

Families First Universal Screening in Manitoba



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Healthy Child
Manitoba



Manitoba

Putting children and families first

Overview of Presentation

- Measuring ECD in Manitoba
- Families First Universal Screening at Birth
- Results from Universal Screening

Acknowledgements

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Universal Screening Process

- All (almost) mothers who deliver a baby in hospital receive a visit from a public health nurse (PHN)
- PHNs engage families in a dialogue about supports and challenges for the family in raising their new child and screen for 38 risk factors (eg. Premature baby, pregnancy or labour complications, history of mental illness, social isolation, relationship distress, substance use etc.)
- The screen serves a dual purpose:
 - PHN provides clinical support to families; those needing extra support may be offered a home visitation program and/or referral to community services
 - Opportunity for data collection to inform policy and programming decisions
- In 2003, detailed follow-up questions were added to the screen if a woman identified alcohol use during pregnancy.





Families
First

SCREENING Form

2008

NUMERICAL INFORMATION ONLY

Please do not write any names or addresses on this form. See detailed instructions on reverse.

Unable to complete screen

MOTHER:		When was pregnancy confirmed (weeks)?		Screened prenatally?		BABY:		
Age (years):	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	Day	Month	Year
PHIN:	<input type="text"/>	MHSC:	<input type="text"/>	Birth Date: <input type="text"/>				
Residence Postal Code:	<input type="text"/>	RHA:	<input type="text"/>	Gender: <input type="radio"/> Male <input type="radio"/> Female				
FATHER:		Age (years):		Education:		PHIN:		
		<input type="text"/>		<input type="radio"/> Grade 12 and up <input type="radio"/> Less than Grade 12		<input type="text"/>		
						Aboriginal child? <input type="radio"/> Yes <input type="radio"/> No		
						Aboriginal group: (if Yes above) <input type="radio"/> North American Indian <input type="radio"/> Metis <input type="radio"/> Inuit <input type="radio"/> Other Aboriginal		

A. CHILDREN WITH KNOWN DISABILITY *(Fill in 'yes' if risk factor is present, 'no' if it is not. If unknown, leave blank.)*

1. Congenital anomaly or acquired disability. Include: Major (probability of permanent disability) e.g., Down's syndrome, cerebral palsy, FASD Moderate (correction may be possible) e.g., cleft palate, loss of limb Yes No

B. DEVELOPMENTAL RISK FACTORS

2. Low birth weight (less than 2500 grams at birth) Yes No
 3. High birth weight (greater than 4000 grams at birth) Yes No
 4. Prematurity - an infant born at less than 37 weeks gestation. Yes No
Complications of pregnancy
 5. Infections that can be transmitted in utero and may damage the fetus (e.g., rubella) Yes No
 6. Alcohol use by mother during pregnancy. If "yes", complete section D. Yes No
 7. Drug use by mother during pregnancy. Yes No
Complications of labour and delivery
 8. Difficult vaginal birth (forceps or vacuum) or emergency caesarean Yes No
 9. Infant trauma or illness (e.g., convulsions, respiratory distress syndrome) Yes No
 10. Family history of a disability not detectable at birth that could affect development (e.g., deafness, mentally disabled/challenged) Yes No
 11. Multiple births (e.g., twins, triplets) Yes No
 12. Maternal smoking during pregnancy Yes No

C. FAMILY RISK FACTORS

13. Mother's age at birth of first child is less than 18 years. Yes No
 14. Mother's highest level of education completed is less than grade 12. Yes No
 15. On social assistance/income support or financial difficulties Yes No
 16. Single parent family. Yes No
 17. No prenatal care before sixth month Yes No
Mental illness or disability in mother and/or father:
 18. Depression (including postpartum) Yes No
 19. Anxiety Disorder Yes No
 20. Schizophrenia or bipolar affective disorder Yes No
 21. Mentally disabled/challenged parent Yes No
 22. Antisocial behaviour. Yes No
 23. Current substance abuse by mother or father. Yes No
 24. Prolonged postpartum maternal separation (5 days or more with little or no contact). Yes No
 25. Assessed lack of bonding (e.g., minimal eye contact, touching) Yes No
 26. Social isolation (lack of social support and/or isolation related to culture, language or geography). Yes No
 27. Relationship distress. Yes No
 28. Current or history of violence between parenting partners. Yes No
 29. Harsh and/or inappropriate discipline practices (including other children). Yes No
 30. Existing file with local child protective services Yes No
 31. Mother's own history of child abuse/neglect Yes No
 32. Father/parenting partner's own history of child abuse/neglect. Yes No

D. ALCOHOL USE DURING PREGNANCY *(complete if answered "yes" to item B6)* *(See reverse for detailed instructions)*

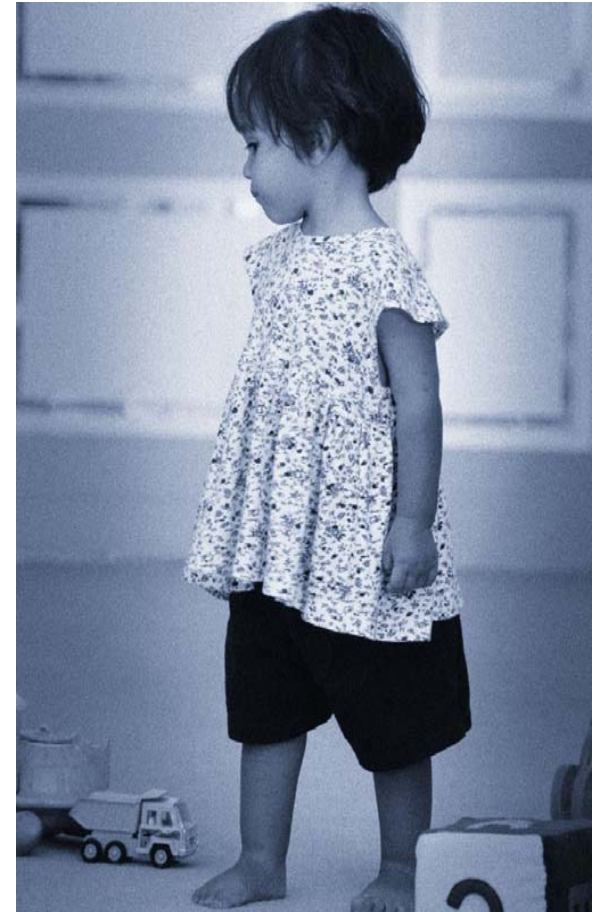
In this section, check the option that is most descriptive of alcohol use before mother knew she was pregnant:



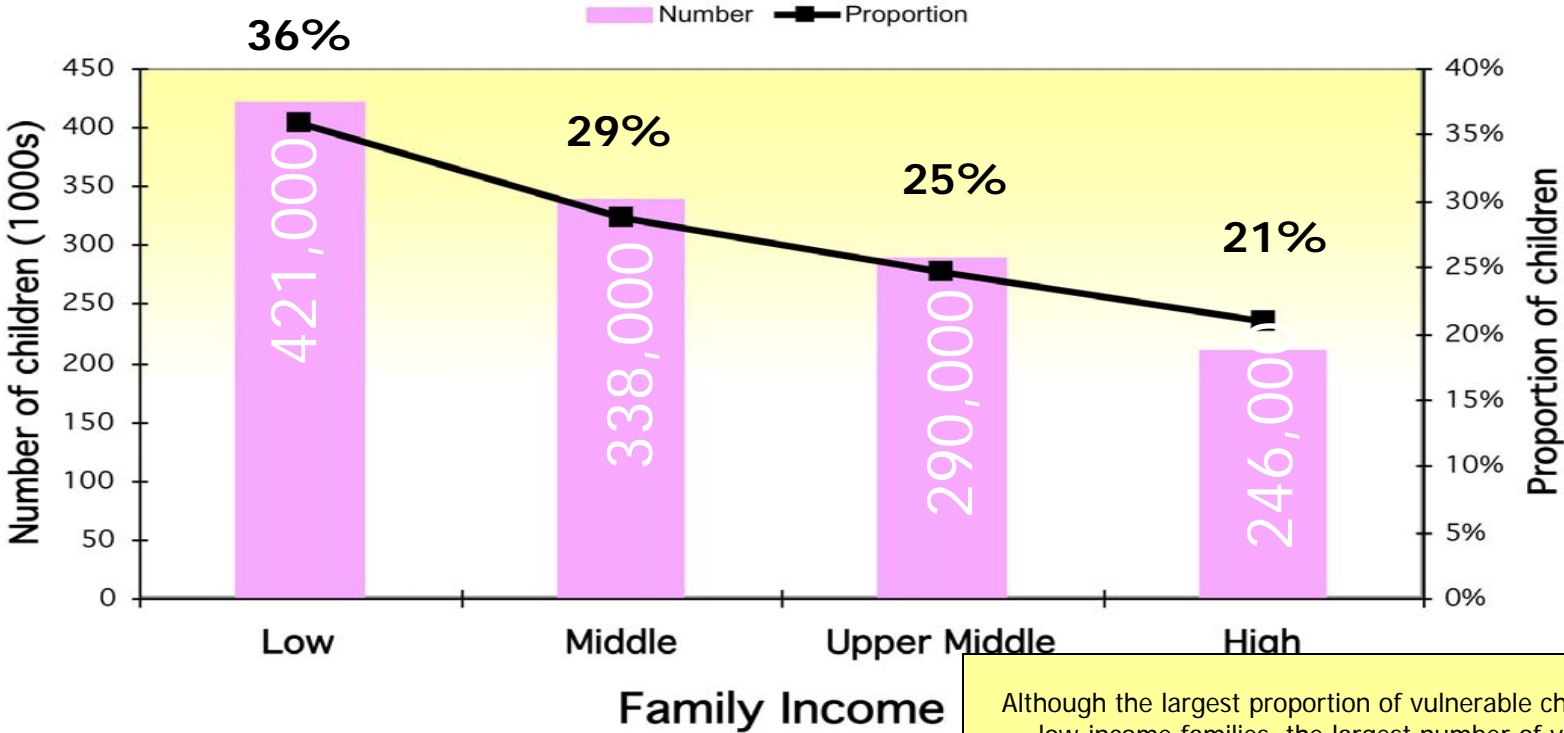
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Increased Awareness of Risk Factors Associated with Poor Child Outcomes

- *Maternal Age (and also maternal age at birth of first child)*
- *Socio-Economic (education, income, employment)*
- *Mental Health Problems (depression, substance abuse)*
- *Parental Attachment*
- *Marital Discord*
- *Social Isolation*



Family Income and Children's Vulnerability in Canada (ages 0-11), 1998/99



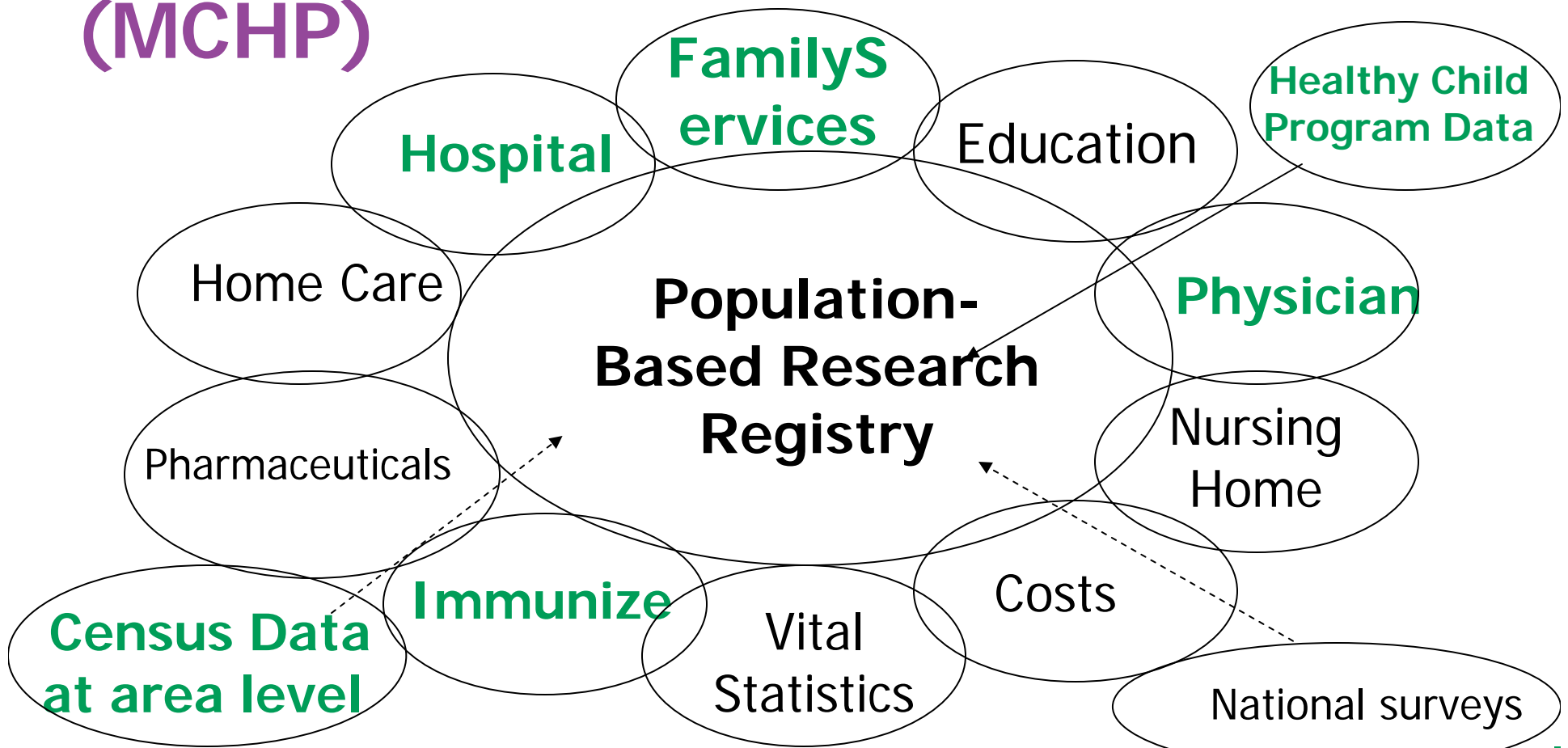
Source: National Longitudinal Survey of Children and Youth, 1998/99
 Human Resources Development Canada - Applied Research Branch

