

**Kittitas County Immunization Survey:  
A Birth Certificate Followback Analysis of Immunization  
Rates for 19-35 Month Old Children**

**Final Report  
February, 2003**

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# Kittitas County Immunization Survey

## Executive Summary

### February, 2003

In mid 2002, the Kittitas County Health Department received funding from the Washington State Department of Health to conduct an immunization survey of children 1 ½ to 3 years old (19-35 months of age) born to residents of Kittitas County. The purpose of the survey was to determine their immunization status and identify potential problems or barriers to obtaining immunizations.

Interviewers surveyed caregivers of 139 children from a random sample of 188 children ( a response rate of 74%) to determine their immunization status as well as the immunization experience and health care services. Kittitas County also added five questions to ascertain breastfeeding experience.

#### The major findings of the study are:

- Kittitas County is below the Healthy People 2010 immunization target of 90% and below neighboring Yakima County for the following immunizations;

	<b>Kittitas</b>	<b>Yakima</b>
<b>DtaP</b> (diphtheria/tetanus/pertussis)	81.3%	85.9%
<b>Polio</b>	88.5%	95.5%
<b>Hepatitis B</b>	85.6%	98.7%

- Kittitas County met the Healthy People 2010 immunization target of 90% for the following immunizations;

<b>MMR</b> (measles/mumps/rubella)	92.8%
<b>HIB</b> (hemophilus influenza type b)	90.7 %

- Seventy -four percent of children in Kittitas County age 1 ½ to 3 years of age were adequately immunized in this study. The Healthy People 2010 target is 80%.
- When analyzing immunizations given at the appropriate ACIP recommended intervals, Kittitas County drops to a 64% valid shot rate (Table C-2)
- Children who have moved more than two times since birth or reported themselves as Hispanic during the survey were more likely to have incomplete immunizations.
- Seventy percent of caregivers interviewed breastfed for at least seven weeks. Forty-four percent breastfed for more than six months. These results surpass the national breastfeeding statistics for 1998 and almost meet the Healthy People 2010 targets; however it falls significantly under the American Academy of Pediatrics recommendation of breastfeeding to one year of age

## Recommendations:

- Share the results of the survey with immunization providers to identify opportunities to increase immunization rates for all shots, (for instance reminder cards and/or phone calls) with particular attention to the DtaP vaccine intervals and to criteria used to exclude a child from immunizations (see table D-2)
- Evaluate the possibility of initiating the Hepatitis B series at the time of birth. The majority of the births to women residing in Kittitas County take place at Kittitas Valley Community Hospital (KVCH). KVCH currently is not giving the first Hepatitis B shot prior to discharge from the hospital.
- Work with local providers to target the Hispanic population and to provide education re the importance of immunization intervals to young families who may be likely to move.
- Work with local providers to increase efforts to promote breastfeeding and increase duration in accordance with the AAP recommendation of 1 year.

(From Healthy People 2010 recommendations: Education of new mothers and their partners, changes in routine maternity ward practices, social support, including support from employers and media portrayal of breastfeeding as the normal method of infant feeding are needed to increase breastfeeding rates.)

# **Kittitas County Immunization Survey Final Report February, 2003**

## **I. Background**

In mid 2002, the Kittitas County Health Department received funding from the Washington State Department of Health to conduct an immunization survey of children 1 ½ to 3 years old (19-35 months of age) born residents of Kittitas County. The purpose of the survey was to determine their immunization status and identify potential problems or barriers to obtaining immunizations. The survey followed guidelines set forth by the Washington State Department of Health and the Centers for Disease Control and Prevention.

## **II. Methods /Surveying Process**

The Kittitas County Immunization Survey project used the Birth Certificate Follow-Back (BCFB) approach. The Washington State Department of Health (WSDOH) provided birth certificate information for a random sample of 188 infants born to mother's residing in Kittitas County between September 1, 1999 and December 31, 2001. The general public was educated through various public awareness campaigns about the immunization study and its purpose. Kittitas County Health Department staff initially mailed out postcards to the 188 families explaining the immunization study. Telephone calls were made after the postcards were mailed out. Approximately 85% of the surveys were completed over the phone. If telephone contact was not made a home visit was conducted.

Three part-time contracted staff conducted surveys. They conducted all of the English speaking interviews. A bilingual interviewer, who was a Women, Infant and Children (WIC) certifier, conducted the surveys for the monolingual Spanish families. All surveyors were trained by WSDOH staff to increase consistency.

A standardized survey tool was developed following CDC and WSDOH guidelines. (See Attachment A). Kittitas County specific questions were added to gain information on breastfeeding practices in Kittitas County. This survey was the ideal time to gather that additional information.

Parental consent was obtained verbally at the end of the interview in order to review Kittitas County physician/clinic office medical records to verify the immunization record. Written parental permission was obtained when it was necessary to request immunization records from out-of-county providers. Only those surveys with medical provider verification were used.

