 1991; Sokol et al., 1980). The larger social, cultural influences, as well as major maternal risk factors, are less well studied.

The general literature on women and alcohol has incorporated a larger range of variables and looked more extensively at social and psychological factors. Much of this has been linked with the FAS literature and major problem drinking risk variables in women have been identified. May (1995) has identified some major maternal risk factors associated with alcohol related birth defects (ARBD) and FAS. These are: age over 25 years, parity over 3, heavy drinking partner, low socioeconomic status, longer drinking history, social mobility, polysubstance misuse and cigarette use.

Interventions - Primary, Secondary and Tertiary

Concern about the impact of alcohol use during pregnancy has spawned initiatives to prevent fetal alcohol syndrome (Halmesmaki, 1988; Larssen, 1983). However, to date, the literature is sparse on the effectiveness of interventions designed to reduce alcohol use during pregnancy. Much of the research findings were generated from exploratory or descriptive studies. Schorling (1993) reviewed studies on the effectiveness of prenatal interventions to reduce alcohol use during pregnancy and found only five studies that were prospective, provided a specific intervention to women at risk, and determined the level of alcohol use in individual women following

intervention. However, women in comparison groups in most of the studies also decreased their use of alcohol. There were no studies found using a randomized design.

Primary prevention acts to avert health problems. In the case of FAS, this has included such areas as bottle labelling and public education. Primary prevention has largely focused on public education on the adverse effects of alcohol on pregnancy. For women the emphasis is on not drinking or using drugs during pregnancy, and for men, the importance of the social/psychological/environmental role in pregnancy.

Some literature has suggested that raising public awareness of the potential dangers of any alcohol use in pregnancy is counterproductive, and that high alcohol use rather than the currently open-ended message that any amount of alcohol consumption during pregnancy constitutes a danger to the fetus is more effective (Abel, 1997). FAS primary prevention in Europe does not recommend total abstinence, but suggests low level intake of alcohol in pregnancy.

Overall, the literature suggests that higher socioeconomic levels, education, and adequate social conditions are very influential in lowering drinking risk and harm, and therefore may lower FAS outcomes among women (Bingal et al., 1987; Sokol et al., 1980). The Canadian Centre on Substance Abuses' Joint Statement on Prevention of FAS, FAE (1996) recommends primary preventative effects on a broader level, addressing the determinants of health.

A review of prevention strategies by Murphy-Brennan and Oei (1999) revealed that prevention programs have been successful in raising awareness of FAS levels

across groups, however this has not translated into behavioral change in "elevated risk" drinkers. Therefore, prevention strategies have appeared to have minimal or no impact in lowering the incidence of FAS.

Secondary prevention is often stimulated by general public information (primary prevention). Some studies indicate substantial reductions in women drinking during pregnancy from various forms of primary prevention information and low intensity exposure to correct information (Streissguth et al., 1981). Broadly dispersed information on alcohol and pregnancy through sources such as the services of health care providers (Oei, Anderson, & Wilks, 1986) may have a greater effect on vulnerable populations. The Canadian Task Force on the Periodic Health Examination found there was fair evidence for recommending that counselling to reduce alcohol intake in pregnant women should be included in the periodic health exam (B recommendation). This was based on evidence that counselling was effective in reducing both the amount of drinking in women and the morbidity in their offspring. Secondary prevention actions identify persons at risk. Strategies include screening and early intervention services for pregnant women who may be at risk for having a child with FAS.

An important step in implementing prevention strategies is to identify and target at risk populations. Some studies have shown that heavy drinkers are more likely to be African American, less educated, and multiparous in comparison to light drinkers (Adam, Eyler, & Behnke, 1990). However, Gladstone, Levy, Nielman, and Koren (1997) identified women most at risk for alcohol binge consumption during

pregnancy, to smoke cigarettes, be single, white and of younger age. The National Maternal Infant Health Survey confirmed the demographic profile of women most likely to be drinking prenatally as white, married, more educated and at a higher income level (U. S. Center for Disease Control, 1995). However, these studies only look at consumption and not risk levels. Research from Australia reports subgroups most at risk are teenagers and young adults, Aboriginal women and career women (Department of Human Services and Health, 1994). Women who use alcohol at risk levels is estimated to be 3 - 4% (Hankin & Sokol, 1995). These women are targets for secondary prevention activities. Information on the characteristics of women at risk is mainly available from clinical populations, and may not necessarily reflect the full range of women whose drinking patterns place them at risk.

The development and use of effective screening methodologies that identify women at high risk for alcohol consumption is a key strategy to prevent FAS (Aristeiqueta, 2000).

There has been increased attention to the use of brief questionnaires for screening for risky drinking. The two most widely used screening questionnaires or tools have been the Cage and the Michigan Alcoholism Screening Test (MAST) (Russell et al., 1994). Both of these were developed in male populations. Due to the potential for differences in specificity and sensitivity of these questionnaires, other screening questionnaires have been developed in the obstetric population. Two of these are T-ACE and Tweak. Both T-ACE and Tweak questionnaires involve indirect questions and are aimed at tolerance to alcohol effects and capitalize on a strategy to

inquire about past drinking, rather than direct current pregnancy alcohol intake in order to avoid triggering denial. Direct questioning about the quantity consumed is avoided, thus subjects may be less defensive and underreporting reduced.

Russell et al. (1994) studied 2,717 obstetrical patients to detect risk drinking during pregnancy and compared four screening questionnaires (Tweak, T-ACE, MAST and Cage). They used a quasi-experimental, correlative design. The subjects were disadvantaged African-American obstetrical patients in Detroit, Michigan. Periconceptual risk drinking was the gold standard. The major weakness of this study was the limitation of generalizability. The study conclusions are that Tweak and T-ACE screened more effectively than Cage or MAST.

It is acknowledged that an objective measure of alcohol intake which could serve as a gold standard is lacking. Valid biomedical markers are not existent at this time. As well, Polit and Hugler (1997) point out, the most serious disadvantage of self-reports is the question of their validity and accuracy, especially when the questions require subjects to admit socially unpopular behaviour. All of the studies utilize self report and relied on memory recall. This self reporting technique may be unreliable and inaccurate (Smith, 1991). Studies used different definitions for terms such as excessive, at risk, heavy and moderate and, therefore, may be an inaccurate comparison. Average daily consumption reported is a derived measure, and may be misleading as it ignores episodic or binge drinking.

Tertiary prevention consists of measures to reduce impairment, complications and disabilities caused by a condition and of measures to help an individual adjust to

irremediable conditions (Last, 1983). In FAS, these sets of actions are generally reserved for a women who has been identified with a past birth of a FAS child. It is consistent in FAS studies that women who have had one definite FAS child and continues to drink will have equally severely damaged children with subsequent pregnancies (Abel, 1998; Davis & Frost, 1984). Alcohol treatment centres that provide women-oriented services increases both entry into and completion of programs (Rudd & Comings, 1994). Rehabilitation treatment programs that provide service to women only are often better able to address complications and provide appropriate interventions.

Models - Epidemiological to Ecological

The majority of the studies on alcohol used in pregnancy have utilized an epidemiologic theoretical perspective. The medical disease model of alcoholism has been noted as a narrow paradigm for a full understanding of alcohol use in pregnancy. Individual-based disease models in substance misuse have received substantial criticism in the past (Conrad & Scheider, 1992; Peale & Brodsky, 1991 as cited in May, 1995). With these models, communities may feel disempowered and left with expectations that only experts can be effective in interventions and treatment.

The transtheoretical model, also called the Stages of Change Model, (Prochaska & DiClemente, 1982) is an integrative model of behaviour change that has its roots in clinical and social psychology. Although situated at the individual level, the role of "expert" is diminished and substituted with a more egalitarian relationship that fosters empowerment and mutuality. The model is ubiquitous within the addiction research

field and is often used with brief intervention in medical settings. Its use has included substance use, diet, exercise, and smoking programs to name a few (Prochaska, DiClemente & Norcross, 1992; Prochaska & Velicer, 1997; DiClemente, Carbonari, Montgomery, & Hughes, 1994). Theories related to primary health care and the determinants of health have been utilized in some studies (Finkelstein, 1994; Harrison, 1991; Luthar & Walsh, 1995; Wallerstein, 1992). As well, public health models were often noted and used as frameworks for comprehensive, multilayered prevention programs at the community level (Ma, Toubbeh, Cline, & Chisholm, 1998; Masis & May, 1991; May, 1995).

Psychological theory was noted in the research more often in older studies and generally focused on individual psychological profiles and related risk factors. More recently in social work research, psychosocial models, family systems and gender-based theories are utilized (Sands & Nuccia, 1992; Volland, 1996). An emphasis on risk as well as protective factors is noteworthy in the psycho-social model. Ecological models were generally absent in the research findings, although there was some overlap with critical theory and community psychology models. A positive outcome from an ecosystem orientation is it avoids blaming the victim and locates assessment and possible treatment within the client's environment (Pardeck, 1988).

Critical theory was noted infrequently in health services research, and was found in anthropology. Feminist research was more commonly cited in tertiary prevention and treatment models for women. A few studies have utilized critical anthropology as a framework for looking at moderate to high levels of alcohol use in

pregnancy (Armstrong & Abel, 2000; Waterston, 1997; Whitford & Vitucci, 1997).

A critique of our scientific culture's emphasis on biomedical individualism is noteworthy. Interventions and designs with women using alcohol in pregnancy that are supported are those formed by social-psychological models which emphasize cognitive aspects in the individual. Although critical anthropology agrees that elements of this paradigm are essential to our understanding of individual human behaviour, its larger value is suspect in its commitment to an ideology of individualism and consequent blindness to broader political and economic issues. These models consider the individual as the locus of change and can obscure the social and material factors (Waterston, 1997). A few studies within this framework have linked theory with social practice, and have utilized participatory action research principles in developing treatment models for pregnant women using alcohol (Whitford & Vitucci, 1997).

Nursing theories were not noted, although primary health care and preventative health promotion studies were found (Corse, 1998; Jessup, 1997). Women and addiction as a biopsychosocial disease is prevalent in the literature and was often found in nursing journals. This model lends itself to focusing on risk factors associated with the development of addiction in women. Biologic predisposition, response to environment stresses and social support are often examined. Assessment and intervention strategies utilize a psychological model that promotes non-threatening interview techniques and the development of a therapeutic alliance (Henderson & Boyd, 1997).

There is a lack of action or participatory research as an approach to the study of

alcohol use in pregnancy. As well, no studies were found that utilized this approach as a method for practitioners to bring about change in their practice. One study within the social work field used action research with adolescents and substance abuse (Malekoff, 1994). This may prove to be a useful approach, as the participants themselves are essential for the implementation of research findings (Balfour & Clarke, 2001).

Brief Intervention and Stages of Change

Brief intervention is a clinically effective strategy designed to counsel and initiate change in individuals whose behaviour may pose current or future negative health outcomes. Interventions are short, cost effective as well as easily integrated into the daily practice of health practitioners. The goal of brief alcohol intervention and brief counselling is to help people bring about change in behaviour through short term intervention strategies as applied to people who consume alcohol at risk levels. The goal is to reduce or stop their alcohol use. While abstinence may be a long term goal, the primary goal is to reduce alcohol consumption to low-risk levels and patterns of use.

Evidence has accumulated that supports the effectiveness of brief interventions in non-dependent drinkers in primary care clinics, hospitals, the community and research settings (Fleming, Barry, Manwell, Johnson, & London, 1997; Walk, Wilkal, Jensen, & Haughurst, 1997; WHO Brief Intervention Study Group, 1996). In approximately 40 controlled studies, brief intervention targeting drinking behaviour was consistently found to be effective in reducing alcohol consumption and facilitating

treatment referral (Bien et al., 1993).

Brief intervention can reduce health care utilization as measured by reductions in emergency room visits and hospital days, and reduction in primary care practitioner visits (Fleming et al., 1997). Brief intervention may reduce mortality and health care and societal costs (Fleming et al., 1997).