Although the largest proportion of vulnerable children are in low-income families, the largest number of vulnerable (838,000 of 1.26 million) children are from middle- to high-income families. Providing programs only to low-income families would miss 67% of children that need them.



Putting children and families first

Manitoba Centre for Health Policy (MCHP)



Key health databases start in 1970

Manitoba Centre for Health Policy Families First Evaluation Report

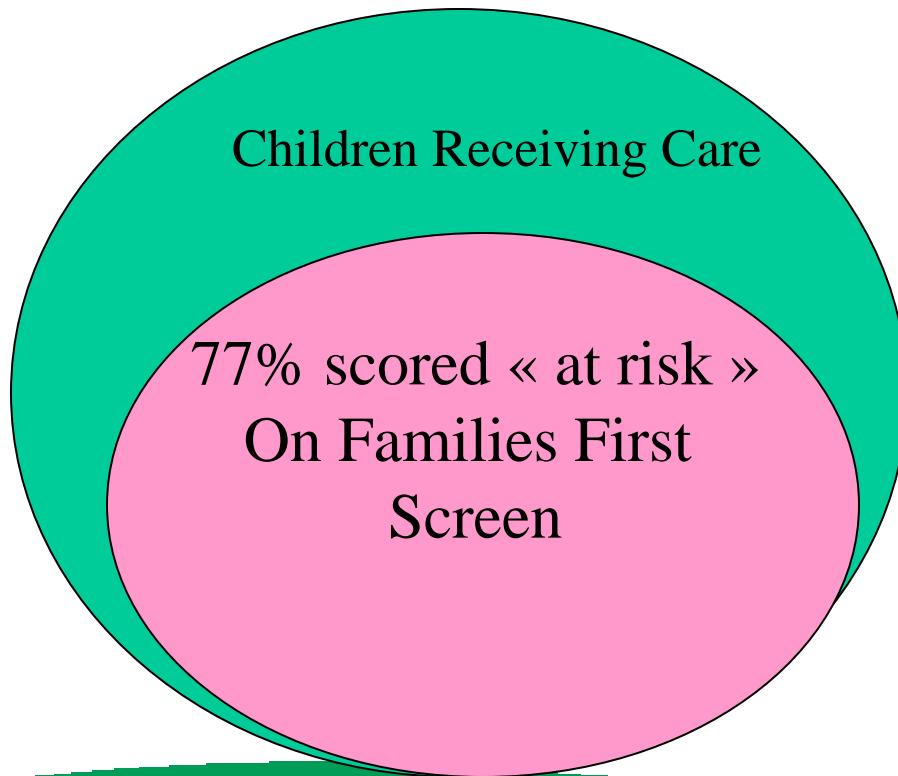
(using 2000-2002 data)

- *Of all babies born in hospital, 76% had been screened.*
- *Families not screened were more vulnerable than families that were screened.*
- *The agreement between items on the Families First screening and administrative data was mostly high.*
- *Sensitivity – 77%*
- *Specificity – 83%*

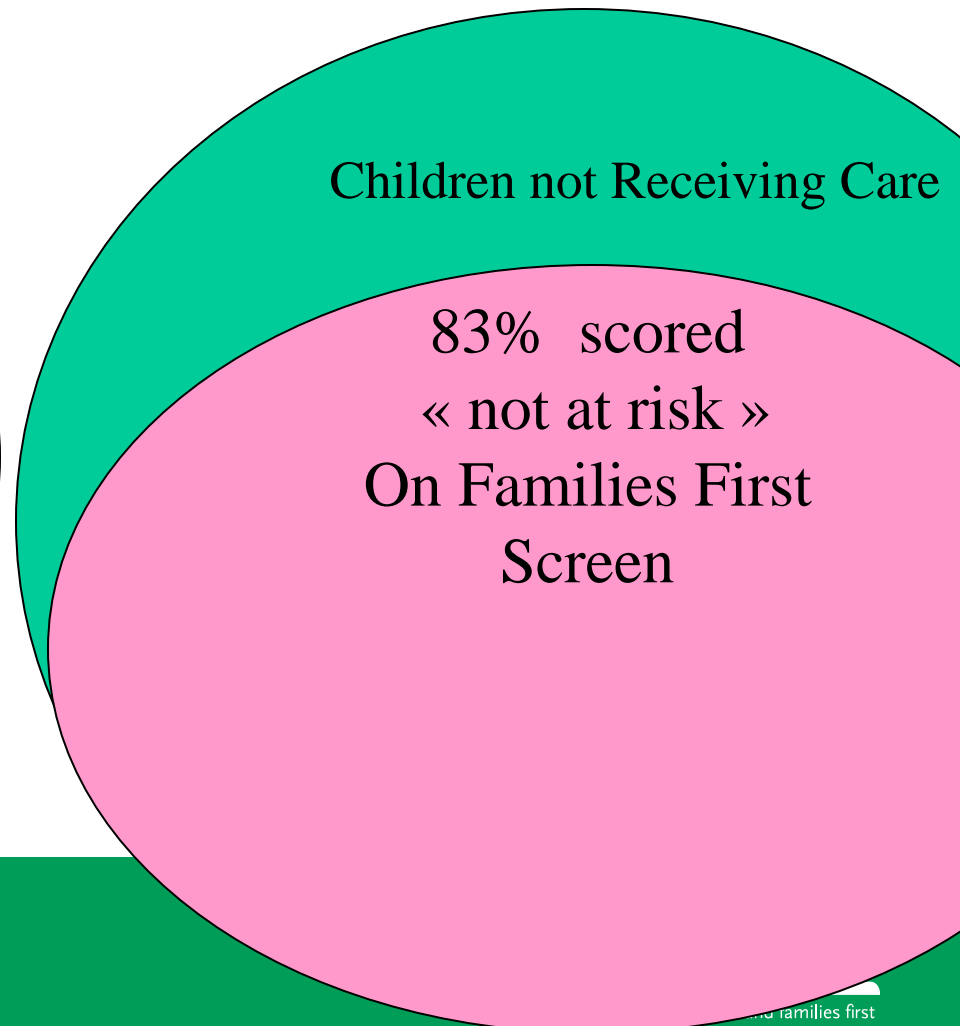
Note: Screening is now up to 85% of all births

Illustration of Sensitivity and Specificity

SENSITIVITY



SPECIFICITY



“Empirical evidence can tell us HOW to do an intervention...”

The HOW will be a variety of strategies determined by the specific needs and characteristics of the population being served and community in which they live.”

Daro, D. (2005) Letter to the Editor, Child Abuse and Neglect, 29



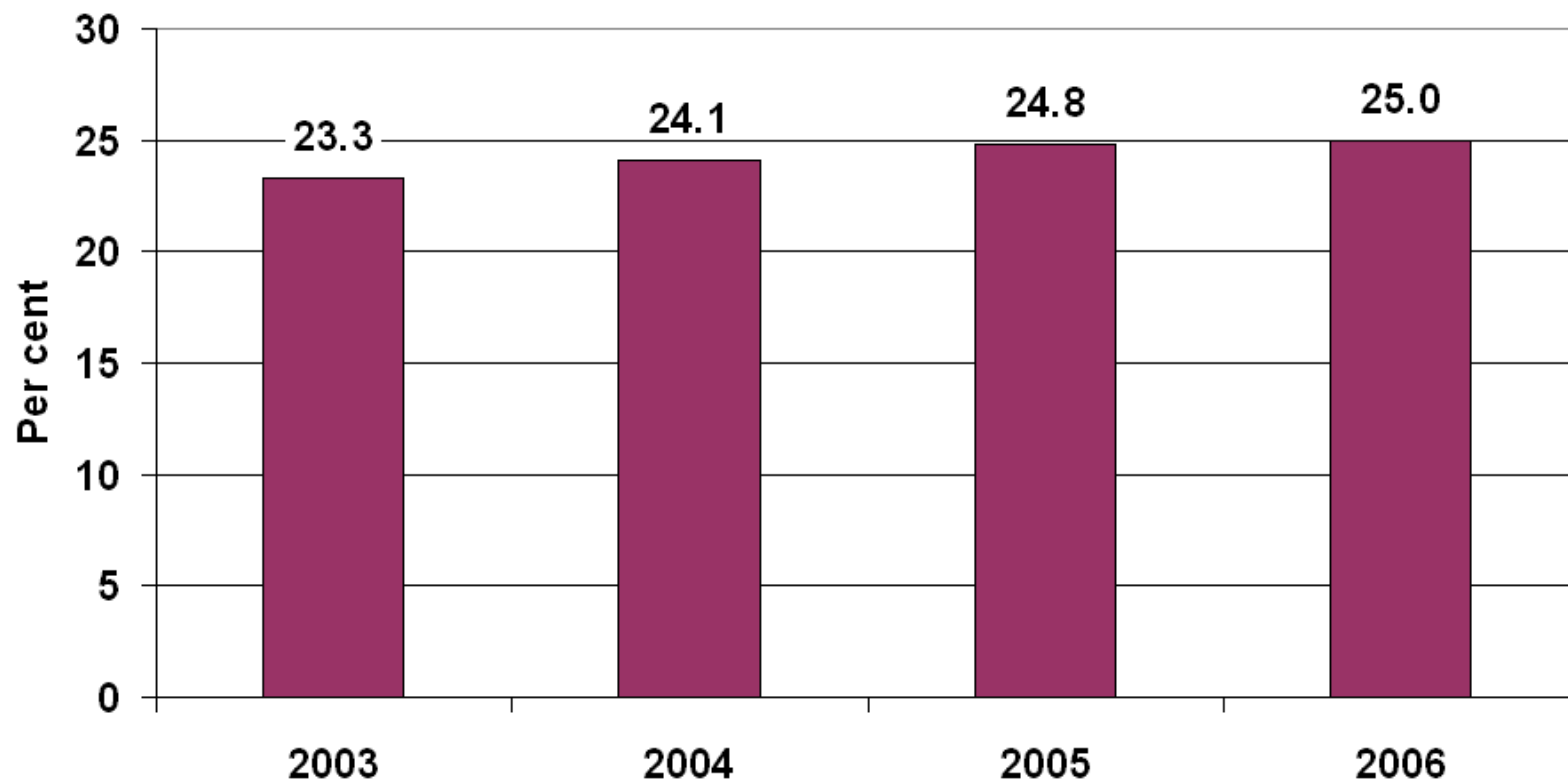
Having 3 or more Risk Factors

With every risk factor in the child's environment there is greater risk of poor child development

« There is no point beyond which services for children are hopeless... every risk factor we can reduce matters » *Appleyard et al. 2008*



Prevalence Rates of 3 or more Risk Factors for Manitoba (2003-2006)



