

ISLAND COUNTY BOARD OF HEALTH - APRIL 12, 1999 - MINUTES OF MEETING

The Island County Board of Health convened in Regular Session at 11:15 a.m., on April 12, 1999, in the Island County Courthouse Annex, Coupeville, Wa., with Board of Health Members present: Mike Shelton, Chairman; Wm. L. McDowell, Member; and William F. Thorn, Member.

Also present were: Marshall Bronson, CHAB; Roger Case, M.D., Health Officer; Tim McDonald, Health Services Director; Carol McNeil, Nursing Supervisor; Keith Higman, Environmental Health Director; Jan Dahl, Assessment Coordinator; Carrie McLachlan, Public Health Coordinator.

CHAB UPDATE

Mr. Bronson commented that it had been very pleasant having the high school members on the advisory board; they add a universal optimism and have shown a great deal of interest and are valuable additions to the Board. CHAB members have been communicating with the Principal of the Stanwood-Camano High school with regard to the desire to bring on board youth from Camano Island.

CHAB discussed the Board of Health leadership workshop held in Olympia. CHAB received a new model for imperative work evaluation which he thought would provide a very good basis for the review of what has been done already, and to help establish significant measurable goals for future activities.

Commissioner Thorn asked that CHAB arrange some kind of summary imperative report [oral] every few months in order to keep the Board up to date on what is happening with regard to various imperatives.

EARLY BRAIN RESEARCH

PRENATAL AND EARLY CHILDHOOD NURSE HOME VISITATION

As noted at the Board of Health Special Session last week, Mr. McDonald introduced today's topic, research findings from Early Brain Research, and highlights from a November 1998 Juvenile Justice bulletin describing the successful program to reduce juvenile crime and violence "Prenatal and Early Childhood Nurse Home Visitation" focusing on the David Olds, Ph.D. study. A copy of the book *Ghosts in the Nursery*, was provided to Board members in preparation for this meeting. The book uses examples and is easy for all to understand, but is based on some meaningful scientific research.

Early Brain Research

Ms. McLachlan used the overhead projector to make her presentation. Over the past five years, there has been a proliferation of media focusing on two areas: new brain research and explosion of juvenile crime. There seems to be a swell in the community and society to pay attention to what happens to youth and infants.

*Early Brain Research*

- New technologies (brain scans) give a much clearer picture of brain functioning
- Growing concerns throughout society about young children and their development and learning
- The findings of long term studies show early intervention programs are effective

*Tracing the Roots of Violence*

- Last 30 years violent crimes committed by youth have risen 371%
- New evidence shows that violent behavior is fundamentally linked to abuse/neglect first 2 years of life

- Recent research shows infancy is the stage during which foundations for trust, empathy, conscience and lifelong learning are laid down—the time in which a predisposition to violent behavior is "hardwired" into the brain
- New research provides evidence that violent criminals have poorly functioning brains

#### *Costs of Such Behavior*

- 1 out of 20 babies born in the U.S. will spend some part of adult life in state or federal prison [not including the number who will spend time in county/city jails]
- Cost of Nation's criminal justice system is 3 times the cost of entire health care budget
- The number of Americans behind bars may soon overtake the number of students enrolled in 4-year colleges/universities
- U.S. has 2<sup>nd</sup> highest murder rate of industrialized nations, 2<sup>nd</sup> highest rape; 11<sup>th</sup> highest serious assault and the 3<sup>rd</sup> highest violent rate of theft of all nations

#### *Early Brain Development*

- By the time a baby is born he/she will have 100 billion brain cells
- Cells are primarily not yet connected to networks—happens through interaction with outside environment
- Through UW research, finding 13 stages of brain development, each builds upon the other; at least ½ occur in the first 24 months
- "Use it or lose it". Many may not be correctable after age 5. Unfortunately, system set up such that many of these things are not caught until age 5 when the child enters the school system.

#### *Ghosts from the Nursery - Summary*

<b>Key Areas of Study</b>	<b>Preventative Efforts</b>
Early brain anatomy and violence	Focused health, early intervention, prevention
Prenatal exposure to drugs/malnutrition	Decrease drug/alc/smoking; increase nutrition; prenatal supplements
Adverse experiences in womb & at birth	Prenatal education, parental attachment
Disruptive behavior disorders [ADHD, ODD, CD]	Stimulant medication with parent training, family therapy and individual skill training
Role of temperament	Help parents cope with difficult personalities; resiliency efforts [environmentally generated vs. biologically)
Impact of trauma and head injury	One healthy individual willing to teach, protect, discipline, love and play constructively
Impact of early emotional deprivation	One warm, attentive, sensitive caregiver for the child to make sure a secure attachment takes place

Role/lack of fathers	Father's programs, parent education
Maze of current programs/organization/policies	Collaborative early intervention programs, no waiting

*The Call to Action for Proactive Prevention.* Early intervention, home visiting, parenting programs; community commitment to care for babies and young children; and building communities around babies. Violent children of the future are now babies.