Although research indicates that brief intervention for alcohol risk drinkers is more effective than no intervention, a larger study reported improvement in decreased drinking was not only confined to those clients who received brief intervention, but control group clients who received screening questionnaires only also reported the same reduction in consumption and related problems (Anderson & Scott, 1992; Chick et al., 1985; Wallace, Cutler, & Haines, 1988; Watson, 1999). It is suggested that the act of asking or screening for alcohol consumption is sufficient to help people consider alcohol reduction.

There is some evidence that women presenting to primary care with excessive drinking do not do as well as males with brief interventions (Kaner, Haighton, McAvoy, Heather, & Gilvarry, 1997). How this translates to women who are pregnant with moderate alcohol use or have patterns of binge drinking is unknown. Trials of brief intervention with excessive alcohol use in the primary health care setting were all done under optimum conditions rather than real-world conditions. The recruitment was done by a researcher, therefore a more motivated sample may have been selected. In a project in which brief interventions were evaluated in naturalistic general practice settings in Australia, far fewer patients returned for consultation

following assessment and the beneficial effects of brief intervention were less obvious (Richmond, Novak, Kehoe, & Cafas, 1998).

The prenatal care setting appears to be a promising site for brief interventions. The high personal and social costs associated with adverse consequences of alcohol exposure warrants consistent screening, intervention and treatment when indicated. There have been only a few studies done on brief intervention in the prenatal setting (Chang, Goetz, Wilkens-Haug, & Berman, 2000).

To identify the key components of brief intervention, Miller and Sanchez (1993) proposed six elements summarized by the acronym FRAMES: feedback, responsibility, advice, menu of strategies, empathy and self efficacy. The importance of these elements in enhancing effectiveness has been supported (Bien et al., 1993). However, little has been written about the brief intervention consultation. Scrutiny of the descriptive methods in outcome studies and of recommendations for future practice suggest that "advice-giving" is the prevailing framework. Rollnick, Heather and Bell (1992) point out the delivery of advice about behaviour change can be authoritative and paternalistic, although at its heart is an attempt by the practitioner to encourage behaviour change by utilizing direct persuasion and providing information. He suggests this resonates with the Szuz-Hollencer parent-child model of doctor-patient interaction. In this model, the relationship of physician and patient is unequal, with the physician's role being authoritative, rather than a relationship that is balanced and egalitarian. Evidence suggests that unsolicited advice about health behaviour may be counterproductive (Rollnick & Miller, 1995).

Having reviewed research on brief intervention, it becomes apparent that not all brief interventions utilize simple advice giving. Several studies have moved brief intervention beyond the administration of advice towards an approach that encompasses motivational interviewing and integration of behaviour change such as purported in the transtheoretical stage of change model (Prochaska & DiClemente, 1982).

Motivational interviewing (M.I.) is a direct client-centred counselling approach for initiating behaviour change by helping clients resolve ambivalence (Rollnick & Miller, 1995). It combines both style (warmth and empathy) and technique (i.e., key questions and reflective listening). Five basic principles to guide practice are: express empathy, develop discrepancy, avoid confrontation and argumentation, roll with resistance, and support self-efficacy (Miller, 1996). Handmaker, Miller, and Manicke (1998) applied motivational interviewing in counselling pregnant drinkers. Women who drank heavily in the intervention group showed significantly greater reduction in drinking. In another controlled study, M.I. for 15 minutes was found to reduce alcohol use at 6 month follow-up in a primary care clinic (Seft, Polen, Freeborn & Hollis, 1997). Motivational interviewing has also been applied in a number of settings with empirical support for its efficacy (Heather, 1996).

The Stages of Change Model (Prochaska & DiClemente, 1982; Prochaska et al., 1992), with or without the use of a more continuous based concept of readiness to change, is a promising model found in the literature on behavioral change. The Stages of Change Model, also called the Transtheoretical model, uses a temporal dimension,

the stages, to integrate processes from different theories of intervention, hence the name transtheoretical (Prochaska & Velicer, 1997). Processes of change are the activities people use to progress through the stages. Processes can provide important guides for intervention programs. From initial studies of smoking, the stage model has expanded to include investigation and application with a broad range of health behaviours. These have included alcohol and substance abuse, anxiety disorders, HIV prevention, unplanned pregnancy precautions, sedentary lifestyle, chronic heart conditions (Cassidy, 1999; Prochaska & Velicer, 1997). Prochaska and DiClemente (1993) used factor and cluster analytic methods in retrospective prospective and cross-sectional studies to uncover the ways people quit smoking. The model has been validated and applied to a variety of behaviours in addition to smoking, such as exercise, dietary behaviour and alcohol use.

A method based on the principles of primary health care and patient centred care which incorporates the Stages of Change Model and elements of motivational interviewing is advocated by some authors in the prenatal setting (Miller, 1995; Rollnick, Heather, & Bell, 1992).

The transtheoretical model of behaviour change (Prochaska & DiClemente, 1983; Prochaska, Norcross, & DiClemente, 1995) proposes that people move through discrete stages leading to adoption and maintenance of new behaviours. The transtheoretical model posits that health behaviour change involves progress through six stages of change: precontemplation, contemplation, preparation, action, maintenance and termination. Specific cognitive, emotional and behaviour processes

are associated with movement from one stage to the next (Prochaska et al., 1992). Some of the processes may involve raising one's awareness of a problem and assessing its impact on oneself and others. At later stages in the model, the processes are more behavioral such as the use of reinforcement and stimulus control.

Across 12 behaviours, consistent patterns have been found between the pros and cons of changing and the stages of change. Research has demonstrated dramatic improvement in recruitment, retention and progress using stage matched interventions (Prochaska & Velicer, 1997). The use of opportunistic brief intervention in the prenatal setting can be utilized as a means of initiating change in addiction behaviours. Advantage is taken of the setting where women presenting for prenatal care are screened for harmful substance and offered brief intervention to those screening positive. In terms of the Stages of Change Model, the assumption is that a majority of those screening positive are in earlier stages of change with respect to alcohol use problems, since the women are encountered in the prenatal setting and are generally not seeking help for such problems. There is some empirical support for this assumption. One study found on a general hospital ward that 73% of adult patients were in precontemplative or contemplative stages and the remainder in action stage (Rollnick, Heather, Gold, & Hall, 1992). Basic research has generated a rule of thumb for at risk populations; 40% in precontemplation, 40% in contemplation, and 20% in preparation.

A primary objective in the delivery of opportunistic brief intervention is motivational. To move women from precontemplation to contemplation and from

contemplation to preparation and action can bring about positive health benefits.

In summary, the vast majority of the studies to date have shown the incidence of FAS and negative pregnancy outcomes have not changed and, in certain populations, may be increasing (Ebrahim, Diekman, Floyd, & DeCoufer, 1999). Brief interventions in the general population have demonstrated effectiveness in changing addictive behaviour. The limited research to date on pregnant women who are screened positive for at risk drinking, and provided with brief intervention, show positive outcomes.

A review of the literature has demonstrated an overall acceptance of the need for creative, responsive intervention models for at risk alcohol use in pregnancy. The vast majority of previous models have used an epidemiological framework with a focus on health promotion - teaching component. This approach emphasizes the action part of change only and assumes a certain level of readiness. The literature has shown that alcohol risk drinking in pregnancy may be effectively reduced by providing brief interventions utilizing a motivational or stages of change model. The stages of change model also gives practitioners guidelines on facilitating an individual's advancement through the stages, and provides for a stage matched intervention (Werch, 1997).

The strongest empirical database for the model exists for the topic of smoking cessation. Studies support stage-matched interventions with smokers only. It is clear when treatment or interventions are matched to stages, people in precontemplation continue engagement at the same high rates as those who started in preparation stage

(Velicer & Prochaska, 1997). How this may translate to women and pregnancy in the clinical setting requires further study.

CHAPTER THREE

Project Method

Health care providers in various prenatal care settings are well positioned to provide interventions aimed at women with at risk alcohol use in pregnancy. The purpose of the practicum project was to develop and define a model with health care practitioners for brief intervention with pregnant women using alcohol. A description of the proposed practicum project including the setting, the health care practitioners, and participants in the project will be provided. Phases of the project planning will be outlined and the project method will be reviewed.

The Community and Health Services

The practicum project took place in the Norman Regional Health Authority. The Norman Region covers an area comprising 72,000 square kilometres in Northwestern Manitoba with a population of 25,550. Three health centres serve residents of this regional health authority, and are located in Flin Flon, Snow Lake and The Pas. With five First Nations communities, four Northern Affairs communities, and six communities categorized as cities, towns or municipalities, the people and communities display very diverse origins, with various governmental structures, economic bases, service availability and interconnectiveness.

A comprehensive community assessment was conducted in the region in 1997/98. Also, information was obtained from community data by Westarc Group, Inc. This firm completed health needs assessments in three Norman communities in 1996 (Norman Regional Health Authority 1997/98 Community Health Needs

Assessment).

The community assessments noted the great diversity between communities with respect to income, education, and morbidity rates. However, the community assessments also noted there are a number of serious health challenges common to the region. From 1994-98, the Norman Region had the second highest standardized premature mortality rate and standardized mortality rate in the province.

The population is relatively young, with 50% being 1 - 20 years (Manitoba 43%). The region also has a significantly higher Aboriginal population at 39%, in comparison to the Manitoba average of 12%. The crude birth rate in 1996 was 19.4%, while the Manitoba rate was 13.5%.

Pregnancy and childbirth were the top cause of hospital inpatient activity with over 50% due to complications in pregnancy. Birth weight is an important indicator of health status, as it is a determinant in perinatal and infant mortality and morbidity. Factors associated with low birth weight include smoking, teenage pregnancy, poverty, and poor nutrition. Low birth weight rates in 1998 and 1999 for the region were in line with the provincial average of 5%. However, in 1995/96, the low birth weight rate was 7%. There was no available data on the incidence of fetal alcohol syndrome (FAS), although in a 1997 The Pas Community Health Needs Assessment, FAS was noted to be a major concern of community residents (Annis & Racher, 1997).

The following health services, broadly outlined, are provided to residents of the region: health promotion/education, community health services, treatment, emergency

and diagnostics, home care, long term care, mental health, substance abuse treatment and palliative care. The Pas and surrounding area accounts for just over 50% of the total Norman Region population. The primary focus will be on The Pas catchment area residents who access care through The Pas Health Complex and other service agencies. Several outlying communities, Aboriginal and non-Aboriginal, access health care in The Pas. Many are accessible by road, others by railroad or air only.

The Pas is considered to be comprised of three distinct communities: the Town of The Pas, The Opaskwayak Cree Nation (OCN), and the Local Governmental District of Kelsey. The Pas is located 600 kilometres northwest of Winnipeg. The population estimates as of March, 2001 are as follows:

The Pas	5,945	Local District Government	2,120
OCN	2,135	Other	3,835

Tolko, Inc. which produces lumber, pulp and paper, remains the number one employer in the area with approximately 900 employees.

Opaskwayak Cree Nation (OCN) and the Town of The Pas are separated by the Saskatchewan River: many services are separate and others shared. The OCN Band provides public health, education, fire, police and water-sewage. Other services currently shared are primary medical care. Aboriginal persons represent 24.4% of the total population of The Pas area. The annual birth rate in The Pas catchments has fluctuated between 300-343 births in the last decade.

Health services in the Region are delivered under different auspices. The Regional Health Authority has assumed responsibility for delivery of a range of health

care services. Manitoba Health and Health Canada are also responsible for many services. The following is an approximate view of the health care professionals who may work with prenatal clients.