Prevalence Rates of 3 or more Risk Factors by Regional Health Authority (RHA)

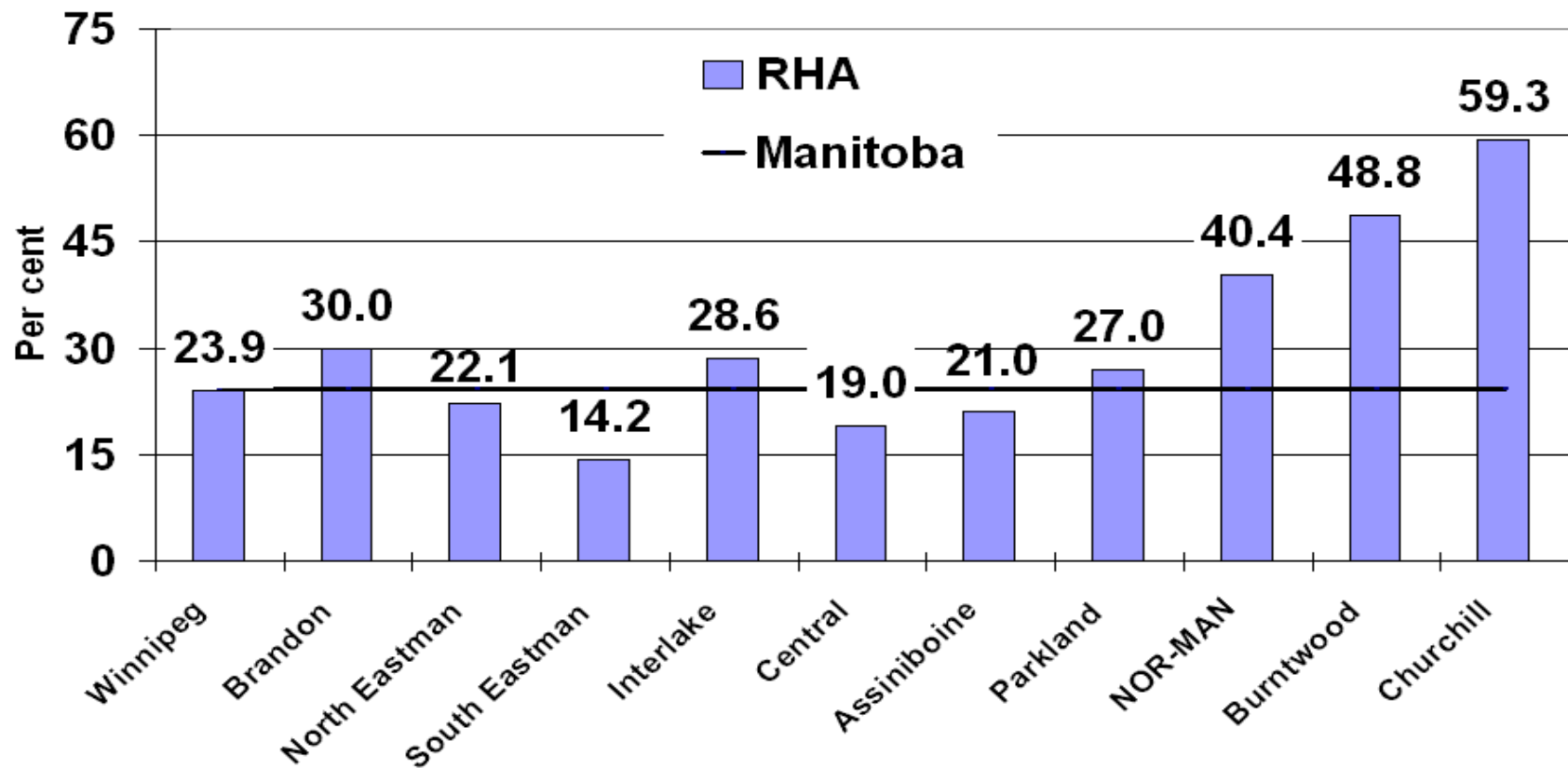
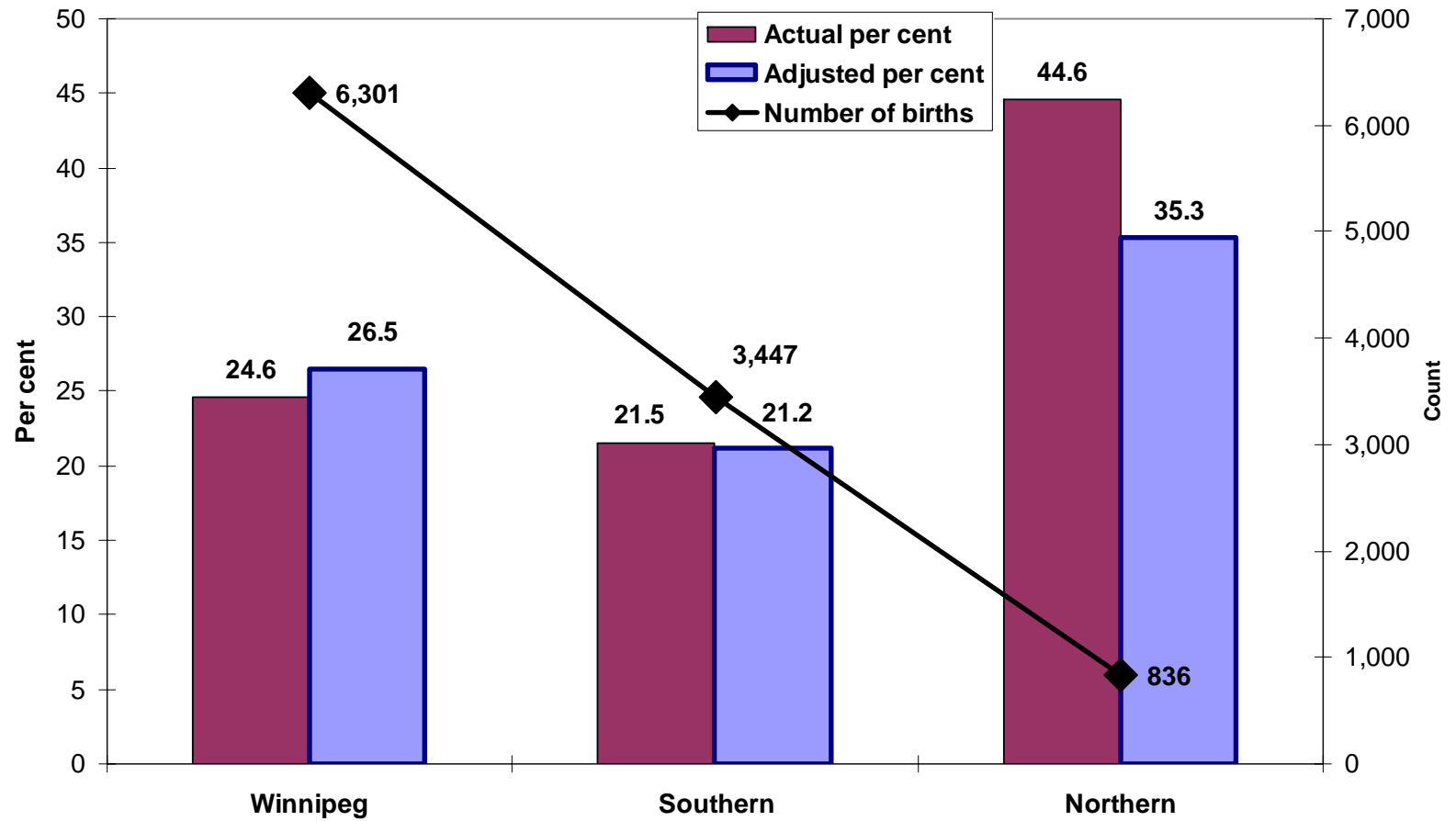


Figure 1. Prevalence Rates of Three or More Risk Factors 2003-2006
By Region



Maternal Smoking During Pregnancy



Prevalence Rates of Smoking During Pregnancy for Manitoba (2003-2006)

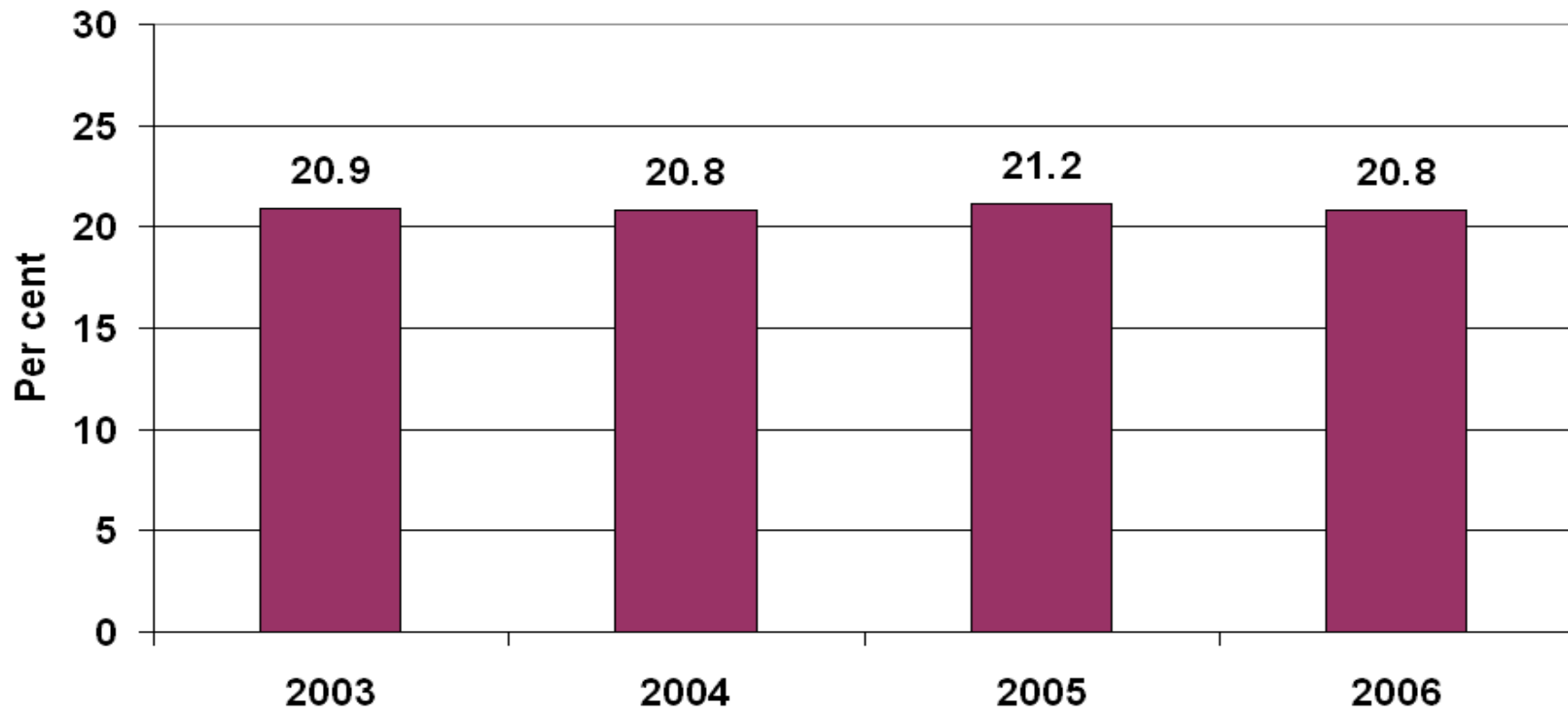
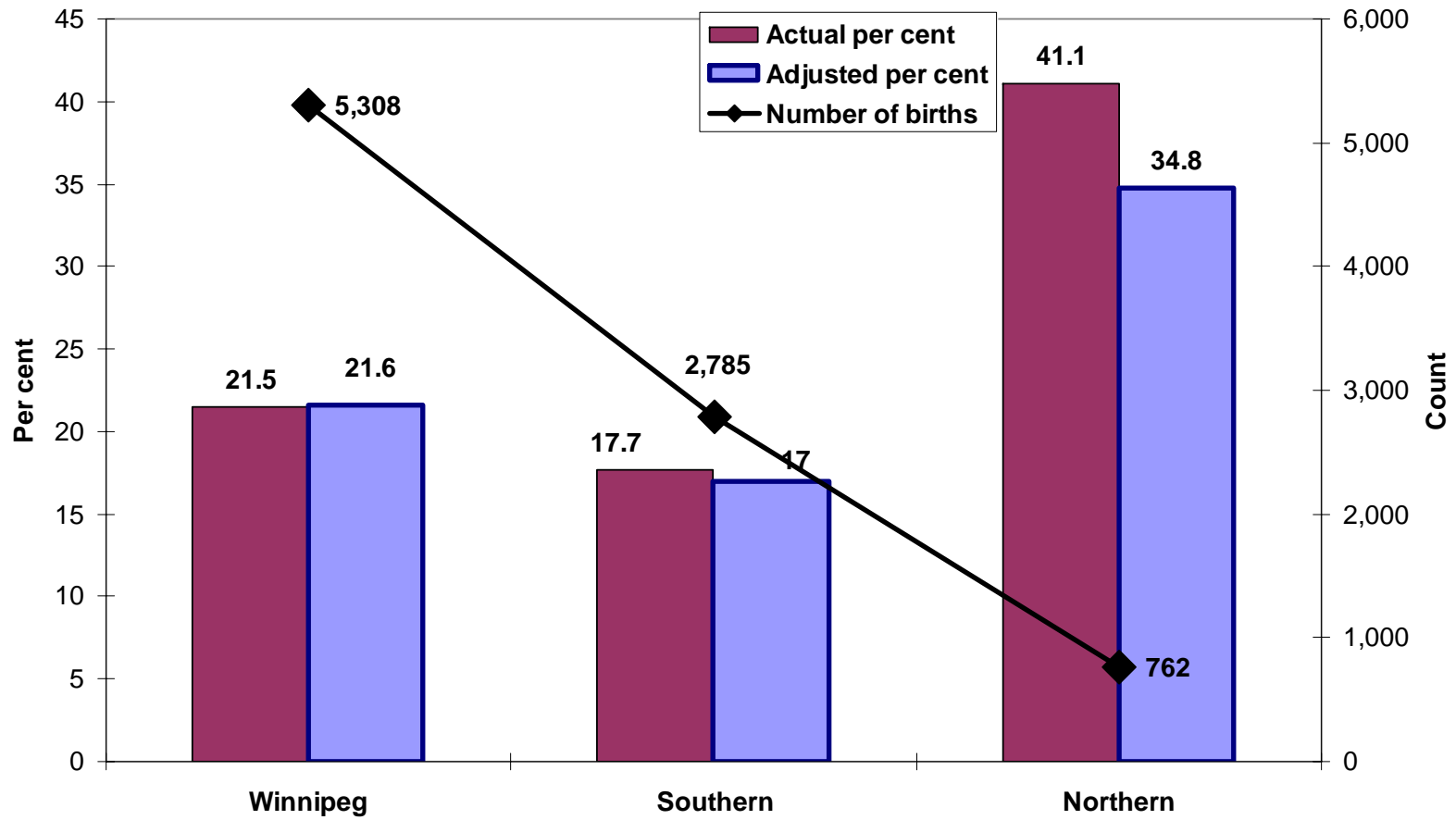