The survey participants received a children’s book and food coupon as an incentive to participate. Twenty participants were also randomly selected to receive a \$50.00 gift card from Fred Meyer.

Table II-1 gives the number of surveys completed. Seventy-four percent of the WSDOH birth certificate sample was located, completed the survey and had verification of immunizations.

**Table II-1: Outcome of Kittitas County sample**

<b>Survey Completion Status</b>	<b>Number</b>	<b>Percent</b>
Interview and Verification Completed	139	73.9%
Interview completed no verification	5	2.7%
Did not locate	39	20.7%
Refused	5	2.7%
<b>TOTAL</b>	<b>188</b>	<b>100%</b>

Over ninety percent of the respondents in the survey were the children’s mothers. As Table II-2 shows a little over nine percent of the respondents were the children’s fathers.

**Table II-2: Relationship of participants in survey to the child**

<b>Participant</b>	<b>Number</b>	<b>Percent</b>
Mother	126	90.7%
Father	13	9.3%
<b>TOTAL</b>	<b>139</b>	<b>100.0%</b>

### **III. Data Analysis**

Data analysis was conducted under contract by Yakima County. Surveys results were entered into an Access database. Data analysis was conducted on the 139 completed interviews with verified immunization records. SAS version 8.02 was used to generate frequencies, cross tabulations, and to test for the strength of associations between indicators measured and completion of immunizations.

### **IV. Results**

Results for the 139 completed surveys are reported below. The information gathered from the survey is reported in the following areas; demographic, health care access/immunization awareness, immunization completion, potential barriers to immunization completion, and breastfeeding experience.

#### **A. Demographic Data**

The sample of families who were interviewed for this survey appear to be a representative sample of the delivering population in Kittitas County. Demographics include education, income, race/ethnicity and primary language spoken at home. The results are tabulated in Appendix A.

There were virtually equal numbers of boys and girls in the study. Of those surveyed, almost 98% stated that the mother was the primary caregiver. Twelve percent of the caregivers interviewed had not graduated from high school. Over eighty percent of the respondents were married. Eighty -eight percent stated their race was white. Fourteen of the respondents (ten percent) stated that they were Hispanic- Mexican.

#### **B. Health Care Access/Immunization Awareness**

Health care access and immunization awareness were determined by a series of questions. The majority of caregivers responding to the survey had identified a health care provider at the time of birth and in most cases it was a private practitioner. Over 92% of the respondents stated that they knew when it was time for their child to receive immunizations. Half of the respondents reported receiving a reminder card or telephone call when it was time to schedule an appointment for immunizations or a well child check up. Ninety-one percent of those surveyed stated they had taken their child to their health care provider at least once between the ages of 13-24 months. Twenty - four percent of the respondents reported that their child attended a licensed childcare/daycare facility for more than ten hours a week in their first year and a-half of life. No respondents reported being excluded from childcare for a lack of immunizations. A detailed tabulation of all these questions are in Appendix B.

### C. Immunization Completion

The State of Washington pays for required vaccines for its children. Appendix C shows the five immunization series and number of doses currently required in the State of Washington that children should receive during the first year-and-a-half of life in preparation for school or daycare entry. When assessing immunization status, 4:3:1:3:3 refers to 4 diphtheria/tetanus/pertussis (DtaP), 3 polio, 1 measles/mumps/rubella (MMR), and 3 hemophilus influenza type b (HIB)vaccines. The required doses of the HIB vaccine can vary between 3-4 depending on the child's age at the time of the survey. The final 3 represents 3 Hepatitis B (Hep B) vaccines.

This report presents data on children with the appropriate number of doses (Table C-1) as well as the percentage of children with valid shots (Table C-2). "Valid" shots refer to the correct number of doses as well as the appropriate spacing between shots. The Advisory Committee on Immunization Practices (ACIP) develops recommended ages for each shot. It was these guidelines, developed by ACIP, that were used in this study.

Kittitas County was below the 2010 Healthy People target for DtaP, Polio, and Hepatitis B. Total series completion using number of shots only was 74.1%.

The percentage of vaccinated children goes down when analyzing the data using the ACIP guidelines for recommended ages and spacing of vaccines for optimal coverage and protection from disease. Appendix C defines the guidelines for each vaccine. The percentage of children receiving a valid series was 64%. The interval between the 3<sup>rd</sup> and 4<sup>th</sup> DtaP appears to be the primary problem in adhering to the ACIP guidelines.