Table I

Practitioners Working with Prenatal Clients

The Pas Health Complex	RNs (approximately 75) 15 RNs work with prenatal, maternal/child, emergency
OCN-Otinika Health	4 CHNs,
Physicians	13 GPs, 4 specialists - Obs/Gyne, Psychiatry, Internal Medicine, Radiology
Public Health Nurses	5
FAS - Baby and Me	3
CNRC CHNs Advanced Practice Nurse Dietitian Community Development Worker	 2 1 1 1
Child and Family Services	5
Rosaire House (treatment centre)	5
Mental Health	5
Dietitian - Prenatal	1

The Manitoba Centre for Health Policy and Evaluation (1997) condensed a number of factors — social economic totals, diabetes prevalency and premature mortality rate — to determine a composite need indicator. The Norman Region has a value that places it with the second highest indicator in the province. Clearly there is poorer health status and higher needs for health care compared to the provincial

average for rural areas. How this translates to women who are at risk for alcohol use in pregnancy is not known.

The following health care participants, who work with the population of interest for the (prenatal) practicum were identified. The population consists of community health nurses, public health nurses, social workers, FAS support workers, substance/alcohol treatment workers, primary care physicians and dietitians working in a primary care or community setting who have access and direct involvement with prenatal clients (see Table 1). The potential participants in the project were practitioners working at the Norman Regional Health Authority, OCN Band, Health Canada, and Manitoba Government, during the months of June and July, 2001.

The participants in the practicum project were health practitioners working in The Pas catchment area during the practicum time frame (June/July, 2001) who provided verbal agreement to participate in the project. The sample consisted of a total of 10 practitioners.

Project Design

The practicum project was carried out over a 10 week period in the Norman Region. The practicum settings included a family physician's clinic, an obstetrician/gynecologist's clinic, and The Pas Health Complex outpatient/emergency department. Also, time was spent in the community with health nurses and community workers involved with prenatal women.

The principles of participatory action research were used in conceptualizing and planning the project. Although the project is a practicum, not a research study, the

principles are relevant to the nature of the project.

Although a variety of definitions of action research exist, most of the literature supports that action research is problem focused, context specific, and is participative (Hart, 1996; Rains & Ray, 1995). In addition, action research involves a change intervention geared to improvements and a process based on interaction between research, action, and reflection.

The main characteristics of action research involve collaboration between researcher and practitioner, solution of practical problems, change in practice and development of theory (Holter & Schwartz-Barcott, 1991). Action research principles also support creative ways to obtain new insights, identify new knowledge and foster transformation of thinking (Hayes, 1996). Karlsen (1991) suggests PAR represents both a special type of research and a break from conventional models for obtaining valid knowledge. As a change from conventional research modes, this mode of inquiry, with the tenets of participation, holism and an emphasis on the social construction of reality, supports an empowering process. The interest in action research in nursing is part of a wider force of criticism of positivism, especially the failure of positivism to take into account the social context in which people construct meaning and its unsuitability for organizational problem solving (Meyer, 1993; Pasmore & Friedlander, 1982).

Utilizing the main principles of participatory action research, this project aimed to support local, culturally relevant ways of knowing and to foster new insights and knowledge. This, in turn, may stimulate and sustain changes in practice that will

beneficially affect women who are at risk for alcohol use in pregnancy.

Recruitment

Practitioners involved in the project met certain criteria. They had to be working with the prenatal population and mandated to do so through their employment. In addition, they had an expressed interest in this area. Recruitment was carried out through a snowball approach that identified interested participants.

The following disciplines were represented: community health nursing, general practice, social work, dietitian, public health and addictions. Participants practiced in clinics, health centres, an addictions centre and in the community.

The initial phase in recruitment involved informing regional managers verbally and soliciting their agreement to approach employees. A letter of invitation and information regarding the assignment and anticipated dates were distributed to managers and potential participants (Appendixes B, C and D). The following agencies and/or departments were notified: Norman Regional Health Authority, Opaskwayak Cree Nation-Otineka Health, Province of Manitoba and Health Canada. Interested participants contacted the facilitator to confirm their participation.

Prior to the initial session, informal conversations were initiated by several practitioners to discuss the project with the facilities. Two meetings were held with supervisors (Public Health and Rosaire Treatment Centre) to clarify and further discuss the project. Their response regarding the utility of the project was also sought.

The potential participants who expressed interest in the project were given a

brief summary of the significance of the problem, and current intervention approaches (Appendix D).

Methods

First Session

The overall goal of the project was to develop a strategy that will be useful for health care practitioners in guiding their work with this population and be relevant and specific to this community. Practitioners were invited to attend two sessions approximately 3 weeks apart. The purpose of the first session was to elicit practitioner responses they have heard prenatal women state regarding their alcohol use in pregnancy. The practitioners were then asked to situate these client responses into specific stages of change. In addition to a brief presentation on current intervention practices from the literature, the elicitation of responses from the participants was two-fold. It was hoped to increase practitioners' working knowledge regarding the specific stages of change, as well as incorporating local experiences from a variety of practitioners.

The first session's date and place were confirmed with all participants. The classroom at the Community Resource Centre (CNRC) was confirmed. The Norman Regional Health Authority provided the space, overhead equipment and supplies.

Materials were developed prior to the scheduled meeting. Four case studies were developed to facilitate participation and focus responses from the practitioners (Appendix E). An assistant was enlisted to record all of the responses.

An agenda (Appendix F) and three handouts (Appendix G) that summarized

current literature on FAS, diagnosis and incidence, brief intervention, motivational interviewing and the Stages of Change Model were distributed. There were additional topics covered on overheads.

A total of six practitioners attended the first session. The participants all represented different agencies and roles: community health nurses, dietitian, FAS social worker, Best Beginnings community worker, and public health nurse.

The following is an overview of the first session. Introduction of the writer, background to the practicum project, and requirements of the Advanced Practice - Master of Nursing degree at the University of Manitoba were reviewed.

A brief presentation reviewed current research findings on alcohol-related birth defects, FAS, incidence and high risk populations. For the purpose of this project at-risk alcohol use during pregnancy was defined as 5 or more drinks per occasion, or at least 7 drinks per week. This criterion was used in a study for the U. S. Center for Disease Control and Prevention (Ebrahim et al., 1998). Current intervention strategies included brief intervention, motivational interviewing and the Stages of Change model. The presentation was augmented by the use of overheads that reviewed key points. Participants were directed to review the literature that was distributed as relevant concepts or information was being discussed. The group was encouraged to ask questions of each other and share experiences throughout the session.

Participants were given four brief case studies (Appendix E). They were asked to read each one and record brief responses to each question. The case studies were designed to help focus participants' responses to both client and practitioner

statements. Each participant was asked to record brief responses to the case studies. Utilizing a nominal group process allowed for equal participation of members by encouraging each participant's input in an ordered round table format.

Each case study was reviewed in this manner. Possible practitioner responses and client responses were recorded on large sheets of paper. Participants were asked to identify client responses only and situate them within appropriate stages. Large poster size paper, each listed with one stage, was used.

The case studies encouraged both possible client and practitioner statements, although the client responses were specifically targeted. The session went overtime by one-half hour. One person had to leave early. At a later date, the facilitator received this individual's responses and added this information to the findings.

The session closed with a brief summary of the participants' input. The second session's date and agenda were confirmed.

Second Session

The objectives of the second session were to elicit practitioners' questions and responses they have asked prenatal women assessed to be drinking alcohol at-risk levels. In addition, feedback on the usefulness of a steps of change quiz was elicited.

The second session took place approximately three weeks later. The session had two original members and three new participants. A total of five participants attended the second session. One participant, unable to attend, requested to meet individually. This was done two days after the second session. Feedback was recorded from this session. The session involved the same agencies with two new participants.

An agenda (Appendix H) was distributed along with material that listed each Stage of Change with possible practitioner statements and/or approaches (Appendix I). This was expanded and adapted from The Stage of Change Training Manual utilized by the Addictions Foundation of Manitoba.

A summary of every stage according to specific characteristics, helpful processes and techniques was also distributed (Appendix I).

The assistant who recorded the first session was enlisted for the second meeting. Large poster paper and flip charts were utilized to record participant responses.

Each stage, starting with precontemplation and ending with relapse, was discussed. Approximately 15 to 20 minutes were spent on each stage.

A handout with Stages of Change defined the stage and listed a few examples of possible practitioner responses (Appendix I). Practitioners were encouraged to write notes on this and refer to each stage as it was discussed. Participants were also encouraged to use their own words and statements as well as share their experiences. A robust discussion ensued with participants giving many examples of practitioner responses for each stage. The facilitator clarified and encouraged the group to give possible practitioner statements, rather than general techniques (i.e., if a participant suggested that giving support was important in a particular stage, the facilitator asked how "giving support" would sound or look like in a statement to a client). If a statement could not be elicited, the facilitator would often give a statement (i.e., "it took a lot of strength to leave that party") and ask for feedback. The group spoke freely, and often supported each other but also discussed openly when in

disagreement. All five stages were discussed, with more time spent on the first two stages, precontemplation and contemplation.

The second objective of the second session was to elicit practitioner responses to a Steps of Change Quiz (Appendix J). The quiz was described as a tool for assessment of alcohol use and helpful for both client and practitioner in determining the current stage of change. They were asked if the quiz would be useful to utilize with all prenatal clients, and whether the quiz could be used as a self assessment tool or administered by a health care practitioner or designate. The recorder listed participants responses.

All participants volunteered feedback on the session. A general discussion of personal and/or work experiences was shared. The meeting lasted two and a half hours. Participants were encouraged to contact the facilitator regarding questions/concerns. Appreciation for their work was expressed. They were notified that a brief summary of the project will be mailed to each member.

The groups' responses were numerous. At times a discussion ensued over disagreement on the appropriate match to a specific stage. The facilitator often offered an alternative approach or wording to facilitate a consensus.

The participants were fully engaged in the process of matching practitioner responses in each stage. The feedback was most often given as a process or technique. The facilitator encouraged statements, and at times assisted the group by rephrasing the content into a statement and asked for feedback.

The role of the facilitator was to encourage the group to focus on the task and

objectives, yet allow for personal and shared experiences. The facilitator attempted to maintain a neutral stance, and added probes when needed.

Summary

In this chapter, project methods were outlined. In an attempt to be as comprehensive as possible, several methods were used in the project including brief presentation, case studies and informal discussions.

CHAPTER FOUR

Project Findings

This chapter will address the findings from the practicum project. The data collected from the group was summarized and focused on the objectives of the project.

First Session

In the first session, the goal was to elicit actual or potential responses of prenatal clients that practitioners had heard when assessing for prenatal alcohol use. The participants were asked to read four case studies and record their responses to the case study questions. These responses were then recorded. Participants were then asked to match client responses to appropriate stages of change. Table 2 (page 45) outlines the responses from the participants. These are responses the practitioners provided, being cued by the case studies, and then categorized into the Stages of Change Model.

The participants easily classified client responses, although several responses were thought to be either precontemplative or contemplative. The group readily expressed their experiences of how they have discussed alcohol use in pregnancy. All participants agreed it can be difficult to ask about alcohol use. Several members stated they feared asking too soon may hinder the relationship and often deferred the assessment until they felt a sense of trust had been established.

Table 2

Examples of Statements Participant Generated Sorted Into Stages

Pre-contemplative • I don't drink all the time - just some times. • She knows a friend that drank through her pregnancy, child is fine so feel it is. • You have to drink a lot and every day to hurt your baby. • I don't drink, I know it is bad for the baby (person smells of alcohol). • I'm a weekend drinker only. • My friend drank and her baby is fine.
Contemplative • I know it's bad - but I get pressure from my friends. • I'm so isolated and lonely - this is my only friend. (Some feel forced to drink to stay in a relationship. If they don't join there are fears of abuse.) • I know it's not good for my baby but I feel pressured. • I don't plan to drink it just happens.
Preparation • I'm waiting for treatment. • I now only have one or two drinks when I go out. • I told my work I'm going into treatment next week. • I told my boyfriend he has to leave by Friday. • I cut down, I only have a few sips. • I'm planning to move so I won't feel so tempted to drink with my friends.
Action • I quit a week ago and started back in AA. • I'm going to more AA meetings. • I started out-patient at the treatment centre last week. • Since I moved in with my parents, I quit.
Maintenance • I didn't know I was pregnant, I drank earlier in my pregnancy, but not anymore. • The pregnancy is added stress, so I will need to call (sponsor/friends/counsellor). • I go to AA meetings once a week—I wonder if I should go more often? • I quit when I found out I was pregnant.
Relapse • Client has one drink—feels terrible as had not drank for over a year. • I had a few drinks with my boyfriend. I didn't plan to. • I quit for a long time but went to a party last weekend.