Figure 3. Prevalence Rates of Smoking During Pregnancy 2003-2006
By Region

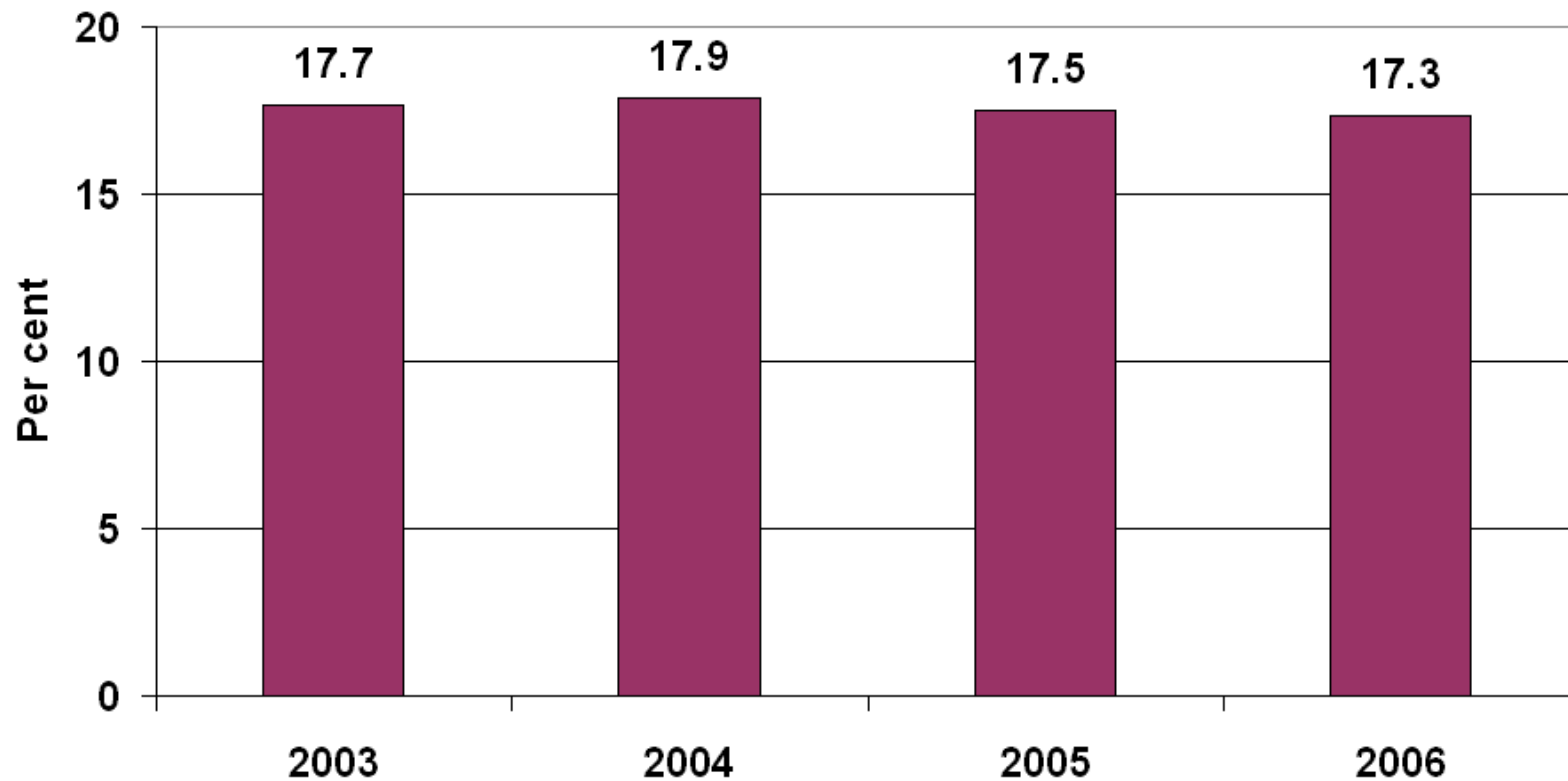




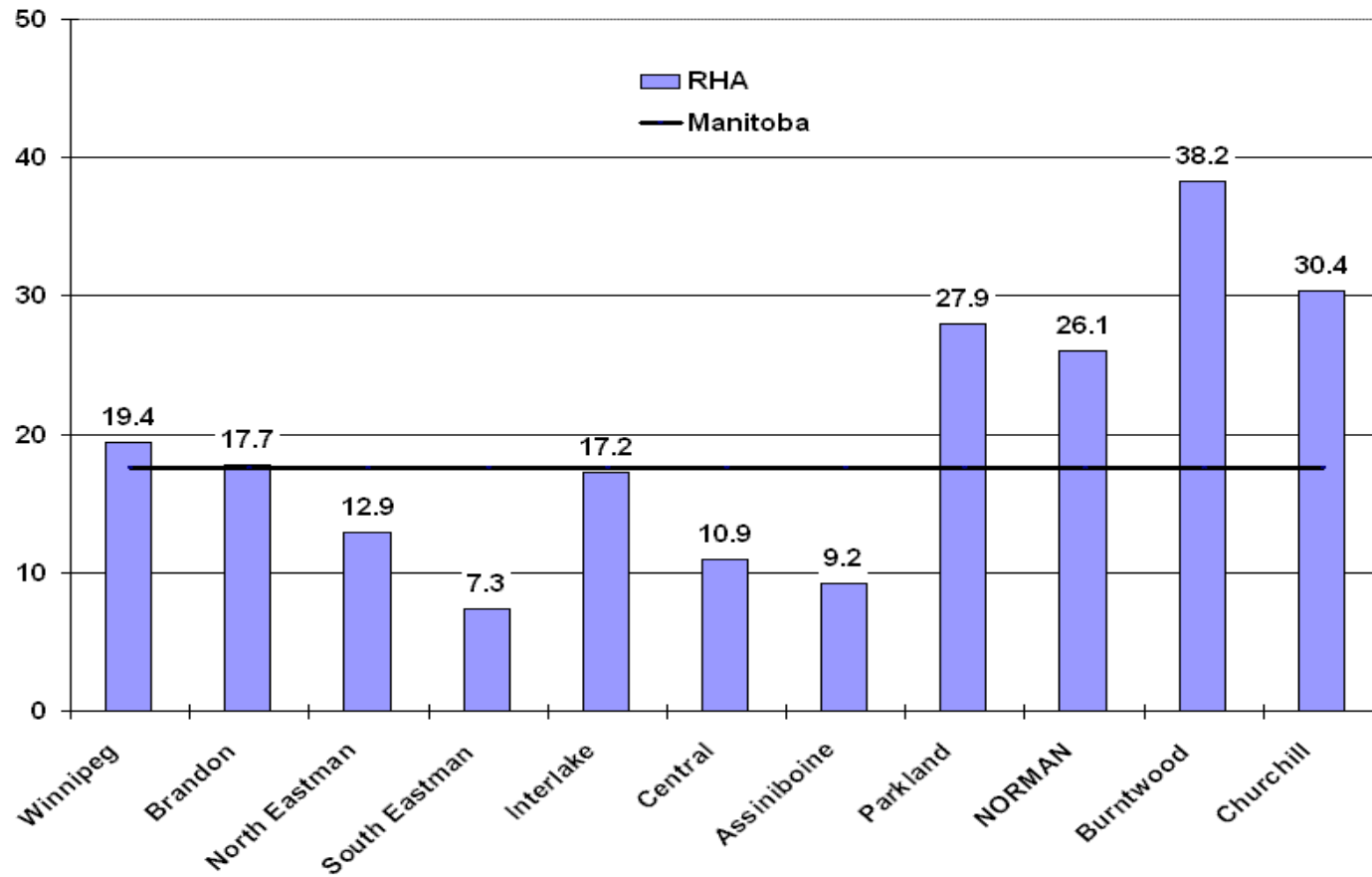
Social Assistance or Financial Difficulties

- On social assistance or income support.
 - Financial difficulties are defined as having insufficient monies available to meet basic needs after meeting financial commitments.
- 

Prevalence Rates of Social Assistance or Financial Difficulties for Manitoba (2003-2006)



Prevalence Rates of Social Assistance or Financial Difficulties by RHA



Teenage Pregnancy

Mother was less than 18 years old
at birth of child

Prevalence Rates Teenage Pregnancy for Manitoba (2003-2006)