**Table C-1: Appropriate Number of Doses by Vaccine (Required only)**

Vaccine	Kittitas Survey	Yakima Survey	1998 National Baseline	2010 Target
DtaP	81.3%	85.9%	84%	90%
Polio	88.5%	95.5%	91%	90%
MMR	92.8%	97.4%	92%	90%
HIB	90.7%	97.4%	93%	90%
HEP B	85.6%	98.7%	87%	90%
4:3:1:3:3 Total Series	74.1%	83.9%	87%	80%

**Table C-2: Valid Shots (Per ACIP guidelines)**

Vaccine	Kittitas Survey	Yakima Survey
DtaP	74.8%	77.6%
Polio	87.0%	94.2%
MMR	100%	96.8%
HIB	89.7%	93.0%
HEP B	82.7%	97.4%
4:3:1:3:3 Total Series	64.0%	72.4%

This study also tabulated the completion of three optional vaccines; Varicella, pneumococcal (PCV7) and Hepatitis A. The varicella, pneumococcal (PCV7), hepatitis A vaccines were recorded on the survey forms if they had been given. Not all the PCV7 doses are expected because they are age dependant. Kittitas County has not been defined as a high-risk area for hepatitis A by DOH, so it would not be expected that a large percentage of children would be receiving this shot.

**Table C-3: Optional Shots (Varicella/PCV7/Hepatitis A)**

Vaccine	Number	Percent	WA. State 2001
Varicella (first dose)	80	57.5%	57% *
PCV7 (first dose)	61	43.8%	N/A
PCV7 (second dose)	49	35.2%	N/A
PCV7 (third dose)	32	23.0%	N/A
PCV7 (fourth dose)	13	9.0%	N/A
Hepatitis A (first dose)	6	4.3%	N/A
Hepatitis A (second dose)	1	.7%	N/A

\* National Immunization Survey Data – for any shot; not valid shot intervals

#### **D. Immunization Experiences**

Section IV of the immunization survey asks questions about the caregiver’s experience in obtaining immunizations for their child. The results are summarized in Tables D-1, D-2 and D-3. Of particular note is that almost 44% of the respondents stated that they have to take time off work to obtain immunizations, however less than 4% stated that they had difficulty taking time off work. Twenty-nine percent of the caregivers stated that there was at least one visit when they thought their child would be immunized and they weren’t. Twenty one caregivers stated that the reason their child wasn’t immunized at that time was because the health care provided thought their child was too sick. There also were nine respondents that gave a variety of other responses. Those responses are listed under Table D-3. Twenty-four caregivers stated they had personal, philosophical or religious reasons against some immunizations. The most common reason given was a general apprehension and concern about side effects of immunizations. Four stated a specific concern with the varicella vaccine while two had a concern with Hepatitis B and one with tetanus. Three people stated they allowed their child to get only the shots that are required.

**Table D-1: Immunization Experiences**

Potential barrier	# yes	% yes	# no	% no	Total*
Problems scheduling an appointment for child's shots	8	5.8%	130	93.5%	99.3%
Problems getting immunizations due to doctor or clinic Hours	7	5.0%	131	94.2%	99.2%
Transportation problems getting child to doctor or clinic or shots	7	5.0%	131	94.2%	99.2%
Had to take time off work to obtain immunizations	61	43.9%	76	54.7%	98.6%
Difficulty taking time off work (if yes to previous question)	5	3.6%	55	90.2%	93.8%
Cost of obtaining immunizations was a problem	10	7.2%	128	92.1%	99.3%
Personal, philosophical, or religious reasons against some immunizations	24	17.3%	114	82%	99.3%

**Table D-2: Child not immunized when you expected**

"During any of your child's doctor or clinic visits, did he/she not get immunized when you expected him/her to be?"	Number	Percent
Yes	40	28.8%
No	97	69.8%
Don't Know	1	0.7%
Missing	1	0.7%
Total	139	100.0%

**Table D-3: Why not immunized when you expected**

"If yes, why weren't those vaccines given during any of those visits?" (Circle all that apply)	Number
The health care provider thought the child was too sick.	21
It was too soon for another vaccination	4
Other* (See comments below)	9

• **Other Comments:**

- Clinician out of vaccine (2)
- Had a visitor
- Not enough shots

Nurse not there  
Put a stop on shot  
Requested not to be done  
Traumatized by being there for 2 hours- skipped  
Waited so they could be combined

Analysis was completed to identify associations between variables and immunization completion.

**There were two questions that correlated with incomplete vaccinations:**

- Moving two or more times since the child's birth
- Parental identification as Hispanic

**Questions tested but not significantly correlated to incomplete vaccinations include:**

- Primary language spoken at home
- Source of health care
- Payor source
- Problems with transportation
- Personal or religious problems with immunizations
- Perception of how likely their child is to become ill from diseases the immunizations prevent
- Caregiver educational attainment
- Income
- Reminder card or telephone call
- Perception of seriousness of the diseases prevented by immunizations
- Participation in WIC, First Steps or TANF
- Number of times taken to their health care provider in second year of life

## E. Breastfeeding Practices

The Kittitas County Health Department added five questions to the survey that were specific to their county. The questions were designed to gain information from families about breastfeeding practices in Kittitas County. The questions included:

How many weeks was your child breastfed?

If your child was breastfed for less than 3 months, what factor(s) influenced the decision to switch to bottle feeding?

If your child was breastfed for six months or longer what factor(s) influenced the decision to continue this long?

Where did you get MOST of the information you used regarding breastfeeding?