Second Session

The objective for the second session was to elicit practitioner responses or statements that could be used in each stage of the Stages of Change Model. A second objective was to receive feedback from the group on a Steps of Change Quiz.

The group was asked if the quiz could be useful in identifying the stage for both client and practitioner, and whether self administration or practitioner administration would be most beneficial. Participants were encouraged to use past experience, as well as possible statements they may use in practice.

The second objective of the session was to elicit feedback on the utility of a Steps of Change Quiz. The participants responses varied initially. All but one member expressed positive comments on the usefulness of the quiz. Members discussed how and when it would be used and suggested it would be most beneficial if done interactively between practitioner and client. Participants' comments were listed by the recorder.

Table 3

Participants Responses to Alcohol Use Based on Assessed Stage

Pre-contemplative • What do you know about the effects of alcohol? • What do you think are the effects of alcohol on your baby? • When did you have your last drink? Tell me your drinking pattern before you were pregnant. • Stopping or decreasing use at any time during your pregnancy will help you have a healthier baby. • How would you know your drinking was a problem for you or your baby? • Have you tried to change your alcohol use in this pregnancy or other pregnancies? • If you decided to change, cut down, or quit drinking, what do you think the benefits might be?
Contemplative • Be neutral - express pros and cons. • What does drinking do for you? • Hey, you're almost there - counting the days. Use it as a time frame. • What are the things that will help you stop/reduce your drinking? • It's really hard to change - stopping or cutting down on drinking. What do you think are blocks or barriers that prevent you from changing your drinking? (Explore one barrier at a time.) • What has been helpful in the past? • What are the good or positive things drinking gives you? What are the negative or bad things of drinking during this pregnancy? • What do you think would help you quit or cut down drinking in this pregnancy? • Some people find that _____ works well and may be adaptable to you.
Preparation • What date are you planning to see the NADAP worker? • Who provides you with the most support? Could you tell him/her your plans? • What do you plan to do during high risk situations? • You have done very well with a difficult decision. • Your baby will be due _____. What dates have you set to reduce/quit drinking?
Action • What do you do for fun? • Look a day at a time with the client. • Tell me how you spend your mornings or afternoons. • What does your day look like...? • How can you say no next time...? • How do you handle someone's wedding, BBQ, party, etc.? • You have made a very good decision that can be difficult to do. • What is working well for you? What do we need to do to continue on this path?
Maintenance • What is working for you? • What is the hardest? • What do we need to build on? • What have you done to help you not drink in this pregnancy. • What situations have been the most difficult?

Relapse

- Practitioner explains that "there are lots of challenges and changes during pregnancy. Is there anything you can think of that may be triggering you to want to drink again?" (If the client gives a response, this response tells the practitioner which stage of change the woman may be returning to.)
- You have done very well—what can be learned from this?
- You have learned a lot from this small set-back. We can use this as a lesson to build on for the future.
- Most people experience success and then new lessons.
- It is important to use this as information for continued success.
- There are a lot of challenges and change in pregnancy. You have done very well.

CHAPTER FIVE

Proposed Model

This chapter will outline the proposed model and in addition review the goals and objectives of each stage of the Stages of Change Model, and review practitioners responses to the Steps of Change Quiz. The purpose of this project was to take the direct findings from the sessions with the health professionals, and, using the literature on the stages of change, develop a useful tool for practitioners.

The model consists of possible practitioner responses to possible client responses. The client responses help determine the client's readiness to change or stage of change, and the practitioner responses are matched to that stage.

Steps of Change Quiz

Prior to developing the model, the assessment questions in the Steps of Change Quiz (Appendix J) were reviewed. The practitioners endorsed the Steps of Change Quiz and they saw it as a valuable tool that could be utilized by the practitioner and client in helping to identify the client's specific Stage of Change.

Goals of Each Stage

The first stage in the stages of change model is the pre-contemplation stage. The goal of pre-contemplation stage is to have the client begin thinking about change. Practitioners can empathetically engage the client, educate in a limited manner about the effects of alcohol and pregnancy, personalize risk factors, and increase client awareness.

The goal during the contemplation stage is to have the client begin to examine

benefits and barriers to change. Practitioners can explore both sides of ambivalence and provide support for the client considering the difficulties of change.

The preparation stage goal is to have the client discover elements necessary for decisive action. Practitioners need to encourage the client's efforts and ask which strategies the client has decided on for risk situations.

The goal during the action stage is for the client to take decisive action. Practitioners can reinforce small successes and continue to support the decision.

The maintenance stage goal is to insure the client incorporates change into her daily lifestyle. Practitioners can ask what has been helpful and what situations have been difficult, and reinforce beneficial behaviours or decisions.

The goal of the relapse stage is for the client to learn from temporary success and re-engage in the change process. "Failure" should be reframed into "success", and viewed as a new lesson. Practitioners can educate clients that relapse is normal, change is cyclical, and is an ongoing process.

The participants supported the need for a model that could give them clear guidance in each stage. They specifically acknowledged the need for a "language" they could incorporate into their practice.

Most of the literature on the stages of change that has been developed to help guide practitioners consists of discussion on the general goals of interventions, such as giving information or supporting clients efforts. Literature was more abundant on the stages of change and specific to stage- model intervention in the addictions field for use by the specialist in this field. It was often laden with specialized terms and

concepts that may be too detailed and complex to be useful to practitioners during a brief intervention.

Proposed Model for Practitioners

Based on the findings from the project, the practitioners identified possible responses of clients and practitioners that fit well within the goals of each Stage of Change in the literature. Statements of responses clients may make, and possible practitioner responses framed the potential model.

Table 4

Proposed Model for Practitioners Working With Prenatal Women Using Alcohol

Stage of Change	Possible Client Response	Practitioner Response
Pre-contemplation	• I don't drink all the time, just on weekends. • My friend drank and her baby is fine.	• Have you tried to change your alcohol use in this pregnancy or other pregnancies? • How would you know your drinking was a problem for you or your baby? • If you decided to change, cut down, or quit drinking, what do you think the benefits might be? • Stopping or decreasing your use at any time during your pregnancy will help you have a healthier baby.
Contemplation	• I know it's not good for my baby, but I feel pressured. • I don't plan to drink, it just happens.	• What are the good or positive things drinking gives you? What are the negative or bad things of drinking during this pregnancy? • It is really hard to change–stopping or cutting down on drinking. What do you think are blocks or barriers that prevent you from changing your drinking? (Explore one barrier at a time.) • What has been helpful in the past? • What do you think would help you quit or cut down drinking in this pregnancy? • Some people find that _____ works well and may be adaptable to you.
Preparation	• I'm planning to move, so I won't feel as tempted with my friends. • I cut down, I only have a few sips.	• You have done very well with a difficult decision. • What do you plan to do when (high risk situations)? • Who do you find most supportive? • Your baby will be due _____. What date have you set to reduce/quit drinking?
Action	• I'm going to more AA meetings. • I started outpatients at the treatment centre last week.	• You have made a very good decision that can be difficult to do. • What is working well for you? What do we need to do to continue on this path?
Maintenance	• I quit when I found out I was pregnant. • I feel added stress with this pregnancy, so I will need to call my sponsor more.	• What have you done that has helped you not drink in this pregnancy? • What situations have been the most difficult?

Stage of Change	Possible Client Response	Practitioner Response
Relapse	• I quit for a long time, but went to a party last weekend.	• You have learned a lot from this. We can use this as a lesson to build on for the future. • Most people experience success and then new lessons. It is important we use this as information for continued success. • There are a lot of challenges and changes in pregnancy, you have done well.

CHAPTER SIX

Discussion

The purpose of the practicum project was to define and develop a model with health care practitioners for use in brief intervention with prenatal women using alcohol in an at-risk pattern. The transtheoretical, or Stages of Change Model, was utilized to guide the project. This chapter will discuss the Stages of Change Model, and its use with motivational interviewing and brief intervention in health care settings. The model that was subsequently developed with practitioners was generated from an extensive review of the literature and adapted, utilizing the principles of Participatory Action Research (PAR), to this community practice setting. Utilizing PAR principles as a framework for the project will be examined in terms of suitability, advantages and disadvantages.

The advantages and limitations of brief interventions, motivational interviewing and the Stages of Change Model will be discussed. Relevant findings from the practitioners will be reviewed under each of these areas. In addition, limitations of the project and implications for future work will be discussed.

Brief Intervention

Health care professionals working in the prenatal setting have been reported as those best able to assist women to abstain or decrease alcohol consumption during pregnancy (Heather, 1996). The implementation of brief intervention programs by front line practitioners can enlist a greater number of at-risk drinkers in programs and a larger portion of the population in need can be reached. Pregnancy may be an

optimal opportunity for brief intervention, as this may be the only time in a woman's life she receives frequent contacts with health care providers with the primary focus on initiating or maintaining health-enhancing behaviour in herself (Ruggierro, Redding, Rossi, & Prochaska, 1997). Brief intervention and the provision of health related information about drinking assumes knowledge of the levels at which drinking is harmful, as well as the nature of advice or intervention to be given. Currently, there is little evidence to support the premise that non-specialist practitioners have this knowledge. However well situated they may be, they may not have had the prerequisite knowledge to conduct accurate assessments of patients' alcohol consumption and provide appropriate advice or counselling (Drummond 1997). Drummond has also cautioned against widespread implementation of brief intervention strategies, arguing if interventions were delivered by practitioners who do not have appropriate knowledge and motivation, the intervention could be ineffective or at worst, harmful.

Although literature on brief intervention has provided evidence for its effectiveness in primary care settings for alcohol problems, difficulty with generalizability of the research has been noted (Drummond 1997). How this translates to use with pregnant women, rural communities, and various other practice settings including those with culturally diverse populations, remains to be seen.

Much of the rationale for widespread brief intervention is predicated on the assumption that the general public has come to understand the concepts of standard units of alcohol, is familiar with levels of risk drinking, and aware practitioners may

ask about drinking habits. Furthermore, it is assumed the client does not resent being asked about alcohol use (Heather, 1996). There is evidence that the patient expects to be asked about drinking by general practitioners (Wallace, 1984), but there is not the evidence to suggest that the stigma attached to an admission of a drinking problem has been removed. Problems of underestimation by self-reporting of consumption and the defensiveness about the need to reduce drinking have been noted in the general population (Heather 1996). Brief intervention with pregnant women may be even more difficult. Whitford and Vitucci (1997) point out the stigma associated with maternal substance use is a powerful force, as it reframes addicted women as "bad mothers". The literature was limited in addressing both the practitioner and client's underlying negative assumptions, and examining these in terms of barriers.

The literature was also limited in examining barriers to the utilization of brief intervention. A major assumption is that practitioners routinely and accurately screen their clients for at-risk alcohol use and deliver interventions when indicated, using methods of demonstrated effectiveness.

The practitioners in the project spoke consistently of the need to establish trust and rapport with prenatal women assessed to be at-risk with alcohol use. Several practitioners deferred completing an alcohol and substance use assessment on the first visit, and viewed it as an ongoing process, utilizing interventions throughout the pregnancy. Some practitioners also commented that they often felt awkward assessing and screening for alcohol use in pregnancy on the initial visit. They reported the possibility of decreasing rapport and trust, and thus having a negative impact on the

therapeutic relationship. Brief intervention appeared to be understood by the practitioners not as a single event, but as an ongoing process, interwoven throughout the practitioner-client relationship.