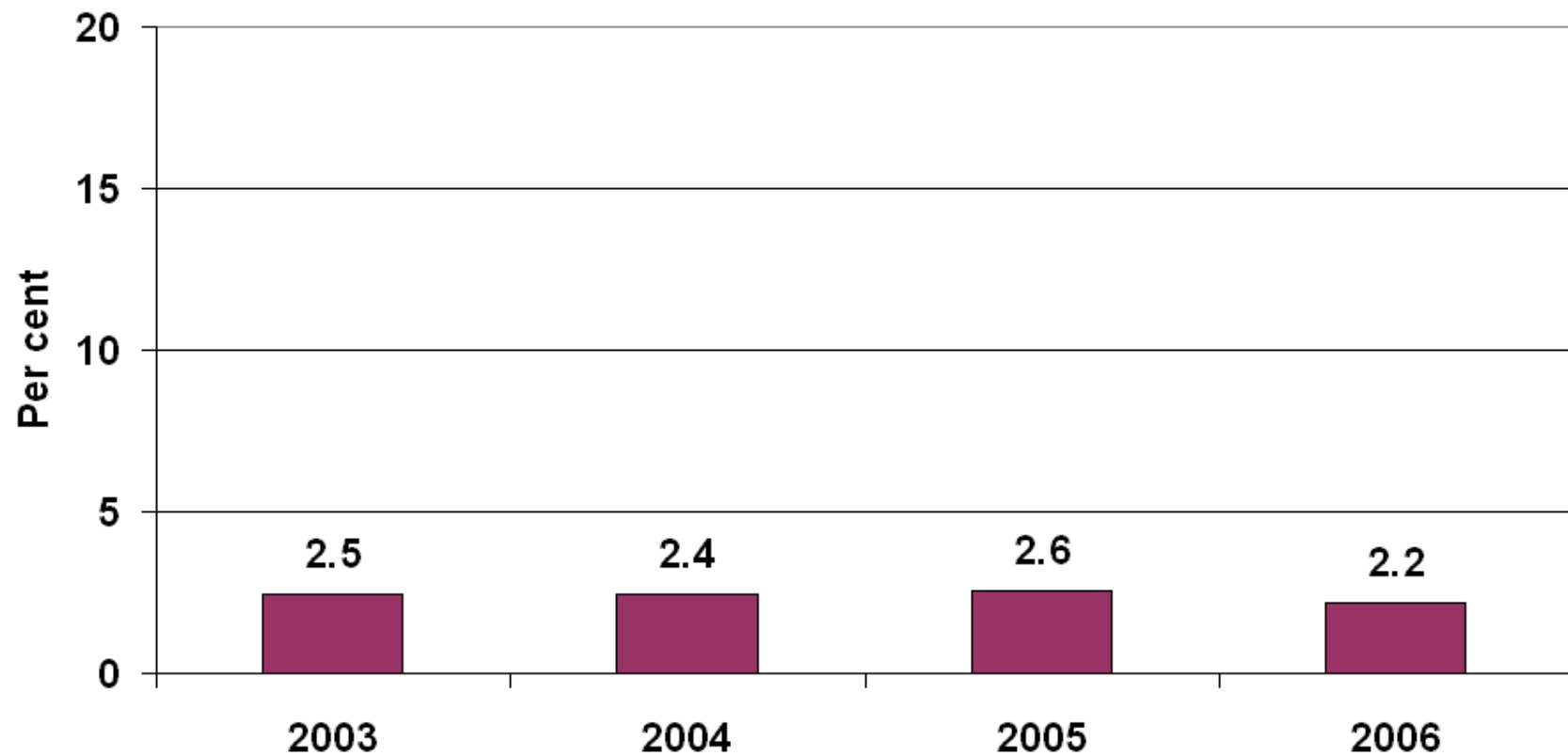
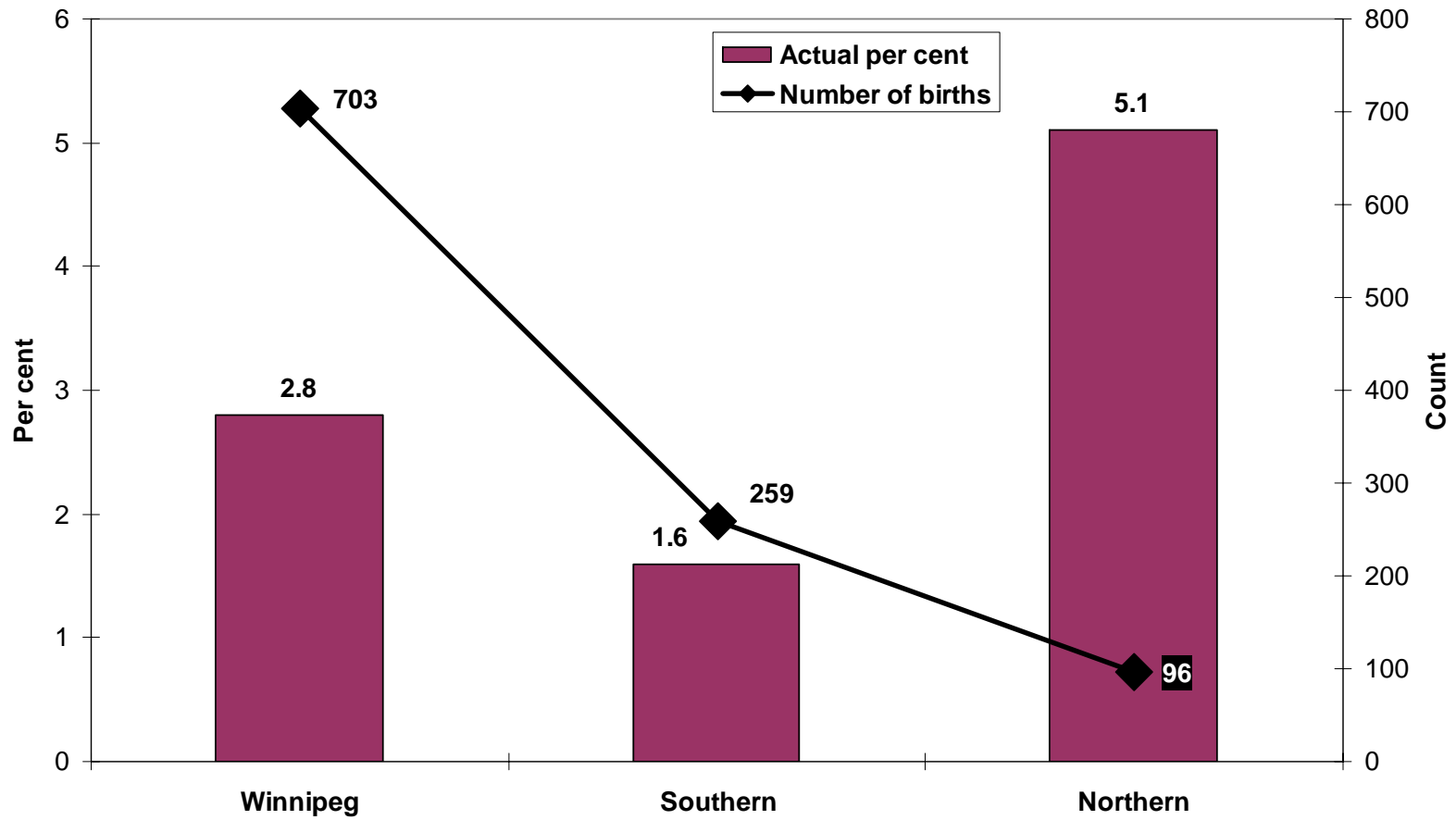


Figure 4. Prevalence Rates of Teenage Mothers 2003-2006
By Region



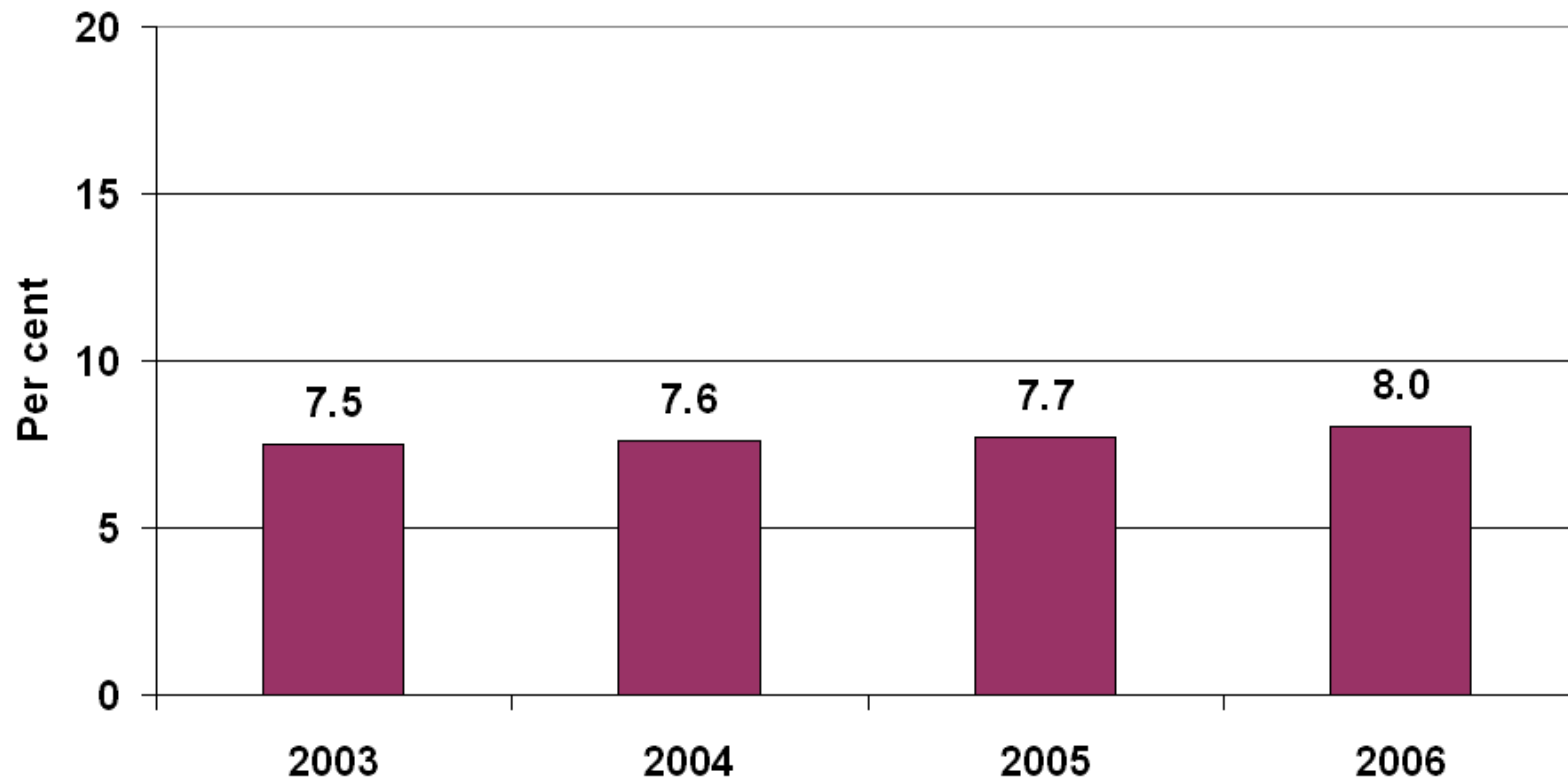


Premature Births

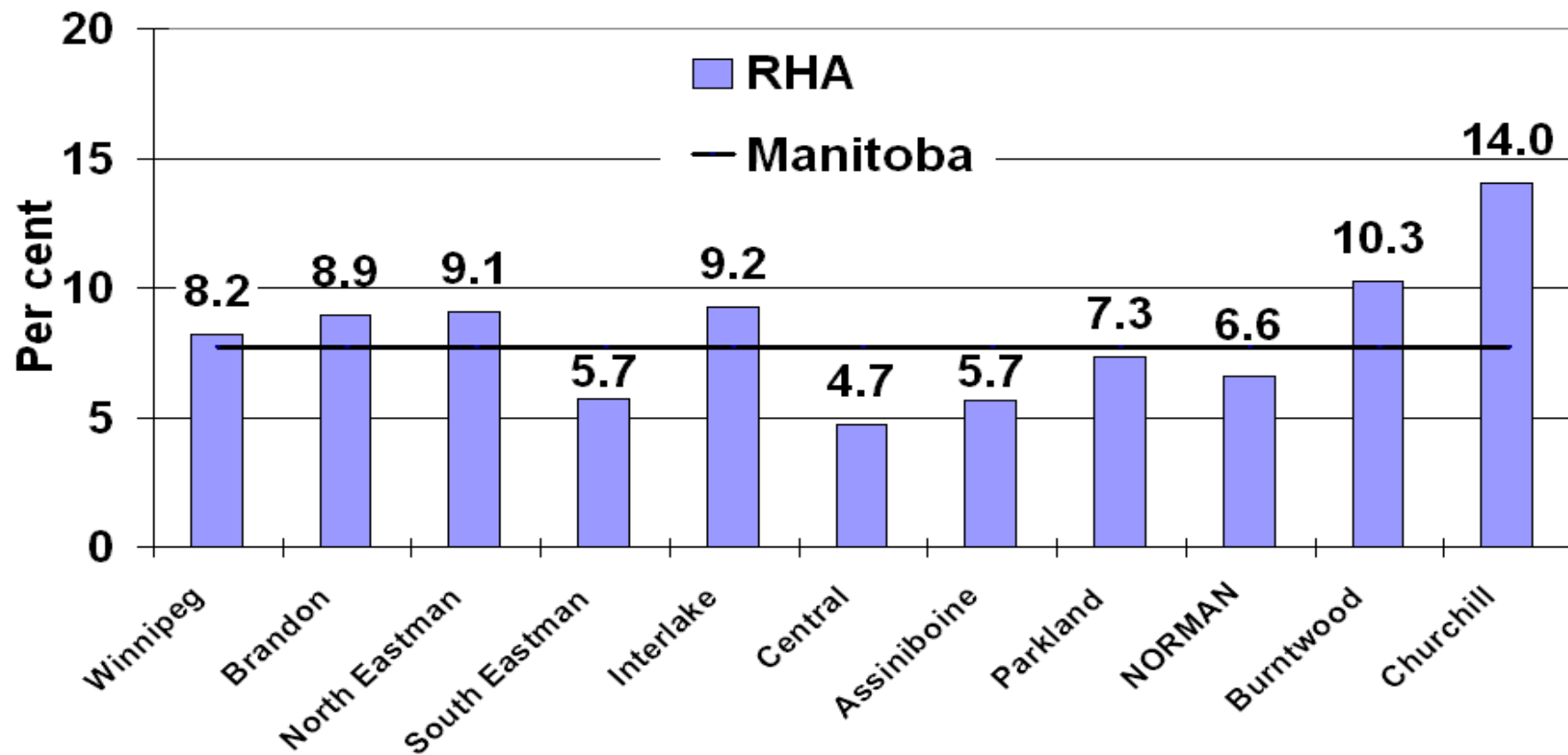
- Child was born at less than 37 weeks gestation.