If you went back to work after your baby was born, would you say your work environment supported breastfeeding your baby? Did your work environment support pumping breast milk?

The results are described below with the length of time breastfed, and factors influencing breastfeeding. Seventy percent of caregivers interviewed breastfed for at least 7 weeks. Forty-four percent reported breastfeeding for more than six months. In this study, Kittitas County has surpassed the national average and has almost achieved the national Healthy People 2010 targets for breastfeeding; however, only twenty-three percent of the children in the survey were breastfed for the duration of one year, recommended by the AAP.

Percent Breastfeeding	1998 National Data	Healthy People 2010 target
Early postpartum period	64%	75%
At 6 months	29%	50%
At 1 year	16%	25%

**Table E-1: Number of Weeks Breastfed**

Number of Weeks Breastfed	Number	Percent	2010 Target
None	23	16.6%	
≤ 6 weeks	19	13.7%	
7-12 weeks	13	9.4%	
13-24 weeks	23	16.5%	
25-52 weeks	29	20.9%	
> 52 weeks (1 year)	32	23%	25%
<b>Total</b>	<b>139</b>	<b>100.1%</b>	

Note: There were no caregivers that reported between 24 and 28 weeks of breastfeeding.

**Table E-2: What influenced switch to bottle if less than 3 months breastfeeding?**

What most influenced switch?	Number
Difficulty with feedings	8
Didn't like it	2
Back to work	11
Didn't have support	1
Bottle feeding was easier	9
Other*	22

Multiple answers were allowed.

\*Other reasons listed include:

- Baby in NICU for 1<sup>st</sup> four days
- Schedule- baby not interested
- Did not wish to breastfeed (4)
- Mastitis did not want to do it too long (2)
- Not getting up at night
- Doubled weight to 12 pounds at 2 weeks Dr. told me to
- Held for medication (2)
- Long enough
- No milk (2)
- Back to school
- Personal (2)
- Twins too time consuming with another toddler
- Wasn't gaining weight

**Table E-3: What factors influenced you to breastfeed?**

<b>Influential factors</b>	<b>Number</b>
AAP recommendation	19
Reading/resource material	27
Health care provider	14
Internet	11
Family/friends	19
Nurses	13
Childbirth classes	12
I liked breastfeeding my baby	28
Less cost	40
More convenient	39
Other*	31

Note: Seventy-seven of the 139 women responded to this question. They could give as many reasons as they wanted.

**\*Other reasons include:**

- Health reasons (26)
- Closeness to child
- My daughter liked it
- Bonding
- Own reason

**Table E-4: Where did you get MOST of the information you used regarding breastfeeding?**

<b>Information about breastfeeding</b>	<b>Number</b>
Doctor/midwife	20
Doctor's nurse or other staff	27
Hospital nurses	20
Childbirth classes	19
WIC/First Steps/Health Dept	21
Family/friends	24
My own reading/research	47
Other*	16

**\*Other factors mentioned include:**

Fifth kid already had knowledge  
 Already had one child  
 KCAC  
 Older kids were breastfed  
 Mom in law OB/Gyn  
 Personal

Random sources  
 Evergreen Women's Clinic  
 Experience with first baby  
 First Steps  
 Internet and personal interest  
 LaLeche League

**Table E-5: If you went back to work was your work environment supportive of breastfeeding and pumping?**

<b>Work environment supportive</b>	<b>Yes</b>
Breastfeeding	<b>46 of 58 or 79%</b>
Pumping*	<b>39 of 54 or 72%</b>
Both	<b>36 of 54 or 66%</b>

\* 4 persons did not answer question about pumping

#### **IV. Recommendations**

- Share the results of the survey with immunization providers to identify opportunities to increase immunization rates for all shots,(for instance, reminder cards and/or phone calls) with particular attention to the DtaP vaccine intervals and to criteria used to exclude a child from immunizations (see table D-2)
- Evaluate the possibility of initiating the Hepatitis B series at the time of birth. The majority of the births to women residing in Kittitas County take place at Kittitas Valley Community Hospital (KVCH). KVCH currently is not giving the first Hepatitis B shot prior to discharge from the hospital.
- Work with local providers to target the Hispanic population and to provide education re the importance of immunization intervals to young families who may be likely to move.
- Work with local providers to increase efforts to promote breastfeeding and increase duration in accordance with the AAP recommendation of 1 year.  
(From Healthy People 2010 recommendations\_ Education of new mothers and their partners, changes in routine maternity ward practices, social support, including support from employers and media portrayal of breastfeeding as the normal method of infant feeding are needed to increase breastfeeding rates.)