Brief intervention was not a new strategy for the practitioners. Utilization of brief interventions presupposes screening and identifying those at risk. None of the practitioners used a screening tool. Direct clinical questions asking about the quantity and frequency of alcohol use was utilized in their practices. Oslin (2001) points out that standard screening (i.e., CAGE) in the general population looks only for alcohol dependency and is aimed specifically at males in the thirty to forty year age group. He suggests the most effective screening approach is one with clinical questions regarding past use, quantity, frequency and problems within the context of the client's life (Barry, Oslin, & Blow, 2001).

Training designed for peer educators for use in interventions with pregnant women using alcohol described by Cain (1995), emphasized the need to intervene at the level of a woman's individual needs. In order for interventions to be fully effective in reducing alcohol use in pregnancy, needs such as self-esteem issues and family violence would have to be addressed, rather that just providing facts on risk drinking during pregnancy.

This view was supported by the practitioners. They described their experiences in working with prenatal women using alcohol at-risk, and acknowledged the multiple stressors and the often complex needs of the women. Many of the participants (8 of the 10) worked in community settings. The community setting may have encouraged a

broader understanding of brief interventions. As well, time restraints, an issue in most clinical settings, may have been less of a factor in these settings. It is noteworthy that the practitioners generally viewed at-risk alcohol use in pregnancy within a broad context. Although this view is comprehensive and holistic, it could serve to diminish the effectiveness of brief intervention for alcohol use in pregnancy. Addressing too many contributing factors, many of which may not be readily amenable to change, could serve to lessen the impact of the brief intervention for alcohol use. Focussing on the "how" of change, with specific stage matched interventions may help focus and guide practitioners in their work.

Research has supported the use of brief intervention utilizing the principles of motivational interviewing (M.I.). M.I. assists clients not ready to change (most often in pre-contemplation or contemplation stage). Motivational interviewing has been described as a style of interaction that utilizes the following principles: express empathy, develop discrepancy, avoid argumentation, roll with resistance and support self-efficacy. M.I. is different from the traditional confrontation of denial, and seeks to emphasize personal choice and responsibility and negotiation of goals and strategies. Labels are de-emphasized and as well client resistance is viewed as being influenced or induced by the interviewer (Miller & Rollnick, 1993).

Practitioners were familiar with this style, but had varying degrees of knowledge regarding M.I.

The use of motivational interviewing is often paired and guided by the stages

of change model. The stages of change model and participants responses will be reviewed next.

Stages of Change

The transtheoretical or Stages of Change Model has been used as a comprehensive model of change in the treatment of addictive behaviour since the mid 1980's. The model has been validated and applied to a variety of behaviours that include smoking cessation, exercise, and dietary behaviour (Prochaska & Velicer, 1997).

The majority of change models have been models of action, but there are several changes that precede or follow a person taking action (Prochaska & DiClemente, 1982). Trying to decide how to help someone change includes taking into account where in the cycle of change the client is.

Findings from the literature have documented that particular processes (coping or other types of activities initiated by the individual) during change are emphasized at particular stages of change (Prochaska & DiClemente 1983). The integration of stages and processes of change can serve as important guides for practitioners. Once it is clear what stage a person is in, the practitioner will know which processes to encourage in order to keep the client progressing to the next stage of change. Stage matched interventions have been used successfully in smoking cessation with pregnant women, and stage matched interventions are ubiquitous within the alcohol addiction field.

All the participants in both sessions supported the need for the stage-matched

model to help guide their work. They endorsed the proposed model for its usefulness in providing appropriate stage-matched interventions. Several practitioners stressed the need for a tool that would give them "specific language" to integrate into their work with clients.

As noted with the discussions on brief intervention, there are several assumptions about the Transtheoretical, or Stages of Change Model, that are evident. The first assumption is that practitioners have a working knowledge of the stages of change model and are indeed screening and assessing clients for at-risk alcohol use in pregnancy. In addition, once a client is assessed at-risk, the practitioner is presumed to have the required knowledge and skills to locate the client in a specific stage, in order to provide an appropriate intervention.

In this project, the practitioners had varying levels of knowledge of the Stages of Change Model. All were familiar with the model and knew the stages and general goal of each stage. All of the practitioners performed clinical screening for alcohol use with clients. This is important because practitioners who do not utilize some form of screening for alcohol use during pregnancy may not identify those at risk.

The findings from the first session, with the overall goal to elicit the client responses the practitioners have heard and situate the responses in the appropriate stage, suggest the practitioners readily matched client responses into appropriate stages. Furthermore, the participants had little difficulty in situating these client responses into the different stages of readiness to change despite varying degrees of knowledge regarding the stages model. Several responses were thought to belong to

either pre-contemplative or contemplative stages. These were the most difficult stages to clearly separate. There is perhaps an explanation for this. May (1995) refers to a "trickle down" effect from primary prevention strategies. Although not proven, trickle down messages may promote harm reduction action on the part of some women. Women acknowledge and are aware of messages not to drink alcohol during pregnancy, yet for many reasons, many women, such as those with a binge pattern of drinking, may not internalize this message or apply it on a personal level.

The practitioners suggested many of their clients knew alcohol is "bad for the baby" during pregnancy; however they felt hearing or seeing advertising or bottle labelling against drinking alcohol during pregnancy did not equal believing in a personal health risk. This may account for the participants' lack of agreement regarding client responses matching precontemplation or contemplation stages.

The Stages of Change Model comes with a host of interventions drawn from divergent theories. Bandura (1997) points out the behavioral-psychodynamic and existential theories from which this model is partially drawn, may offer contradictory prescriptions on how to change human behaviour. The Stages of Change Model, with its inherent limitations, can also be seen as a model that "frees" clients and practitioners, and can allow for a more dynamic egalitarian relationship. Acceptance of where a person is, in terms of behaviour change, a basic premise of the stages of change model. In other models, both the practitioner and client may view relapse as failure. This can lead to clients avoiding contact with health care practitioners. Zimmerman, Olsen, and Bosworth (2000) suggest that understanding client's readiness

to change, understanding barriers to change, and anticipating relapse can improve client satisfaction and lower practitioner frustration during the change process.

The definition of addiction varies cross-culturally. In North America, medically related concepts are embedded in a set of cultural beliefs that define addiction. The majority of research conducted on the stages of change model appears to have been conducted within a Caucasian middle-class setting. The biomedical model of addiction does not conceptualize substance abuse as a social problem, but rather a physiological problem to be cured.

Practitioners commented that they viewed their clients' alcohol use as interwoven within their social and physical environment, and in many respects their clients were aware of this. Family stresses, partner or family at-risk alcohol use, single parenthood and inadequate housing were highlighted as significant factors predisposing clients to alcohol abuse. Also, community and peer group acceptance was listed as a contributing factor influencing a woman's readiness to change alcohol use. Aboriginal women, being in more isolated communities in the region, were mentioned by practitioners as having greater barriers in addressing their at-risk alcohol use in pregnancy. Services are generally more sporadic and fragmented, and in addition there is a greater fear of stigmatization in smaller communities. Often health care providers are well known to clients. Therefore, increased concerns about a lack of confidentiality may be experienced.

Kowalsky and Verhoef (1999) provided a literature study of an aboriginal community in Northern Canada. They noted the same barriers the practitioners in the

group identified and suggest an individual's lack of awareness of issues and substance use problems may be embedded in the fabric of other social problems in some communities.

The literature on alcohol use and pregnancy is situated within an ideological framework that focuses on the individual and personal responsibility for lifestyle choices. Also central to this is the belief in the power of broad-based public education to change an individual's behaviour (Reinerman, 1988). However, much of the impetus behind the FAS research comes from the biomedical community. Intervention designs, which receive the most support, are those informed by social-psychological models that emphasize cognitive aspects of the individual. This appears to remain so, despite persistent calls for a broader perspective by various critics (Singer & Baer, 1994). With an ideological commitment to individualism, the only preventative actions suggested are those that can be implemented by the individual. Intended or not, these attitudes implicitly accept social inequities in health and fail to challenge the social production of disease. Armstrong and Abel (2001) report FAS as undeniably concentrated among disadvantaged groups, although alcohol use is more common among middle and upper classes than among the poor. Abel and Hannigan (1995) suggest the reasons FAS occurs among poverty stricken women is that they experience, or are characterized by, many more permissive factors such as smoking and poor diet that exacerbate the effects of alcohol. Since FAS cannot be divorced from poverty, insisting FAS "crosses all lines", perpetuates the problem by situating it solely within an alcohol context, instead of the wider context of poverty. Attention

may be diverted from social inequity and displace blame for poor pregnancy outcomes on individual mothers, rather than social circumstances.

Ma et al. (1998) suggest viable intervention approaches cannot exclude contributing factors such as parental role models, guidance of other influential individuals, and the community at large. Pregnancies that result in FAS births are products of shared actions, hence responsibilities.

The Stages of Change Model was developed within this social/psychological framework, therefore its main limitation is in its micro-individualistic approach as an intervention strategy. However, it differs from other individual models in several respects. Specifically noteworthy is the model's emphasis on practitioner responsibility. Rather than viewing clients as poorly motivated or resistant to change, the practitioner is given a framework and tools to assess and match interventions to a client's current stage of readiness. This model also incorporates a salutogenic framework, not a disease oriented, pathological approach that is often noted in the literature on alcoholism and recovery (O'Leary & Kane, 1999). A salutogenic model emphasizes health and views health on a continuum. This view prevents the dichotomous categorizing of health and illness (that views cure or action as the only goal) and can promote understanding and acceptance of individuals' health within a dynamic perspective that can account for all changes one makes in attempting to become more healthy (Antonovsky, 1987).

Individual models of intervention with prenatal women using alcohol at risk levels can be criticized when viewed as a singular approach. Increasingly, research

literature is directed at broad-based multiple strategies that include comprehensive, multiple approaches (May, 1995).

Waterston (1997) discusses how HIV prevention policies have encouraged an underclass ideology that is harmful to the "overstudied". Women scholars have suggested that fighting poverty has created "a politics of blaming the poor, that fosters a downward cycle of impoverishment, stigmatization, and despair" (Gorden, 1995, p. 32).

Practitioners suggested reducing alcohol use in pregnancy may have as much to do with economics - and the lack of affordable housing, limited access to health care and treatment centres and child care - as it has to do with individual limitations. Practitioners noted their caution in using broad labels that would further stigmatize or blame their clients.

Waterson (2001) reflects on the difficulty in utilizing behavioral models of intervention that target high risk groups. The Stages of Change Model with its inherent individualism may further perpetuate a "blaming the victim" cycle. As previously noted, focussing on high risk groups can further stigmatize and may add "fuel to the fire of the underclass script" (p. 81). Operationalizing broader focused models into something more immediately useful has been noted as a challenge in the literature.

Participants in the project shared their frustrations regarding their ability as individual practitioners to influence change in client's behaviour among the broader determinants of health. However, as a brief intervention strategy, in the context of the

practitioners' work environment, a stages-matched model was viewed as a significant and valuable approach in mobilizing client's strengths and individualizing interventions.

The findings of the second session indicated the participants easily matched possible practitioner responses to each stage of change. Again, as identified in the first session, the two stages, pre-contemplative and contemplative, often overlapped. More time was spent on the earlier stages of pre-contemplative and contemplative. This may reflect the practitioners placing more of a value and urgency on matched interventions at the earlier stages. The importance of providing appropriate matched intervention during preparation, action and relapse stages needs to be emphasized.

Responses by the practitioners that were matched to each stage reflected a sensitivity to the circumstances of pregnant women. They were cognizant of the importance of a screening assessment and intervention that occurs within a trusting relationship and supportive milieu. This supports what Roter, Stashefsky, and Rudd (2001) pointed out, that effective interventions need to encourage non-judgemental, open questions and statements by practitioners who work with pregnant women.