## Early Brain Research & Reduction in Youth Criminal Behavior & Violence

Ms. Dahl indicated the study began in Elmira N.Y. in 1976 and identified 400 pregnant women to participate in the study of the impact of public health nurse home visits on development and what happens. The results fifteen years later come from 380 of the participants and 315 of their children, after 2 years of public health nurse visits. Families

received about 9 visits during the prenatal period, and followed those families with visits every 2 weeks for 2 years.

Risk factors associated with early anti-social behavior the study included were: poor maternal health behaviors during pregnancy; child abuse and neglect; and troubled maternal life course. Prevention is focused on problems targeted for prevention in children as well as problems targeted for prevention in mothers:

### Children Mothers

reduce pre-term delivery & low birth weight smoking, drug/alcohol use

neurodevelopmental impairment dropping out of high school

child abuse and neglect rapid successive pregnancies

childhood injuries; school failure; reduced participation in work force conduct disorders; juvenile crime & delinquency

### The Public Health Nurse Visitation Program focuses on:

first time mothers;

use of educated, trained, experienced nurses with strong interpersonal communication skills

home visits begin in pregnancy and continued until child is 2 and occur every 1-2 weeks

nurses focus simultaneously on:

mother's personal health and development; environmental health; quality of caregiving

for the child

nurses involve families, friends and community resources for support

nursing supervisor provides supportive guidance and oversees program implementation

detailed records are kept

Signs of neuropsychological impairment include: poor motor functioning; attention deficits; hyperactivity; impulsivity; impaired language and cognitive development. Nurse visits assist mothers to improve diets; reduce number of cigarettes smoked and use of alcohol and drugs.

Abused and neglected children are at risk for: persistent behavior problems; chronic delinquency; antisocial personality disorder; academic failure; adult criminal behavior; violent crime. Nurse visits reduce child abuse and neglect by helping parents deal with depression, anger and impulsiveness; assist parents in dealing with substance abuse problems; and encourage parents to reflect on how they were parented. Nurse home visits reduce child abuse and neglect by teaching parents normal child development and effective parenting skills; assist parents to read infant signals; and anticipate infant needs.

Maternal troubles that impact children include: teen pregnancy; unmarried parenthood; lack of high school completion; welfare dependence; three or more children. Nurse visits improve a mother's troubled life course by assisting parents to develop the confidence and skills necessary to set and achieve goals such as: complete education, find work, avoid subsequent unplanned pregnancies; assist parents to consider multiple options and make good choices about the environment in which they will raise their children and taking steps to create the kind of life they want for themselves and their children.

Ms. Dahl mentioned the fact that these risks are cumulative. The Elmira study was so successful that two other pilot projects were initiated, Memphis, Tenn. and Denver, Co.

Graphs were displayed to show results fifteen years later for the high risk adolescents in the Elmira N.Y. study who received nurse home visits compared to the comparison group who did not received any nurse home visits, which included reduced number of cigarettes smoked per day; ran-away behavior reduced; number of arrests were lower per child; as well as number of convictions/probation violations reduced.

The mothers in the group at the end of the 15 year period showed: reduction in subsequent births; a longer interval between the birth of the first and second child. Women that nurses visited had fewer months on welfare and a lower number of unmarried mothers. Early results from the Memphis study indicate the same kind of results for both the children and the moms.

The program cost initially \$3200 per family per year [during the time the nurse was being trained and program getting put into place. After the program was in place, the cost was \$2800 per family per year. The study itself projected that for low income women on welfare

the cost was recovered by the time the child was 4 years old. The Rand Corporation looked at the studies and estimated that at the time these children reach age 15 the cost savings are four times the original investment.

For this meeting, Ms. Dahl explained what she had wanted to do was to describe the ideal program that achieves the kind of results she talked about, and at a subsequent meeting, would then propose to talk about what Island County's program is, and what is being proposed for a healthy families grant.

*[copy of the overhead presentation and graphs on file with the Island County Health Department and Board of Health and the November 1998 Juvenile Justice bulletin describing the successful program to reduce juvenile crime and violence "Prenatal and Early Childhood Nurse Home Visitation" on file with the Island County Health Department and Board of Health]*

Meeting adjourned at 12:20 p.m. The next regular meeting is scheduled for

May 10, 1999, beginning at 11:15 a.m.

BOARD OF HEALTH

ISLAND COUNTY, WASHINGTON

*Mike Shelton*, Chairman

*Wm. L. McDowell*, Member

*William F. Thorn*, Member