#### **V. Staff**

##### **Kittitas County Health Department:**

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## APPENDIX A

**Table A-1: Gender of children in survey**

GENDER	NUMBER	PERCENT
Boys	67	48.2%
Girls	72	51.8%
<b>TOTAL</b>	139	100.0%

**Table A-2: Primary caregivers**

	NUMBER	PERCENT
Mother	137	98.6%
Father	2	1.4%
<b>TOTAL</b>	139	100.0%

**Table A-3: Highest level of education reported for primary caregivers**

LEVEL OF EDUCATION	NUMBER	PERCENT
Sixth grade or less	5	3.6%
Seventh to eleventh grades	11	8.0%
Completed high school	32	23.0%
Some college	33	23.7%
College graduate/grad school	53	38.1%
Technical School/Other	5	3.6%
<b>TOTAL</b>	139	100.1%

**Table A-4: Marital status of primary caregiver**

MARITAL STATUS	NUMBER	PERCENT
Single	9	6.5%
Married	113	81.3%
Live-in partner	7	5.0%
Separated or divorced	10	7.2%
<b>TOTAL</b>	139	100.0%

**Table A-5: Race of primary caregiver**

<b>RACE</b>	<b>NUMBER</b>	<b>PERCENT</b>
White	122	87.8%
American Indian/Alaska Native	2	1.4%
Chinese	1	0.7%
Other Asian	1	0.7%
Other	4	2.9%
Don't know	3	2.2%
Missing	6	4.3%
<b>TOTAL</b>	<b>139</b>	<b>100.0%</b>

**Table A-6: Caregivers of Hispanic origin**

<b>HISPANIC ORIGIN</b>	<b>NUMBER</b>	<b>PERCENT</b>
Mexican	14	10.1%
Other	1	.7%
Not of Hispanic origin	124	89.2%
<b>TOTAL</b>	<b>139</b>	<b>100.0%</b>

**Table A-7: Primary language spoken in the household**

<b>LANGUAGE</b>	<b>NUMBER</b>	<b>PERCENT</b>
English	128	92.1%
Spanish	10	7.2%
Other	1	.7%
<b>TOTAL</b>	<b>139</b>	<b>100.0%</b>

**Table A-8: Annual combined household income distribution before taxes, reported by participants**

<b>INCOME CATEGORY</b>	<b>NUMBER</b>	<b>PERCENT</b>
<\$10,000	9	6.5%
\$10,000 - \$20,000	18	12.9%
\$20,001 - \$30,000	23	16.6%
\$30,001 - \$40,000	28	20.2%
\$40,001 - \$50,000	15	10.8%
>\$50,000	33	23.8%
Refused	5	3.6%
Don't know	8	5.8%
<b>TOTAL</b>	<b>139</b>	<b>100.2%</b>

**Table A-9: Number of people living in household**

<b># IN HOUSEHOLD</b>	<b>NUMBER</b>	<b>PERCENT</b>
2	8	5.8%
3	48	34.5%
4	41	29.5%
5	21	15.1%
> 5	19	13.7%
Missing	2	1.4%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table A-10: Number of times child had moved since birth.**

# of times moved	Frequency	Percent
0	69	49.6%
1	42	30.2%
2	14	10.1%
>2	14	10%
<b>Total</b>	<b>139</b>	<b>99.9%</b>

**Table B-1: Child health care access at time of birth**

HEALTH CARE ACCESS AT BIRTH	NUMBER	PERCENT
Yes	131	94.2%
No	8	5.8%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-2: Regular child health care provider at time of survey**

HEALTH CARE AT TIME OF SURVEY	NUMBER	PERCENT
Yes	128	92.1%
No	11	7.9%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-3: Source of health care now**

Where do you take your child for health care?	NUMBER	PERCENT
Private Provider	134	96.4%
Local Health Department	4	2.9%
Other	1	0.7%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-4: Source of immunizations**

Where did your child receive their immunizations?	NUMBER	PERCENT
Private Provider/Clinic	135	97.1%
Community Health Clinic	2	1.4%
Missing	2	1.4%
<b>Total</b>	139	100.0%

Note: Caregivers could answer as many sources as had been used.

**Table B-5: Caregiver's awareness when it is time for immunizations**

"Do you usually know when it is time for the child to get immunizations?"	NUMBER	PERCENT
Yes	129	92.8%
No	9	6.5%
Don't know	1	0.7%
<b>Total</b>	139	100.0%

**Table B-6: Had received a telephone or mail reminder to schedule or keep a well-baby or immunization appointment**

Received reminder	NUMBER	PERCENT
Yes	65	46.8%
No	68	48.9%
Don't know	6	4.3%
<b>Total</b>	156	100.0%

**Table B-7: Currently Receives CHILD Profile materials**

Receives CHILD Profile Materials	NUMBER	PERCENT
Yes	106	76.3%
No	31	22.3%
Don't know	2	1.4%
<b>Total</b>	156	100.0%

**Table B-8: Ever enrolled in the Women, Infant, and Children or WIC program?**

<b>“ Was your child ever enrolled in the Women, Infant, Children, or WIC program?”</b>	<b>NUMBER</b>	<b>PERCENT</b>
Yes	65	46.8%
No	73	52.5%
Don't know	1	0.7%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-9: Ever enrolled in First Steps**