Prevalence Rates of Premature Births for Manitoba 2003-2006



Prevalence Rates of Premature Births by RHA



Maternal Depression & Anxiety



- Public Health Nurse has knowledge of professional diagnosis.
- This is sometimes determined by noting medication use.

Prevalence Rates of Maternal Depression and Anxiety for Manitoba (2003-2006)

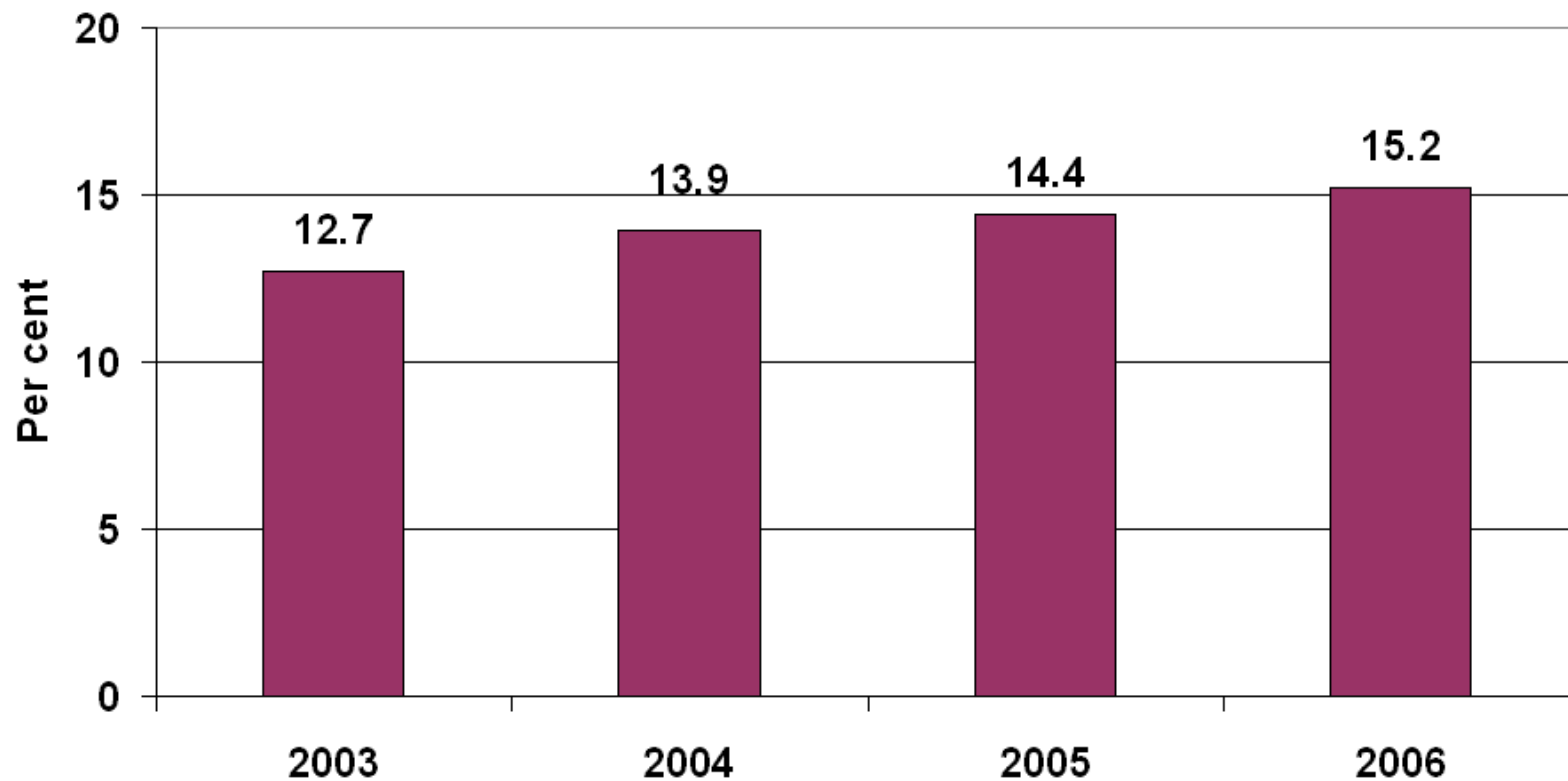
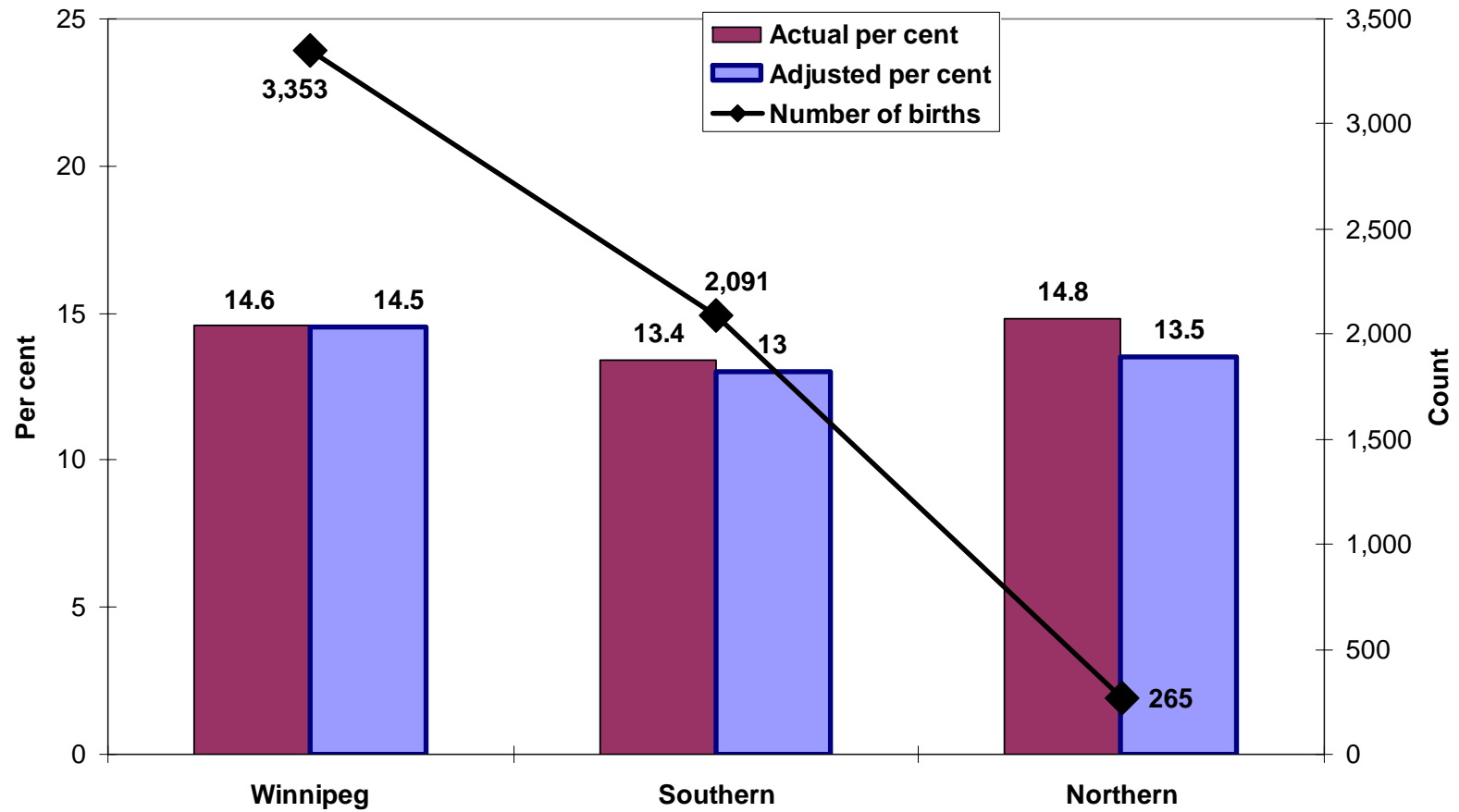