Practitioners verbalized their interest in a model that would go beyond identification, information giving, and referral. They supported the need for working with women not in an "action" stage. The participants expressed a need for a specific guide or framework in response to women identified at different stages of change. They identified this as a gap in their practice settings.

The second session's objective was for practitioners to give feedback on the

usefulness of the Steps of Change Quiz (Appendix J). The majority of the participants felt it would be a useful tool in identifying a woman's stage of readiness to change. They endorsed its use as an interactive tool between the practitioner and the client. Deccalhe and Aujoulat (2001) reported on European perspectives regarding health promotion and education. They state a new paradigm has emerged with a shift from a biomedical model to one that includes psychological and social dimensions of health. They report clients are asking for a stronger voice in decisions concerning their health. The steps of change quiz may encourage clarity between practitioner and clients and uncover unstated assumptions about change regarding alcohol use in pregnancy.

The Stages of Change Model with stage matched interventions may provide a rich model for practitioners to use in responding to the often complex needs of prenatal women. This response may be further enhanced by utilizing PAR principles, that allowed for practitioners' experiences and knowledge to be incorporated into the proposed model. PAR principles and the limitations, strengths, and, the "fit" for the practicum project will now be examined.

Participatory Action Research

Participatory Action Research (PAR) principles were used as a foundation for the project. The conventional or positivist paradigm is often examined because it remains the dominant model in health care research-specifically that of health promotion. It has been argued that the paradigm is useful so long as one adds the texture and richness of qualitative methods. Lewis (1991) comments on the new

public health which embraces community empowerment, community partnership, and community participation that requires a dialogue between the researcher, practitioners and community members. Lewis also suggests that while not advocating replacement of the empiricist tradition, "if we are to be at 'the table' of the community" (p. 31), the constructivist paradigm is essential to success.

The practicum project was based on the principles of PAR. PAR has been described as problem-focussed, context-specific, participative and involving a change intervention geared to improvement (Hart, 1996). The main elements of this approach are action, education, and empowerment (Green, O'Neil, Westphal, & Morisky, 1996). PAR offered a number of advantages for this project. It may have served to narrow the gap between theory and practice, and help define individuals as active participants in the change process. In addition, it is a non-exploitive collaborative process which may encourage further dialogue between various practitioners and community groups. It can offer reflection-in-action, as a means of developing professional knowledge that is more appropriate to practice (Meyer, 1993). Hart (1996) refers to PAR as emphasizing empowerment of practitioners with the skills to think critically and analytically. These are the main advantages but, in this project, as with PAR in general, its limitation is its inherent unpredictability. The facilitator has little control over bringing the project to predictable conclusions.

The practitioners in the project actively engaged in the process during both sessions. They openly discussed their experience, and knowledge, and gave feedback throughout the sessions. The practitioners discussed broad structural barriers they saw

affecting the health care of women using alcohol at-risk in pregnancy. They also identified the varied social forces and determinants of health that may significantly impact this client population.

The practitioners' reflections support what Carr and Kemmis (1986) suggest action research can provide. They point out PAR may enable practitioners to become more critical and reflective, and through their practice may begin to challenge oppressive structures that may mask the reality of people's lives.

Utilizing the principles of PAR may have provided a "good fit" for the project. Both the Stages of Change Model and the principles of PAR embrace similar underlying assumptions and philosophies in communication. They both seek to accept the individual and their experiences and support and strengthen the individual within an empowering atmosphere.

Utilizing the principles of PAR appeared appropriate for the practicum project's objectives. A major focus of the project was to augment existing research as research evidence cannot be applied in a vacuum. Care is rendered within a context - which can inform the application of population based data to individual practitioners and communities.

Some theoretical issues arose regarding the application of PAR principles to the project. The participants represented interested members from the prenatal practice community. The participants varied in terms of their practice setting, work roles and responsibilities, and knowledge level with respect to brief intervention, MI, and the Stages of Change Model. The heterogeneity of the group may have been both

an advantage and a limitation. An advantage may have been reflected in the robust discussions and the richness of the data provided. Several professions being represented may have been a limitation, as less practice specific responses may have been elicited, and group knowledge regarding the stages of change model more variable. The majority of the practitioners worked in community settings. This may have influenced the concepts of brief intervention, especially related to time constraints. Another issues involved attendance. Several members were able to attend only one of the sessions. Ongoing learning, sharing and group cohesiveness may have been diminished.

Overall, however, based on the findings from the practicum, the principles of PAR were effective for this descriptive project. The findings of the sessions support existing research, and provided a good foundation for the proposed intervention model.

A PAR framework may set the stage for further dialogue involving practitioners, community members and prenatal women. It may serve to foster strength between disciplines and agencies, and further endorse collaborative relationships. In addition, further involvement with community practitioners, community members and pre and post-natal clients may engender true partnerships that encourage further action research in the areas of interventions for women using alcohol at-risk during pregnancy.

Limitations

There were several theoretical and methodological issues that may have served

to limit the development and findings of the project. Some of the challenges were specifically related to the short time frame of this student practicum. Other limitations reflected utilizing the principles of PAR for this descriptive project.

The project was initiated by the facilitator as a course requirement for completion of a Masters Degree in Nursing in Advanced Practice Nursing. However, a Norman Regional Health Authority Needs Assessment (1997-98) indicated FAS was a significant concern of residents in The Pas. Nevertheless, initiation by the facilitator was a "top-down" approach and thus did not allow for significant participatory principles to be realized. In addition, both professional group and client group would need to be included to fully incorporate participatory principles. The prenatal client group was not invited into the project due to time constraints placed on the practicum.

Another limitation identified was the lack of sufficient time to conduct the sessions. More sessions with practitioners may have been useful in developing front-end work, such as educational sessions and team work on brief intervention and the Stages of Change Model. This may have allowed for greater understanding of the stages model and benefited the findings by providing more specific community and prenatal data.

Practitioners represented several occupations and agencies. This may have contributed to the irregular attendance, as agency support, job responsibilities, and time could have influenced attendance. Attendance levels may also have been affected due to the fact the project was not initiated by the practitioners. Therefore, there may

have been less motivation and vested interest in the project.

The project sample of practitioners was small and not randomly selected, thus generalizability of the findings is limited. However, it can be argued that generalizability was not the intent. Rather, the development of a model that utilized both practitioners' knowledge and experience from a specific community, in conjunction with relevant research literature on the Stages of Change Model, was a primary goal.

The sample of practitioners was represented by practitioners whose work setting was in the community. This may have influenced the proposed model in respect to the concept of brief intervention, as time with clients is generally longer than practitioners working in clinical settings. In addition, the sessions were recorded in writing rather than being taped. This may have influenced the amount and quality of the data.

The first session utilized case studies developed by the facilitator. The case studies asked for both client and practitioner responses which may have limited client responses. Both sessions spent more time on the earlier stages of change. A balanced amount of time for all stages may have influenced the findings for the later stages.

Recommendations for Future Work

Based on the findings to date, it is recommended that the model be reviewed by health care practitioners and employers and, if in agreement, the model be implemented as a pilot project.

Prior to full implementation of the model, further discussion with practitioners

is needed and sessions with the participants could be used to further develop the proposed model and to assess what elements of the model would be implemented initially.

Participatory action research can contribute to the subsequent utilization of evaluation results. Participants have greater understanding and heightened perceptions of the results as valid and credible. In addition, members have a greater acceptance/ownership of the findings and an increased sense of responsibility and obligation to follow through on results (Rossi & Freeman, 1999). Being true to the participatory action research process, an evaluation plan cannot be mapped out thoroughly. However, the goals of the evaluation would be to: (a) provide feedback on the model, (b) identify areas of strengths and limitations, and (c) to make recommendation for change.

A formative approach in evaluating the effectiveness of the model for the practitioner could be done through the use of a feedback form. The form would be specifically designed to assess if the model was being used by the practitioners, what was useful and what weaknesses were identified. To determine how effective and useful the model was with prenatal clients, a summative evaluation method in the form of a short questionnaire could be conducted during the postpartum period.

Further recommendations include:

- Continuing development of screening for alcohol/substance use in pregnancy (clinical or screening tool).
- Further review and discussion with practitioners on the Steps of Change Quiz

(Appendix J). If in agreement, a pilot of the quiz and an evaluation be developed utilizing PAR principles.

- A committee/advisory group of practitioners, stakeholders, and clients (pre and postnatal) be brought together, with a specific time commitment, as members of a participatory evaluation process.
- Further utilization of participatory action research related to this model for further projects, as PAR can allow the community to identify problems, strategies for addressing these problems, as well as establishing community specific foundations for ongoing, sustained collective action.
- Continuing education for health care practitioners and students, designed to enhance skills in screening and assessment of alcohol use in pregnancy. In addition, education designed to increase knowledge and skills in the areas of brief intervention, motivational interviewing, and the Stages of Change Model.
- The use of secondary prevention efforts that are culturally sensitive and family centered and address the women, her partner and family, in the context of her community. After pilot of the model, an evaluation that includes questions to practitioners and clients regarding cultural sensitivity be included.

Conclusion

The practicum project highlighted some unique components. The literature on secondary prevention activities involving at-risk alcohol use in pregnancy has thus far examined and suggested there is good evidence that brief interventions in prenatal settings, based on cognitive-behavioral principles, are effective in helping pregnant

women reduce or eliminate alcohol use in pregnancy. The proposed model, with stage matched interventions, utilizing the Stages of Change Model, was unique in its application to this population.

The proposed model shows promise as an intervention for use by practitioners working with women using alcohol in at-risk levels in pregnancy.

The project focussed on an individual level of intervention with the overall goal being a decrease or cessation of drinking alcohol in pregnancy. However, the project may have generated other less obvious outcomes. Practitioners were brought together for this project which may provide for further dialogue and collaboration among interdisciplinary groups.

FAS is a preventable birth defect and is dependant on individual behaviour. The Stages of Change Model is an individual behavioral intervention and therefore may be very useful. However, it is unlikely to impact significantly on the incidence of FAS without further broad-based multiple strategies that focus on the determinants of health and social change.

Although difficult to move forward among these complex, often seemingly incompatible goals, the framework of Participatory Action Research (PAR) may be an approach that is well suited to address these concerns. At once a "micro" and "macro" approach, the practicum project utilized the principles of PAR with the Stages of Change Model guiding the proposed model.

The proposed stage-matched model provided preliminary work that may help to guide practitioners. Stage matched secondary brief intervention strategies, within a

participatory action research framework, may be well suited and integral to addressing both the individual needs of pregnant women using alcohol at-risk levels and the broader determinants of health.

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Appendix A

Glossary of Terms

FAS: Fetal Alcohol Syndrome: A medical diagnosis with specific diagnostic criteria.

All of the terms below refer to situations where the client has a history of alcohol exposure during gestation and some, but not all, of the findings of FAS.

Conditions associated with fetal alcohol exposure:

FAE Fetal Alcohol Effects

PFAS Partial FAS

ARBD Alcohol-related Birth Defects

ARND Alcohol-related Neurodevelopmental Disorder

Appendix B

Letters to Managers Regarding Practicum Project

This letter is a follow-up to our conversation with respect to interested staff participating in a Master of Nursing practicum project entitled *At Risk Alcohol Use in Pregnancy: A Project to Develop an Intervention Model with Health Care Practitioners*.

Health and community practitioners who work with prenatal clients are being invited to voluntarily participate in this project. Two meetings will be arranged during the months of May and June 2001.

Please find attached a letter of invitation to participate in the project. Enclosed are additional informational notes titled "Alcohol Use in Pregnancy - Current Intervention Approaches" that review terminology, various intervention strategies/models and statistics regarding the use of alcohol in pregnancy.