<b>“Was your child ever enrolled in the First Steps program?”</b>	<b>NUMBER</b>	<b>PERCENT</b>
Yes	28	20.1%
No	109	78.4%
Don't know	2	1.4%
<b>Total</b>	<b>139</b>	<b>99.9%</b>

**Table B-10: Ever enrolled in TANF**

<b>“Was your child ever enrolled in the Aid to Families with Dependent Children, AFDC or Temporary Assistance to Needy Families or TANF programs?”</b>	<b>NUMBER</b>	<b>PERCENT</b>
Yes	15	10.8%
No	123	88.5%
Missing	1	0.7%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-11: Number of Visits to a health care provider in the second year of life**

<b>Number of visits to the health care provider in the second year of life (12-23 months)</b>	<b>NUMBER</b>	<b>PERCENT</b>
0/No Visits	12	8.6%
1	14	10.1%
2	23	16.6%
3	27	19.4%
4	18	12.9%
5	45	32.4%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-12: Attended Childcare**

<b>“During the first year-and-a-half of life, did your child attend licensed childcare/daycare for more than 10 hours per week?”</b>	<b>NUMBER</b>	<b>PERCENT</b>
Yes	33	23.7%
No	106	76.3%
<b>Total</b>	<b>139</b>	<b>100.0%</b>

**Table B-13: Exclusion from childcare for of lack of immunizations**

<b>“During that time was your child ever excluded from childcare for lack of immunizations?”</b>	<b>NUMBER</b>	<b>PERCENT</b>
Yes	0	0.0%
No	134	96.4%
<b>Missing</b>	<b>5</b>	<b>3.6%</b>
<b>Total</b>	<b>139</b>	<b>100.0%</b>

## APPENDIX C:

### Required Immunizations

**Table C-1: Immunizations and doses required by the State of Washington for school or daycare entry.**

Immunization	Number of doses
Diphtheria, tetanus, pertussis: DTaP/DT (DT)	4
Polio	3
Measles, mumps, rubella: MMR	1
Hemophilus influenza type b: Hib	3 or 4, depending on age
Hepatitis B	3

Immunizations should be given in accordance with the minimum age and dosage intervals specified by the Advisory Committee on Immunization Practices (ACIP) of the Centers for Disease Control and Prevention (CDC). These intervals have been agreed upon by the CDC, the American Academy of Pediatrics (AAP), and the American Academy of Family Physicians (AAFP). The sources of information used here are the Red Book 2000, Report of the Committee on Infectious Diseases, 25th Edition, published by the AAP, and the ACIP's "General Recommendations on Immunization." Table 4 below specifies the minimum age and dosage intervals for the ages of children in this study.

**Table C-2: The minimum age and dosage intervals for valid immunizations for children less than four years of age.**

Vaccine	Minimum age for first dose	Minimum interval from dose 1 to 2	Minimum interval from dose 2 to 3	Minimum interval from dose 3 to 4
<b>DTaP/DTP (DT)</b>	6 weeks (42 days)	28 days	28 days	6 months, or 180 days (but must be after birthday)
<b>Polio</b>	6 weeks (42 days)	28 days	28 days	
<b>MMR</b>	12 months (first birthday)			
<b>Hib</b>	6 weeks (42 days)	28 days	28 days*	after 1st birthday*
<b>Hepatitis B</b>	birth	28 days	2 months (60 days)**	

\* If two doses of Hib are given prior to the first birthday and the third dose is given after the first birthday, the child is considered immunized with the three doses; however, the last dose (whether it is the third or the fourth) must be given after the first birthday. If the first Hib vaccine is given at 12 months of age, the second should be given at 14 or 15 months. If the first Hib vaccine is given after 15 months of age, the one dose is adequate.

\*\* The third and final dose of hepatitis B should be given no earlier than 6 months of age, at least 4 months after the first dose, and at least 2 months after the second dose.

### **Optional Immunizations**

At the current time varicella, hepatitis A, and pneumococcal vaccinations are not required for school entry in Washington State. The State now pays for these vaccinations. The recommendations for the varicella, pneumococcal, Hepatitis A vaccinations are shown in Table 5.

**Table C-3: Recommendations for varicella and hepatitis A vaccinations**

<b>Vaccine</b>	<b>Minimum age for first dose</b>	<b>Minimum interval from dose 1 to 2</b>
Varicella	12 months	(only one dose required prior to 13 years of age)
Pneumococcal (PCV)	2 months	2 months
Hepatitis A	24 months	6 months





They may be listed on your card in a different order. Also, be sure to look on back of your card.