Figure 7. Prevalence Rates of Maternal Depression & Anxiety 2003-2006
By Region

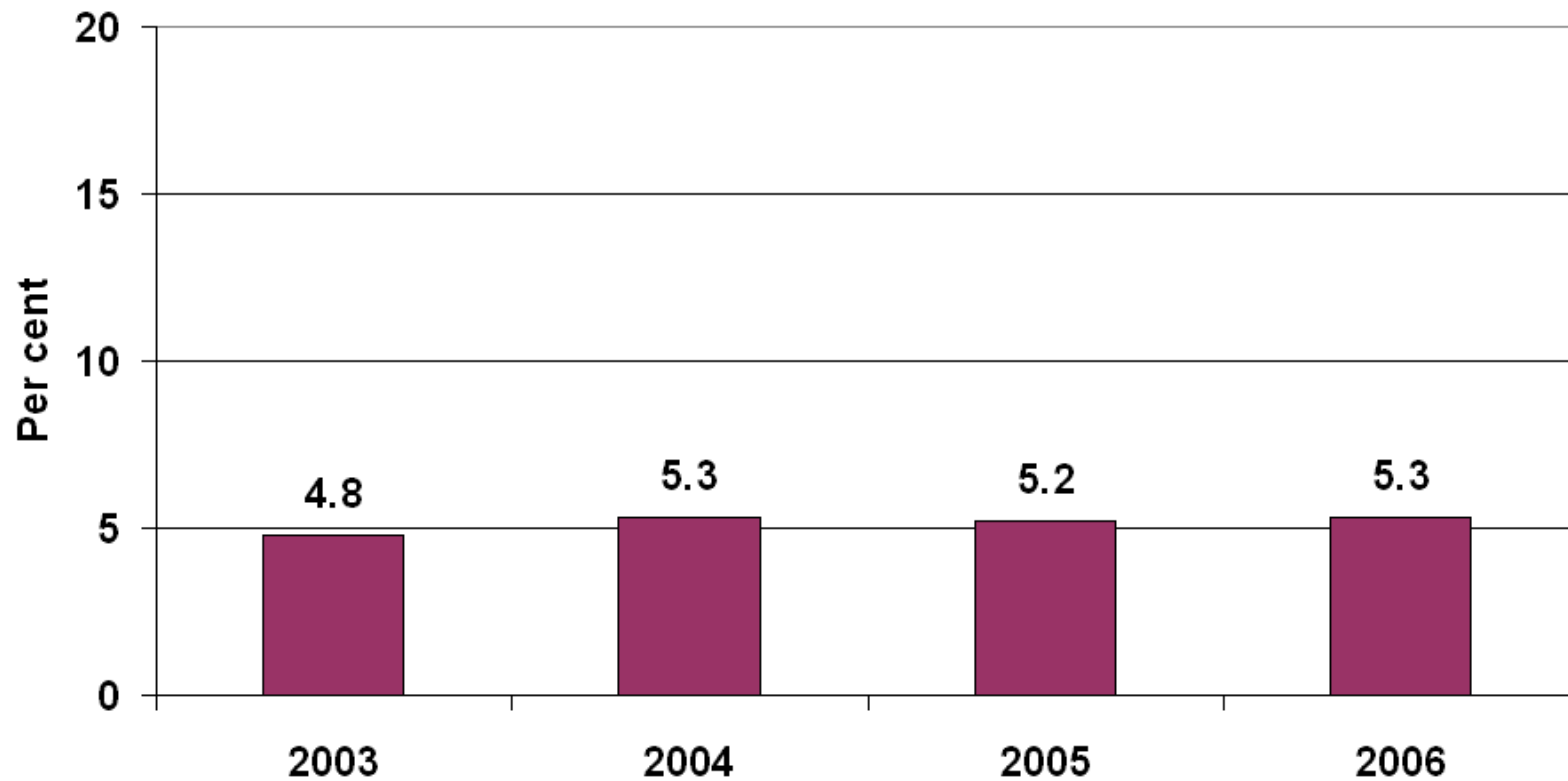




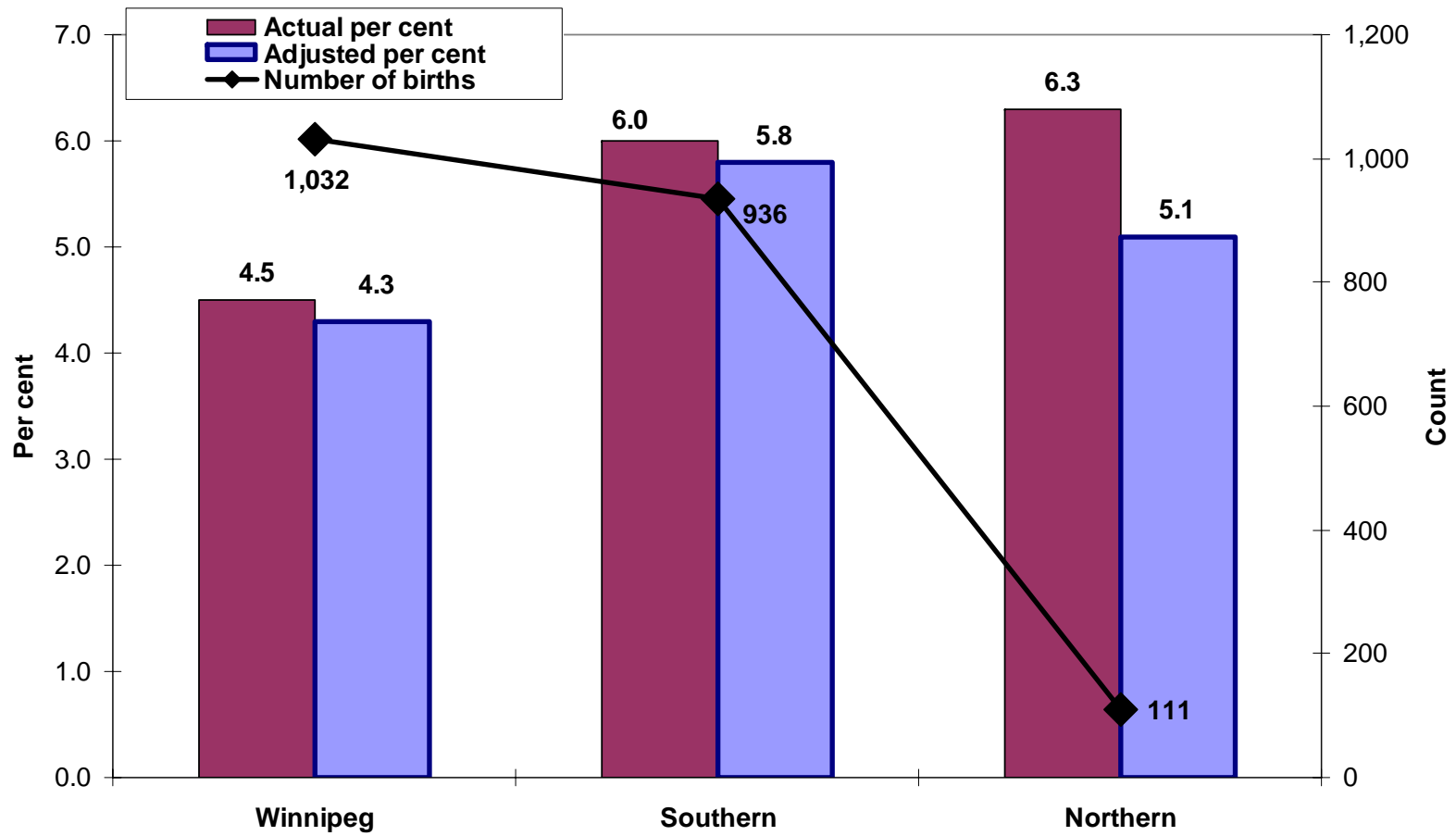
Family Social Isolation

- Mother says she has no support.
 - Isolation can also be due to culture, language or geography.
- 

Prevalence Rates of Social Isolation for Manitoba (2003-2006)



**Figure 8. Prevalence Rates of Maternal Social Isolation 2003-2006
By Region**





Alcohol Use During Pregnancy

Every mother is asked about her alcohol use during pregnancy.



Prevalence Rates of Alcohol Use During Pregnancy for Manitoba 2003-2006

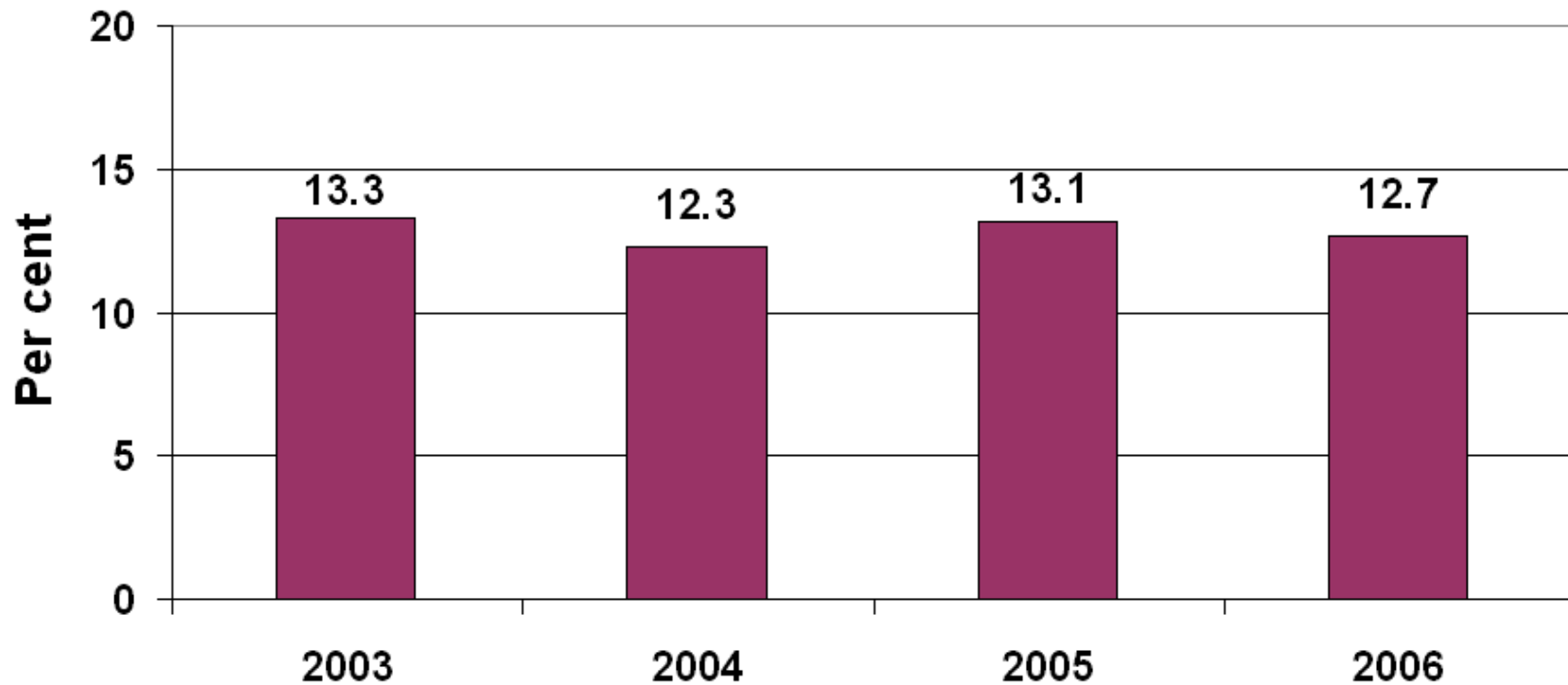
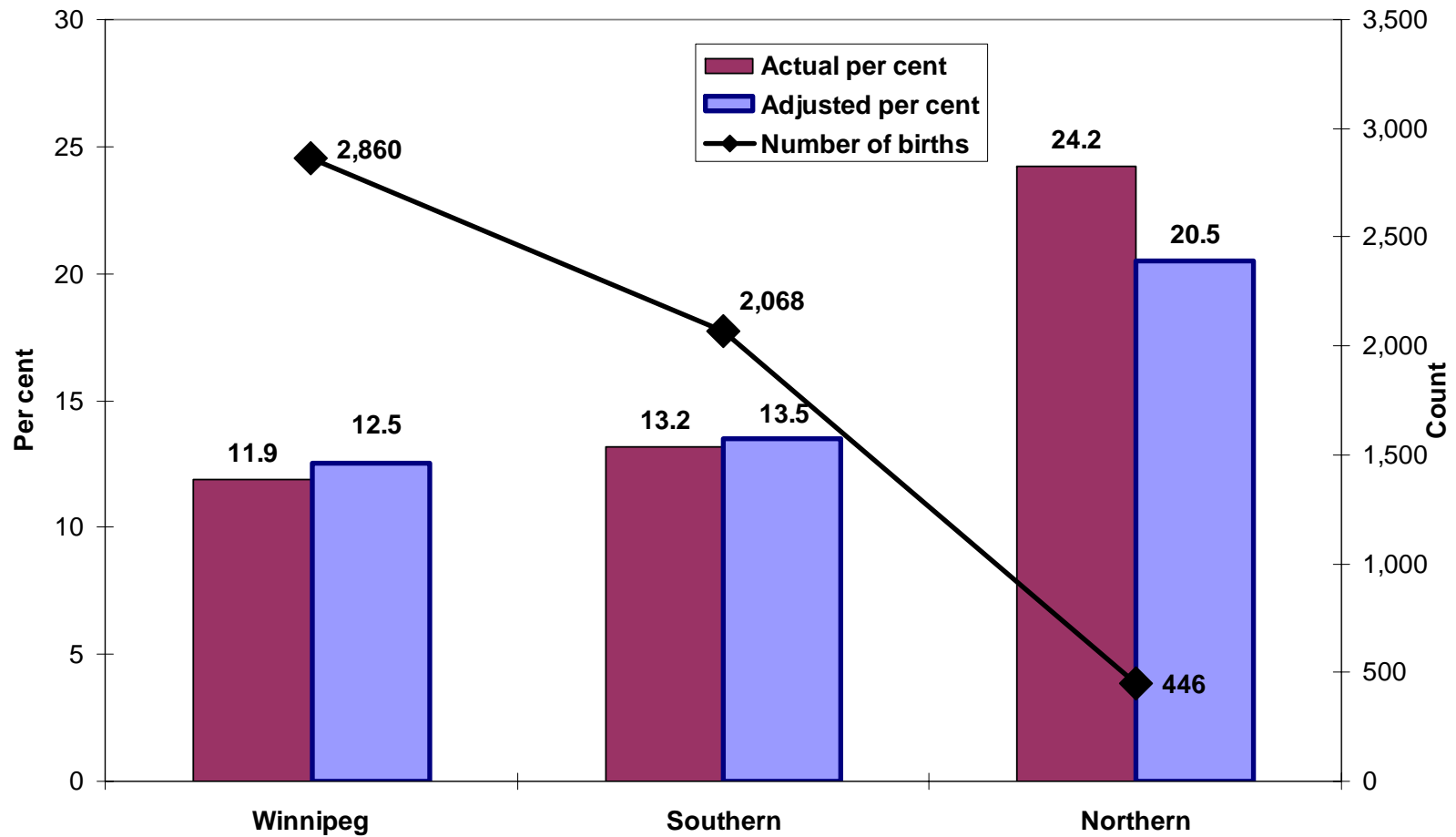