If you have any questions or if you would like a copy of the project proposal to review, please do not hesitate to contact me for a copy.

Thank you in advance for taking the time to review the letter of invitation and considerations in assisting with this project. Your time and input will be greatly appreciated.

Yours sincerely,

Pat Medd,
Master of Nursing Student, University of Manitoba

Appendix C

Invitation Letter to Practitioners to Participate in Practicum Project

You are invited to participate in a practicum project *At Risk Alcohol Use in Pregnancy: A Project to Develop an Intervention Model with Health Care Practitioners*. This project will be conducted by Pat Medd who is currently enrolled in the Advanced Practice Nursing Major in the Master of Nursing program at the University of Manitoba.

The Advisory Committee members for the practicum project include Dr. Karen Chalmers, Chair; Dr. Loretta Secco, Internal Member; and Dr. Morag Fisher, External Member. If there are any questions or concerns regarding the project, Dr. Karen Chalmers can be reached at (204) 474-9317.

The goal of the project is to develop a model with practitioners for brief intervention with pregnant women who are at risk for alcohol misuse. Participation in the project is entirely voluntary. Participants will be under no obligation to participate and may withdraw from the project at any time. Upon completion, you may be asked to review the model and provide myself with any further comments. This, however, would not be mandatory. Feedback in response to the model being designed may be given to myself either by telephone or in writing. No individual will be identified in the written report of the project.

Health and community practitioners who work with the prenatal population are invited to attend two meetings (approximately 1 - 1 1/2 hours in length) during the months of May/June, 2001. Specific dates for the meetings will be arranged with all participants within the next two weeks.

This project plans to use a community based multifaceted framework approach that will involve the advice and input from practitioners of various disciplines and practice settings who work with prenatal women. It is anticipated that the outcome of this practicum will provide an approach that can be used in the assessment and/or intervention of pregnant women at risk with alcohol use.

Please find attached some background information on alcohol use during pregnancy. Upon completion of the project, a summary of the practicum project will be made available to those interested in receiving a copy.

Sincerely,

Pat Medd,
Master of Nursing Student, University of Manitoba

Appendix D

Alcohol Use in Pregnancy Current Intervention Approaches

Terminology:

- Alcohol-related birth defects (ARBD) is a general term used to refer to physical, developmental and behavioral abnormalities attributed to prenatal exposure to alcohol.
- Fetal Alcohol Syndrome (FAS) is a type of ARBD and refers to the medical diagnosis of a specific cluster of anomalies associated with the use of alcohol during pregnancy. Three essential traits of FAS are (1) pre and/or postnatal growth restriction, (2) characteristic facial features and (3) an impairment of the central nervous system functioning resulting in developmental delays, neurological abnormalities, behavioral dysfunction and learning disabilities

Statistical Review:

- To date, there is no national data available on the incidence of FAS in Canada. However, it is believed to be one of the leading causes of preventable birth defects and developmental delay among Canadian children. The national rate is estimated at 1-2 per 1,000 live births. The cost for the lifetime care of an individual with FAS is estimated at $1.4 million.
- Studies in Northern British Columbia and in a First Nation community in Manitoba found alcohol related birth defects prevalence of 190 per 1,000 people and 100 per 1,000 people respectively. These results and others suggest that ARBD may be more prevalent in some population groups—and more prevalent among the children of some Aboriginal communities.

Research Review:

- Effects of prenatal alcohol exposure can vary. Factors such as the amount of alcohol consumed, the stage during pregnancy at which the alcohol was consumed, the woman's ability to metabolize alcohol and the genetic make-up of the fetus play an influential role in determining fetal outcome.
- A safe drinking level during pregnancy has not been established. Therefore, it is recommended in Canada that women who are pregnant abstain from alcohol.
- Interventions have been developed at the primary (e.g., through public education and bottle labelling), secondary (e.g., screening, brief interventions, professional education), and tertiary (eg. provisions for women who have given birth to a diagnosed FAS child that involves intensive case management and treatment) levels of health care.

Current Intervention Approaches:

- *Brief intervention* is a strategy practitioners have utilized to help elevated risk clients reduce their risk of alcohol-related problems. It is also used to help modify other behaviours such as diet and exercise.
- Brief interventions are time limited (often 5 - 15 minutes in length) and are often used by health practitioners in settings where clients are being seen for other health related issues.
- Goals of brief alcohol intervention are generally to reduce alcohol consumption and/or facilitate the entry into treatment.
- Settings for brief intervention can include primary care, community, hospitals, workplace and substance abuse treatment facilities.
- Brief alcohol intervention can be used by a nurse, physician, social worker, health educators, allied health professionals and many others.
- *Motivational counselling or interviewing* (MI) is often paired with the Stages of Change model. It is especially useful in precontemplation and contemplation stages and involves five general principles for the practitioner: express empathy, develop discrepancy, avoid augmentation, roll with resistance and support self-efficacy.
- The *Transtheoretical* or *"Stages of Change" Model* is an approach to health promotion that views behavioral changes requiring one to progress through a series of stages before a person is motivated to take the action step to change.
- The Stages of Change Model views changes in behaviour as occurring gradually. The first stage begins with the client being uninterested in changing their behaviour, unaware or unwilling to make change (precontemplation stage), to considering a change (contemplation stage), to deciding and preparing to make change (preparation stage). Action and maintenance are the remaining stages. Relapses are inevitable and this process is viewed as spiral rather than linear.
- Stage of Change Model provides a framework of hope in which those not ready to make active changes are seen as capable of making progress towards change.
- Stage of Change Model is useful for selecting appropriate interventions and can be used successfully during brief interventions.
- By identifying a client's position in the change process, practitioners can tailor the intervention.
- Understanding client readiness to make change will increase success in helping people change behaviour by targeting interventions to match.
- Research into smoking cessation and alcohol abuse in the general population has advance dour understanding of the change process. These areas have been successful in utilizing brief interventions and the Stages of Change Model.
- To date, few or no studies have been found that utilizes a model of intervention with pregnant women who are at risk with alcohol use that incorporates the Stages of Change Model.

Appendix E

Case Studies

Case Study #1

A woman who is approximately 6 months pregnant brings in her 18-month-old to be immunized. She smells of alcohol, but does not appear intoxicated. Previous history recorded, occasional binge drinking during the first trimester of this pregnancy. You respond with questions/statements regarding alcohol use and/or change.

List client responses you have encountered:

Case Study #2

You are doing a home visit in the community. You have assessed in a previous visit that the client has been drinking at risk levels in pregnancy. What questions and/or statements have you used?

What was successful? What was not helpful?

Case Study #3

Prenatal Clinic - A client who is in her second trimester, you note has a bruised left eye and abrasions to her right arm. Upon questioning, the client reports her partner "pushed me when he was drunk". She denies ETOH use since finding out she was pregnant, although reports past history of heavy drinking prior to this pregnancy.

What are some questions, responses you have used as a practitioner, or heard used?

Case Study #4

A prenatal client reports a few drinks every once in a while especially in response to stress regarding issues with her boyfriend. She states she does not drink anymore though.

How do you respond?

Appendix F

Meeting Agenda

June 6, 2001

I. Intro & Background - Project

II. Purpose

III. Background Literature

- Brief Intervention
- Stages of Change
- Motivational Interviewing

IV. Discuss — Brainstorm

- Approaches, Responses
- What was successful / not helpful?
- Assessment?

V. Final Notes — Next meeting date
Wednesday, July 4th @ 10:00 am
CNRC

Appendix G

Handouts at First Session

1. Motivational Interviewing Principles Guidelines and Strategies
2. Integration: Processes of Change with Stages of Change
3. What are the Stages of Change?
4. Counsellor Tasks and the Stages of Change

MOTIVATIONAL INTERVIEWING PRINCIPLES GUIDELINES AND STRATEGIES

Motivation Principles (Miller, 1983) which help direct clients toward change are:

1. **De-emphasize labels** by referring to drug behavior, drug dependence or drug-related problems rather than addicts or alcoholics;

2. **Emphasize individual responsibility** in defining the problem;

3. **Stress internal attribution**, i.e., that the problem is not beyond individual's control;

4. **Identify "cognitive dissonance"**, i.e., incongruence between individual goals/values and current behavior.

Motivational Guidelines which can help mobilize clients to seek changes are:

1. **Increase self-esteem** through identifying strengths and successes;

2. **Increase self-efficacy** by designing successes through assignment of achievable tasks;

3. **Decrease cognitive dissonance** between individual's goals and behavior by pointing out discrepancies between them in the past, present and future;

4. **Direct cognitive dissonance reduction** by negotiating plans for changing the behavior, rather than changing goals and values.

INTEGRATION: PROCESS OF CHANGE WITH STAGES OF CHANGE

STAGE: PRECONTEMPLATION	STAGE: CONTEMPLATION
MOST EFFECTIVE PROCESSES OF CHANGE ◆ Consciousness Raising ◆ Social Liberation ◆ Helping Relationships	MOST EFFECTIVE PROCESSES OF CHANGE ◆ Consciousness Raising ◆ Social Liberation ◆ Emotional Arousal ◆ Self Re-evaluation ◆ Helping Relationships

STAGE: PREPARATION	STAGE: ACTION
MOST EFFECTIVE PROCESSES OF CHANGE ◆ Self Re-evaluation ◆ Commitment ◆ Social Liberation ◆ Emotional Arousal ◆ Helping Relationships	MOST EFFECTIVE PROCESSES OF CHANGE ◆ Commitment ◆ Countering ◆ Environmental Control ◆ Reward ◆ Helping Relationships ◆ Social Liberation

STAGE: MAINTENANCE	STAGE: RECYCLE
MOST EFFECTIVE PROCESSES OF CHANGE ◆ Commitment ◆ Countering ◆ Environmental Control ◆ Helping Relationships	MOST EFFECTIVE PROCESSES OF CHANGE ◆ Processes are dependent upon which stage the person recycles to.

STAGE: TERMINATION - All of the stage appropriate processes may be helpful in pursuit of new growth.

WHAT ARE THE STAGES OF CHANGE?

PRECONTEMPLATIVE
The stage where the client is not considering change as there is no perceived need for any change.

CONTEMPLATIVE
The stage where the client is thinking about making some changes.

PREPARATION
The stage where the client is preparing or becoming determined to make changes.

ACTION
The stage where the client is actively making changes through modifying behaviors.

MAINTENANCE
The stage where the client is consistently maintaining changes made over a period of time.

RECYCLE
The stage where the client falls back to an earlier stage of change.

TERMINATION
The stage where the client no longer needs to attend to the task of maintaining the change.

COUNSELLOR TASKS AND THE STAGES OF CHANGE
(1999 Alberta: Prairie Province Conference on Fetal Alcohol Syndrome)

The Model of Change outlines tasks for the counsellor in each stage.

STAGE	TASK
Precontemplation	To raise doubts; increase the client's perception of the risks and problems with current behaviors.
Contemplation	Tip the decisional balance: evoke reasons to change, risks of not changing. Strengthen the client's self-efficacy for change of current behavior.
Preparation	Help the client determine the best course of action to take in seeking change.
Action	Help the client take steps towards change.
Maintenance	Help the client identify and use strategies to prevent relapse.

It also gives suggestions to help a client when they relapse:

In the case of relapse - Help the client to renew the processes of contemplation, preparation, and action, without becoming stuck or demoralized because of relapse.

MOTIVATIONAL INTERVIEWING

Motivational Interviewing, developed by Miller and Rollnick (1991), is a way to help people recognize and do something about their present or potential problems. It is especially useful with people who are either reluctant to change or ambivalent about changing. It is intended to help resolve ambivalence and get a person moving along the path to change. In Motivational Interviewing, the counsellor does not assume an authoritarian or expert role.

The strategies of Motivational Interviewing are persuasive and supportive rather than coercive or argumentative. The counsellor attempts to create a positive atmosphere which is conducive to change. Motivational Interviewing uses a variety of strategies, some derived from client-centred counselling, to encourage internal change rather than imposing external change onto the client.