SECTION III. IMMUNIZATION HISTORY				
Vaccine	[RECORD DATE AS MM/DD/YY]			
	A. Dose 1	B. Dose 2	C. Dose 3	D. Dose 4
<b>20. Diphtheria/Tetanus/Pertussis (DTP)</b> may be listed as: DTaP, ACEL-IMUNE, Tripedia, Infanrix, Tetramune				
<b>21. Diphtheria/Tetanus (DT)</b>				
<b>22. Oral Polio Vaccine/Inactivated Polio Vaccine (OPV/IPV)</b> may be listed as: Orimune, IPOL, eIPV, TOPV				
<b>23. Haemophilus Influenza Type b (HIB)</b> may be listed as: PedvaxHIB, HibTiter, ACTHib, Omni HIB, ProHIBIT, COMVAX, PRO-D, HbOC, PRP-T, PRP-OMP, Tetramune				
<b>24. Measles/Mumps/Rubella (MMR)</b>				
<b>25. Measles/ Rubella (M-R, M-R II)</b>				
<b>26. Mumps/Rubella</b> may be listed as Biavax				
<b>27. Measles (M)</b> may be listed as Attenuvax				
<b>28. Mumps (Mu)</b> may be listed as Mumpsvax				
<b>29. Rubella (R)</b> may be listed as Meruvax				
<b>30. Hepatitis B (HEP B)</b> may also be listed as: Recombivax, Enderix-B, COMVAX				
<b>31. Varicella</b> may be listed as: Chickenpox, Varivax				
<b>32. Hepatitis A</b> may be listed as Havrix, Vaqta				

**SECTION III. IMMUNIZATION HISTORY...CONTINUED**

	<b>[RECORD AS MM/DD/YY]</b>			
	<b>A. Dose 1</b>	<b>B. Dose 2</b>	<b>C. Dose 3</b>	<b>D. Dose 4</b>
<b>33. Pneumococcal 7-Valent</b> may be listed as PCV7, Prevnar				
<b>34. Pneumococcal 23-Valent</b> may be listed as Pneumovax, Pneu Immune				
<b>35. Pneumococcal Unknown Type</b> may be listed as "pneumonia shot"				
<b>36. Other [SPECIFY]</b>				
<b>37. Other [SPECIFY]</b>				









<p><b>67. What race (DO YOU/DOES SHE/DOES HE) consider (YOURSELF/HERSELF/HISELF)?</b></p> <table border="0"> <tr> <td>01 White</td> <td>11 Native Hawaiian</td> </tr> <tr> <td>02 Black, African Am, Negro</td> <td>12 Guamanian or Chamorro</td> </tr> <tr> <td>03 American Indian or Alaska Native [SPECIFY TRIBE]</td> <td>13 Samoan</td> </tr> <tr> <td>04 Asian Indian</td> <td>14 Other Islander [SPECIFY]</td> </tr> <tr> <td>05 Chinese</td> <td></td> </tr> <tr> <td>06 Filipino</td> <td>15 Other [SPECIFY]</td> </tr> <tr> <td>07 Japanese</td> <td></td> </tr> <tr> <td>08 Korean</td> <td>77 Refused</td> </tr> <tr> <td>09 Vietnamese</td> <td>99 Don't know</td> </tr> <tr> <td>10 Other Asian [SPECIFY]</td> <td></td> </tr> </table>	01 White	11 Native Hawaiian	02 Black, African Am, Negro	12 Guamanian or Chamorro	03 American Indian or Alaska Native [SPECIFY TRIBE]	13 Samoan	04 Asian Indian	14 Other Islander [SPECIFY]	05 Chinese		06 Filipino	15 Other [SPECIFY]	07 Japanese		08 Korean	77 Refused	09 Vietnamese	99 Don't know	10 Other Asian [SPECIFY]		
01 White	11 Native Hawaiian																				
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06 Filipino	15 Other [SPECIFY]																				
07 Japanese																					
08 Korean	77 Refused																				
09 Vietnamese	99 Don't know																				
10 Other Asian [SPECIFY]																					
<p><b>68. What is the primary language spoken in your household?</b></p> <table border="0"> <tr> <td>01 English</td> <td>05 Laotian</td> <td>08 Other [SPECIFY]</td> </tr> <tr> <td>02 Spanish</td> <td>06 Russian</td> <td></td> </tr> <tr> <td>03 Vietnamese</td> <td>07 Ukrainian</td> <td>77 Refused</td> </tr> <tr> <td>04 Cambodian</td> <td></td> <td>99 Don't know</td> </tr> </table>	01 English	05 Laotian	08 Other [SPECIFY]	02 Spanish	06 Russian		03 Vietnamese	07 Ukrainian	77 Refused	04 Cambodian		99 Don't know									
01 English	05 Laotian	08 Other [SPECIFY]																			
02 Spanish	06 Russian																				
03 Vietnamese	07 Ukrainian	77 Refused																			
04 Cambodian		99 Don't know																			
<p><b>69. Including all of the adults and all of the children, how many people live in this household?</b></p>																					
<p><b>70. Here is a list of income categories. Which category best describes the annual combined household income, before taxes, during (CHILD'S NAME)'s first year of life? [READ LIST &amp; CIRCLE ONE]</b></p> <table border="0"> <tr> <td>01 &lt;\$10,000</td> <td>06 \$30,000 - &lt;\$35,000</td> <td>11 ≥\$60,000</td> </tr> <tr> <td>02 \$10,000 - &lt;\$15,000</td> <td>07 \$35,000 - &lt;\$40,000</td> <td>77 Refused</td> </tr> <tr> <td>03 \$15,000 - &lt;\$20,000</td> <td>08 \$40,000 - &lt;\$45,000</td> <td>99 Don't know</td> </tr> <tr> <td>04 \$20,000 - &lt;\$25,000</td> <td>09 \$45,000 - &lt;\$50,000</td> <td></td> </tr> <tr> <td>05 \$25,000 - &lt;\$30,000</td> <td>10 \$50,000 - &lt;\$60,000</td> <td></td> </tr> </table>	01 <\$10,000	06 \$30,000 - <\$35,000	11 ≥\$60,000	02 \$10,000 - <\$15,000	07 \$35,000 - <\$40,000	77 Refused	03 \$15,000 - <\$20,000	08 \$40,000 - <\$45,000	99 Don't know	04 \$20,000 - <\$25,000	09 \$45,000 - <\$50,000		05 \$25,000 - <\$30,000	10 \$50,000 - <\$60,000							
01 <\$10,000	06 \$30,000 - <\$35,000	11 ≥\$60,000																			
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03 \$15,000 - <\$20,000	08 \$40,000 - <\$45,000	99 Don't know																			
04 \$20,000 - <\$25,000	09 \$45,000 - <\$50,000																				
05 \$25,000 - <\$30,000	10 \$50,000 - <\$60,000																				
<p><b>71. We would like your permission to obtain copies of your child's immunization records from the places where (HIS/HER) shots were given. Would you give your permission for this?</b></p> <p>01 Yes    02 No    88 Not applicable [SKIP TO END]</p> <p><b>If yes: PLEASE TELL ME THE NAME OF THE DOCTOR/CLINIC WHERE I MAY OBTAIN THESE RECORDS (Write name of Drs. /Clinics – may be more than one) RECORD THIS INFORMATION ON TRACKING SHEET AND THEN SIGN YOUR NAME AS THE PERSON WHO OBTAINED VERBAL PERMISSION.</b></p>																					
<p><b>72. [IF NO] Is there any particular reason why you would prefer that I not get this information from your doctor? [RECORD REASON VERBATIM]</b></p>																					