Figure 2. Prevalence Rates of Alcohol Use During Pregnancy 2003-2006
By Region

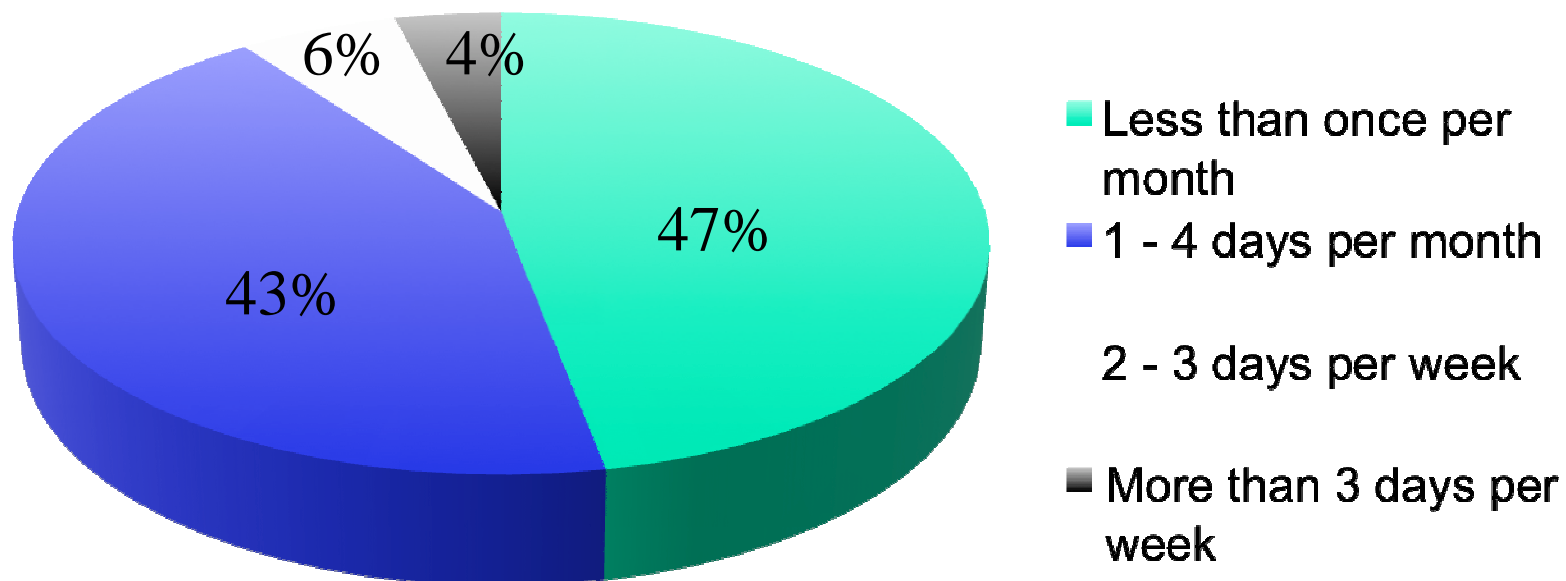


Screen Questions

- Any alcohol use by mother during pregnancy (yes/no)
- If yes, before she knew she was pregnant:
 - How often did mother consume alcohol?
 - Less than once a month
 - 1-4 days/month
 - 2-3 days/week
 - More than 3 days/week
 - How much alcohol would she consume in one sitting?
 - 1-2 drinks or less
 - 3-4 drinks
 - 5 or more drinks
 - Did she ever drink more than 5 drinks in one sitting? (yes/no)
 - How often did binge drinking occur?
- Once she discovered her pregnancy, did how much or how often she consumed alcohol change?
 - No
 - Yes, reduced use
 - Yes, increased use
 - Yes, stopped altogether

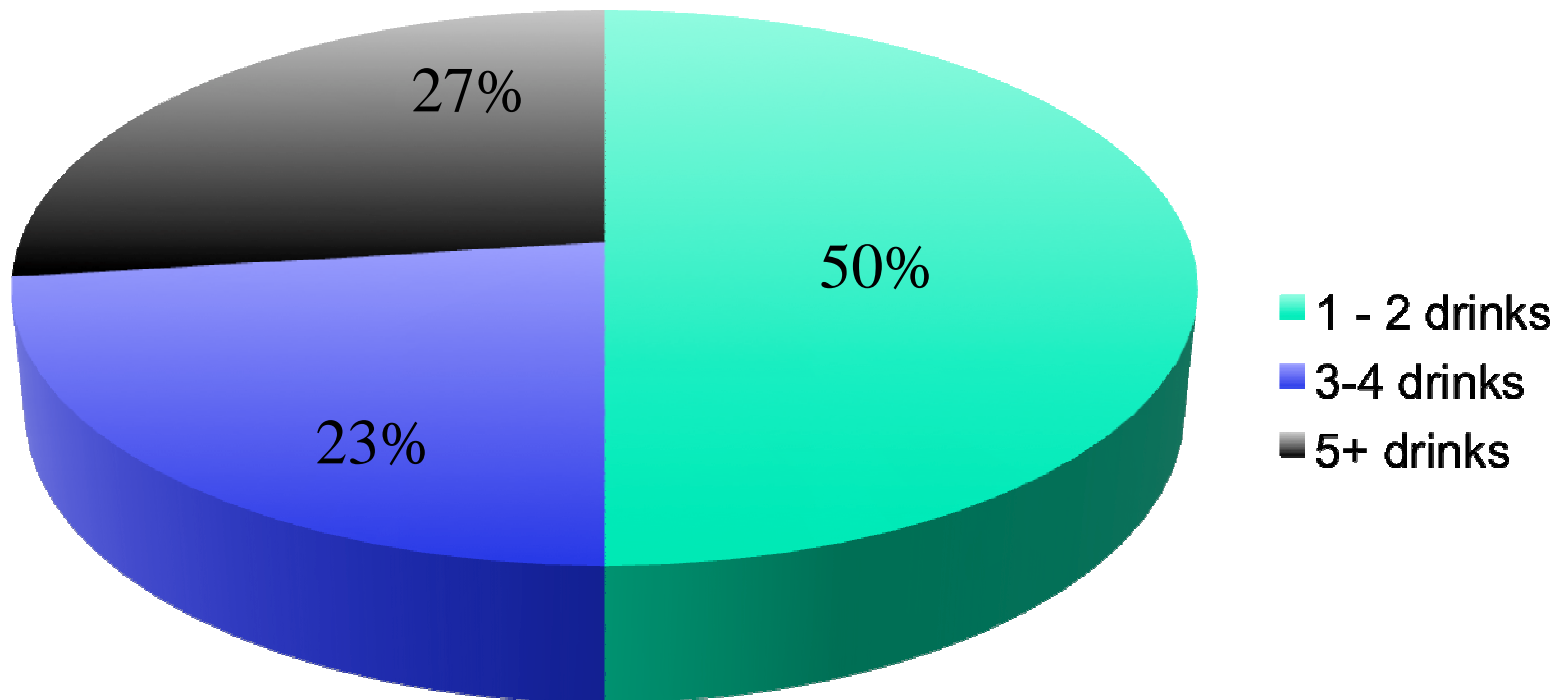
Frequency of alcohol use

Among women who reported using alcohol during prenatal period



Alcohol consumed at one sitting

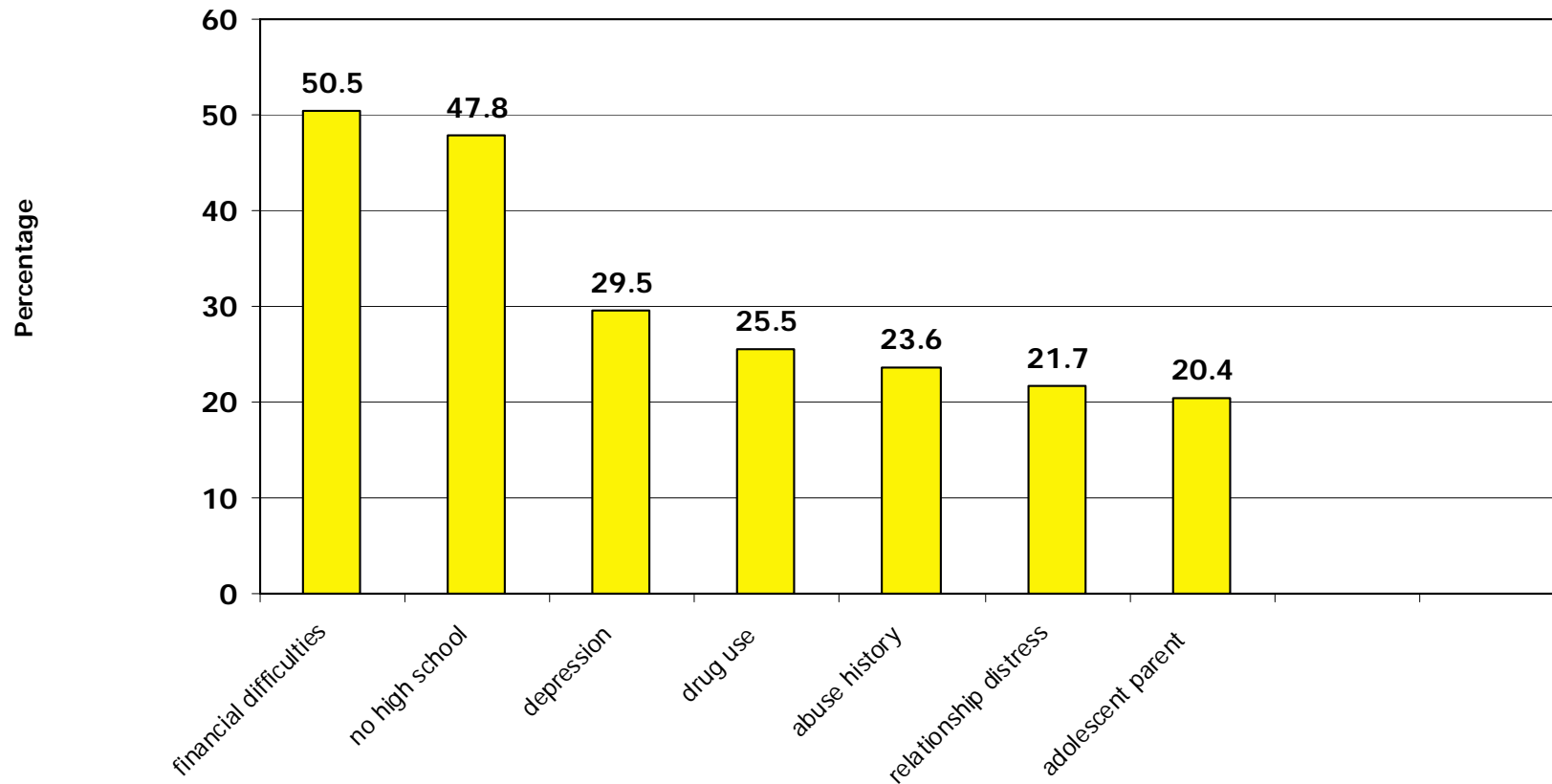
Among women who reported using alcohol during prenatal period



*Among women who reported using alcohol
during prenatal period*

- Upon discovery of pregnancy:
- 82.1% stopped alcohol use
 - 9.1% reduced their use
 - 8.5% continued using at the same level
 - 2% increased use

Summary: risk factors experienced by “high-risk” users



Strengths

- Screen is administered by public health nurses
 - Viewed as trusted professionals
 - Have professional training on discussing sensitive topics with women
 - Receive ongoing training in the administration of the alcohol use questions
- Screen universally applied
- Screening process is accepted and embedding in Manitoba nursing practice (eg. There is buy-in)
- Response rate to the alcohol use questions of those screened is 94% - excellent!
- Ability to link with other risk factor data (eg: alcohol use)

Limitations

- Not all women are screened. Those missed are:
 - women living in First Nation reserve communities
 - extremely vulnerable women
- Some questions have higher missing values than others. Some nurses remain uncomfortable discussing some topics, other pressing issues may take precedence during the visit, other people in the home may limit the appropriateness of some questions (eg. Intimate partner violence)
- The detailed alcohol questions were revised in 2007, so results are still preliminary

Conclusions

- The screen data can assist with policy, programming and planning purposes.
- The screening process itself is of benefit to both women and children.
- Provides support for ECD strategy
 - 24% of families with newborns have many risk factors
- Stability of prevalence rates
- Possible prenatal strategies
 - Alcohol and smoking during pregnancy
- Mental health strategies
 - Maternal depression and anxiety
 - Relationship distress