In their book, Miller and Rollnick (1991) state: "Motivational Interviewing is an approach designed to help clients build commitment and reach a decision to change." Prochaska and Di Clemente have described the stages of change a client may be in when presenting for counselling: Miller and Rollnick offer strategies to move the client from one stage to the next. The first half of this book is essential reading for counsellors dealing with problem gamblers and other clients experiencing addiction problems.

The following two sections are some notes from Miller and Rollnick's work, adapted for problem gambling clients.

Five Principles of Motivational Interviewing

1. Express Empathy
   - Acceptance facilitates change
   - Skillful reflective listening
   - Ambivalence is normal

2. Develop Discrepancy
   - Awareness of consequences is important
   - Consequences that conflict with important goals favor a change
   - The client should present the arguments for change
   - Labelling is unnecessary

3. Avoid Argumentation
   - Arguments are counterproductive
   - Defending breeds defensiveness
   - Resistance is a signal to change strategies

4. Roll With Resistance
   - Momentum can be used to good advantage
   - Perceptions can be shifted
   - New perspectives are invited but not imposed
   - The client is a valuable resource in finding solutions to problems

5. Support Self-Efficacy
   - Belief in the possibility of change is an important motivator
   - The client is responsible for choosing and carrying out personal change

PRECONTEMPLATION

At this stage, individuals can be thought of as "not ready" for change. They have not yet considered the possibility or the need for change. They are likely aware of their behavior, but are not defining it as a problem. However, the notion of precontemplation suggests that someone else knows there is a problem. Precontemplators are only likely to present for treatment if pressured or mandated to do so by someone else. Precontemplators are often labelled as resistant or "in denial."

CONTEMPLATION

This stage might best be thought of as a continuum that begins when individuals recognize they may have a problem they want to change and ends when individuals conclude they do have a problem that they do want to change. In between, people experience ambivalence—both considering and rejecting change. Such ambivalence is normal and understandable and is typical of many of the addictions clients who present for individual counselling. Contemplation involves achieving the willingness to change.

PREPARATION

In the preparation stage, people plan how they will accomplish the desired change. Strategies need to be realistic and appropriate. Clients seem ready and committed to make a serious attempt at change. The counsellor must recognize the enthusiasm does not equal skill at this point. There may be many barriers to overcome in order for the client to be successful; these must be planned for.

ACTION

Clients in the action stage may use their counselling session to obtain support and monitoring of their success. Research shows that three to six months is required for this phase to be complete, although this varies with the individual and the problem area. As Prochaska states "clients at this stage represent many of our miracle cures, who see us for one session, make significant and long lasting changes, and tell everyone what great therapists we are" (quoted in Miller and Rollnick, 1991, p. 199).

MAINTENANCE

New behavior becomes firmly established in this stage. Although the threat of relapse is less frequent/intense, it is still possible. Clients must be realistic in their understanding of the length of time required to accomplish change. When clients attend counselling after relapse occurs, they may be very shaken and need to make sense of the relapse.

TERMINATION

The termination stage is when people exit the stages of change. In other words, they are finished. There are three criteria for termination: the problem behavior will no longer present any temptation or threat; the behavior will never return, and there is complete confidence that the person can cope without fear of relapse. Only 10 to 15% of all changers reach termination. Most changers remain in the maintenance stage for the rest of their lives. This means that they have built a healthy and rewarding lifestyle, yet may still be tempted on occasion.

There is hope in the range of alternative approaches available.

Challenge These Assumptions

Many behavior change consultations fail because the counsellor falls into the trap of making false assumptions. The client is more likely to openly consider change if the following assumptions are not imposed on him or her:

1. This person OUGHT to change.
   This is difficult to avoid because counsellors tend to place a high value on health and often do feel that change would be a good idea. Do not be dishonest about this. The solution is to either hold back on expressing personal views, or to express them openly in a non-threatening manner. "I think it might be a good idea to change your gambling, but what do you really think about this?" In other words, express opinions in a relatively neutral and non-judgmental way, placing emphasis on the client's freedom of choice.

2. This person WANTS to change.
   This assumption is easy to avoid. Ask the client! Remember that motivation is not an all-or-nothing phenomenon. It's a question of degree, so don't ask a question like, "do you or don't you want to reduce gambling?" The assessment of how much the person wants to change will be crucial to the success of the consultation. Remember that clients sometimes feel intimidated by health professionals; they may not want to be frank because they fear possible disagreement about behavior change. The counsellor's general attitude and specific wording of questions can help to facilitate honest discussion.

3. This person's health is the prime motivating factor for them.
   This is a common faulty assumption made on counselling sessions. For example, fairly healthy clients are not necessarily motivated to change behavior in the interests of long-term health. More immediate prospects like keeping a job or saving money might be more important.

4. If he or she does not decide to change behavior, the consultation has failed.
   This is unrealistic and too ambitious. Deciding to change is a process, not an event, and it takes time. People vacillate between feeling ready to take action and feeling unwilling to even think about it. Simply helping someone to think a little more deeply about change is a useful outcome of a consultation. A decision to change is more likely to be made outside of the consultation.

5. Clients are either motivated to change or they're not.
   Motivation to do something is not an all-or-nothing phenomenon. It's a matter of degree. Readiness to change varies between individuals, and within them, over time. A counsellor can have a great deal of influence with a client's motivation.

6. Now is the right time to consider change.
   It might not be! Choosing the right time is a delicate matter. The best guideline is the client's reactions. if he or she has rushed into the session, late because of a disagreement at home, there is a problem of timing! Choosing the right moment and moving ahead at the right pace will enhance success rates.

7. A tough approach is always best.
   No, it's not! Most people are not encouraged to change when someone uses this approach. people take a "hard line" when they feel no other approach is possible. With some clients, on some occasions, being very frank and directly persuasive might be justified. But do not assume this is necessary for every client. Counsellors can enter a vicious circle if they use the tough approach. Clients resist because they don't like being cornered, the counsellor feels that clients are inherently resistant to change, further tough action appears justified, and so on.

Appendix H

Meeting Agenda

July 4, 2001

AGENDA:

1. Review of June 6, 2001 meeting

2. Session Purpose:

   To collect statements and questions from health practitioners that could possibly be utilized as a part of a brief intervention model.

3. Steps of Change Quiz

4. Final Comments/Recommendations/Suggestions from participants

5. Facilitator Closing Comments

Appendix I

Handouts at Second Session

1. Stages of Change
2. Summarization of Stages of Change

STAGES OF CHANGE

Pre-Contemplative

STAGE 1 The stage where the client is not considering change as there is no perceived need for any change.

Possible Approach Statements by Practitioner:

- Give information and personalize risk factors.
- Use relationship building.
- "If you were to decide to change, what do you imagine might be some advantages?"

Contemplative

STAGE 2 The stage where the client is thinking about making some changes.

Possible Approach Statement by Practitioner:

- Explore pros and cons of change. Explore ambivalence.
- Focus on client strengths.
- "Tell me the positive aspects of your drinking?"
- Use emotional arousal.
- "What are the barriers today that keep you from changing your drinking?"

Preparation

STAGE 3 The client is preparing or becoming determined to make changes.

Possible Approach Statements by the Practitioner:

- Ask for change date. Go public-tell specific others.
- Create an action plan.
- Focus on solutions, not problems.
- "It took a lot of strength and effort to get the kids ready."

Action

STAGE 4 The client is actively making changes through modifying behaviors.

Possible Approach Statements by Practitioner:

- Reinforce the decision.
- View problems as helpful information.
- "You have made a hard decision, and are doing very well at what you set out to do."

Maintenance

STAGE 5 The client is consistently maintaining changes made over a period of time.

Possible Approach Statements by Practitioner:

- Continue reinforcement and review what works.
- Focus on relapse prevention.
- Encourage taking credit for success.
- "What situations give you the hardest time and tempt you to drink?"

Summarization of Stages of Change
(Addictions Foundation of Manitoba Summary)

Characteristics	Most Helpful Processes	Most Helpful Techniques
PRECONTEMPLATION STAGE		
• resistant to information which connects them to the problem • lacking full and/or accurate information • lacking a self awareness regarding the problem • seen by others as having a problem • no intent to change • defensive • usually referred by others	• Consciousness Raising • Social Liberation • Helping Relationships	• reading • informational video, audio tapes • providing information about the issue • assessing choices and alternatives • counsellors's use of reflective communication skills • counsellor interviewing as close to a critical incident as possible • de-emphasizing labels
CONTEMPLATION STAGE		
• high levels of anxiety • actively looking for information • aware of the problem • ambivalent about change • eager to explore and talk about the problem • high levels of temptation • low self efficacy with respect to controlling the behaviour • no commitment to change	• Conscious Raising • Social Liberation • Emotional Arousal • Self re-evaluation • Helping Relationships	• encourage solicitation of information • emotional videos • discussion • balanced problem evaluation • examination of pros and cons of change • focus on clients' strengths • emphasize client's personal goal setting responsibility • assist in dissonance reduction
PREPARATION (DETERMINATION) STAGE		
• committed to change • focus on solutions rather than problem • feelings include ambivalence and anxiety • change becomes the highest priority	• Self re-evaluation • Commitment • Social Liberation • Emotional Arousal • Helping Relationships	• creation of action plan • turning away from old behaviours • making change a priority • balance pros and cons • take small steps • set specific dates • client decision to tell specific others

Characteristics	Most Helpful Processes	Most Helpful Techniques
ACTION STAGE		
• receives recognition for change • initiates actions • skill development is highly significant • modifying, stopping or adding behaviours • anxiety and anger are common feelings • most visible stage of change • requires the most time and energy commitment • high risk time for relapse • enthusiastic about change • increase in self esteem	• Commitment • Countering • Environmental Control • Reward • Helping Relationships • Social Liberation	• concrete plans • avoidance/reminders • contracting • self talk • step by step behavioral shaping • skill development • assess relapse potential • short/long term plan development • relapse prevention planning
MAINTENANCE STAGE		
• maintains changes made in action stage • builds on changes made in action stage • goal of permanent change becoming part of self • one of the most difficult stages • long term • fearful of possible relapse	• Commitment • Countering • Environmental Control • Helping Relationships	• reviews • role plays • discussion • strategic planning • counsellor's use of reflective and directive skills • focus on relapse prevention • assessment of choices/decisions
RECYCLE STAGE		
• guilt, disappointment, self blame, embarrassment • sense of failure, frustration, hopelessness • period of re-evaluation • period of learning • exploration of work done • longer term return to old behaviours	• dependent upon which stage the client is **now** in	• guided learning from experience • dependent upon which stage the client is **now** in

Appendix J

Steps of Change Quiz

Read the following statements. Put a check mark in the boxes beside the statement that best describes your feeling toward drinking alcohol during your pregnancy. We know that women may use alcohol while pregnant. This information will be helpful for us to work together.

STEP ONE	☐ I'm not thinking of stopping drinking during my pregnancy.
⇕	
STEP TWO	☐ I'm thinking about stopping drinking during my pregnancy, but I can think of all kinds of reasons not to quit now. ☐ I'm thinking about quitting but I'm not convinced I am ready to quit now.
⇕	
STEP THREE	☐ I want to quit drinking soon but I'm not sure how to do it. ☐ I'm making plans which will help me stop drinking during my pregnancy.
⇕	
STEP FOUR	☐ I am ready to quit drinking now.
⇕	
STEP FIVE	☐ I stopped drinking as soon as I knew I was pregnant, or in preparation for pregnancy. ☐ I quite drinking, but feel the pregnancy has added stress and put me at risk for drinking at times.

Adapted from Chalmers, K., & Bramadat, I. (1996). Close up: A resource package for nurses who smoke or have recently become smoke-free. Winnipeg: The Manitoba Nursing Research Institute, Faculty of Nursing, University of Manitoba.