**Lastly, since the Health Department has a program to build and enhance support for women who choose to breastfeed, we'd like to take this opportunity to ask a few questions that will give us information about breastfeeding practices in our county. Was (CHILD'S NAME) breastfed? (If no, put 0 in box for #73)**

<p>73. How many weeks was (CHILD'S NAME) breastfed?</p>	
<p>74. If (CHILD'S NAME) was breastfed for less than 3 months, what factor(s) influenced the decision to switch to bottle feeding? Circle all that apply.</p> <ul style="list-style-type: none"> <li>a) Difficulty with feedings</li> <li>b) Didn't like it</li> <li>c) Back to work</li> <li>d) Didn't have support</li> <li>e) Bottle feeding was easier</li> <li>f) Other? _____</li> </ul>	
<p>75. If (CHILD'S NAME) was breastfed for 6 months or longer, what factor(s) influenced the decision to continue this long? I will read a list of resources. Circle all that apply.</p> <ul style="list-style-type: none"> <li>a. American Academy of Pediatrics recommendation to breastfeed exclusively for the 1<sup>st</sup> year.</li> <li>b. Reading/resource material</li> <li>c. Health care provider</li> <li>d. Information from the Internet</li> <li>e. Family/friends</li> <li>f. Nurses</li> <li>g. Childbirth classes</li> <li>h. I liked breastfeeding my baby</li> <li>i. Less cost</li> <li>j. More convenient</li> <li>k. Other? _____</li> </ul>	
<p>76. Where did you get MOST of the information you used regarding breastfeeding?</p> <ul style="list-style-type: none"> <li>a. Doctor/midwife</li> <li>b. Doctor's nurse or other staff</li> <li>c. Hospital nurses</li> <li>d. Childbirth classes</li> <li>e. WIC/First Steps/Health Department</li> <li>f. Family/friends</li> <li>g. My own reading/research</li> <li>h. Other? _____</li> </ul>	
<p>77. If you went back to work after your baby was born, would you say your work environment supported breastfeeding your baby?</p> <p>Did the work environment support pumping breast milk?</p>	

***This completes the interview. Thank you very much for answering the questions. Please feel free to contact the health department if you have any questions concerning our survey.***

***I'll send out a little gift soon. (If consent form is needed for out of county provider say: We'll send a consent form for the release of the immunization records for you to sign and return as soon as possible.) Then we'll enter you in a drawing to win one of 20 \$50 gift certificates at a local store. We'll hold the drawing and notify winners in early December – just in time for the Holidays! Thanks again.***

Time Finish: \_\_\_\_\_:\_\_\_\_\_