

Introduction

In recent years the United States has undergone a shift in thinking about “health”. The old way of thinking emphasized health in relationship to disease or illness. The new way of thinking emphasizes health in relationship to functioning, quality of life and well-being. Yet, today’s health system is inordinately complex, understood by too few and pulled in opposite directions by many conflicting expectations of various stakeholders. A tremendous amount of information about health is available and it is used for different purposes- for assessing community health status, for setting clinical priorities, for developing prevention strategies, and for monitor program and provider performance.

The rising tide of complex health issues is leading us into new conversations about health system reform. Public health is a key voice in the discussion. With the Institute of Medicine’s landmark study of public health in the United States, entitled *The Future of Public Health* (1998), the previous concept of health broadened to include social, economical, political and medical care factors that affect health and sickness.

Yet, never has there been a time when so many health issues so strongly needed addressing in such a short time—new epidemics—SARS, West Nile Virus; threats of biological and chemical disease; emerging “old” diseases; new environmental concerns, for example, arsenic; and a host of other issues require our health system to be active in assessing health concerns, developing preventive and intervention health programs, and responding to an aging and diverse population. We need to focus on producing better health as well as providing an ever-widening array of services that require an ever-growing body of health professionals with the technical expertise to deal with emerging health issues.

Individuals need to be encouraged to take more responsibility for their own health. Health agencies, providers, and community partners need to help provide an environment and education that gives individuals more control over their health and healthcare while holding them accountable for the choices they make. We are seeking to develop tools for healthy, empowered, responsible individuals. We are looking for ways to offer community support and encouragement to make it easier to make healthy choices.

Individual health is closely linked to community health—the health of the community and environment in which people live, work and play. Similarly, community health is profoundly affected by the collective behaviors, attitudes and beliefs of everyone who lives in the community. Community health definitions generally go beyond the absence of disease to address core problems within the community health education and promotion, disease prevention, economic and social factors.

Strategies for addressing health issues and encouraging healthy choices for a lifetime require understanding and involving communities in addressing the health issues. Community norms

and socioeconomic conditions are significant factors influencing health behaviors and health access. Citizens themselves must be engaged in the development of strategies intended to give them the best possible chances at leading healthy lives.

To that end we hope this report will cultivate new partners for health, engage the public in issues affecting their health and the health of their neighbors, and improve community health efforts by targeting resources in the areas of greatest need and incent others to base program and policy decisions on model approaches that work at a community-level.

About Community Health Assessment

The Document

“The Health of Island County” is a comprehensive report, a “snapshot in time” that presents health and injury-related data specific to Island County. The report was written using national, state and local data and whenever possible, comparisons are made to see where Island County stands relative to other counties and Washington state as a whole.

Intended to be a work in progress, this document will be amended and updated over time at its permanent home at the Island County website (www.islandcounty.net/health/CommAssess.htm). In this way current information about the issues that directly and indirectly affect the well-being of our people and communities can be easily accessed. Each module varies somewhat from each other, depending on data sources and authorship. A goal of the author’s has been to organize each module the same, if possible.

The various section headings in each module include:

- ◆ Fast Facts
- ◆ Identified Island County Issues
- ◆ Introduction and Background
- ◆ Local Data and Findings
- ◆ Effective Interventions
- ◆ Healthy People Goals and Objectives
- ◆ Local Resources
- ◆ Helpful Internet Sites

What are those Gray Boxes?

Throughout the report there are gray text boxes which include general information about community resources and programs available in Island County that address the specific issue being discussed in that section. Call Island County Health Department or the Opportunity Council to be linked to specific programs, services, or businesses.

Goal

The goal of making this information more widely available to the general public is to deepen people’s understanding of their community and facilitate continuing discussion about the health status of Island County. It is hoped that community groups and organizations will find this information useful in program planning, prioritizing health and safety concerns, and grant writing.

Public Health Responsibility

Information from such reports is enormously useful to public health agencies in general, and to health promotion and prevention efforts in particular.

Information is used to:

- ◆ Track health, disease, and risk factor trends over time and place, and across population subgroups,
- ◆ Quantify the burden of disease and illness among populations to assist in the reasonable allocation of resources for public health programs,
- ◆ Establish broad program priority areas and goals, and
- ◆ Plan, implement, and evaluate specific public health policies, programs, and services.

Though assessing and protecting the community's health has long been part of the mission of public health, the Washington State Public Health Improvement Plan (PHIP) of 1994 established clearer guidelines for the core functions of public health — assessment, policy development, and assurance. The PHIP legislation requires that local public health agencies improve their capacity to assess the community, use available data to shape the development of policy, and work with others in the community to assure that needed services are available and accessible.

Most importantly, as this report shows, much of health is dependent on an individual's pursuit of good health, one that includes education, self-care, minimizing risk behaviors and increasing healthy behaviors.

It is hoped that this report will be used as both public and private health agencies document needs, develop strategic plans, implement policies and programs, evaluate the effectiveness of programs and projects, monitor performance, and track community health trends. Ideally, data from other sources can and will be included in this report. For example, clinical data sources include information important to health promotion and disease prevention programs.

Recent research by health promotion experts demonstrated increased public health effectiveness by using multi-level strategies, intervening on the personal, interpersonal, organizational, and community levels. To be appropriately targeted, these strategies require assessment/surveillance information on community facilities, services, programs and policies.

The Island County Health Department and CHAB (the Island County Community Health Advisory Board) fully endorse the inclusion of citizens as key members of health assessment work. Citizen participation is important as citizens connect to health resources in ways that lead to culturally and population subgroup appropriate interventions and programs. Such approaches work best if developed at the local level, are oriented to real people, incorporate a broad array of philosophies and resources, and provide for a financially responsible continuum of care. Most importantly, as this report shows, much of health is dependent on an individual's pursuit of good health, one that includes education, self-care, minimizing risk behaviors and increasing healthy behaviors.

We also believe that significant health problems facing us in the next several decades will be best met by and in the community. We believe collaborative approaches with multiple community partners/resources will achieve the best health for Island County and its communities.

The health resources that a community develops are among the most important forces that define, motivate, and bond a community. Long term change will most be impacted by citizens able to lead healthy lifestyles and whose needs are met at a local level. As much as possible program effects and health improvement projects should be modeled after “best approaches” that have worked on a community-level.

Community Involvement

Comprehensive assessment of the health status of a community requires the input and involvement of a myriad of individuals, agencies, and organizations. Though there is always room for improvement, the health and social service agencies in Island County communicate well with one another. Each individual and entity brings new information and a unique perspective to bear.

As we continue to network, sponsor surveys and evaluate our work to identify and address health priorities, we have been successful at forging creative partnerships to address local needs in the most efficient way possible. It is our hope that wide distribution of this report will invite more input, generate increased community partnerships/collaborations and that subsequent profiles will be more complete and inclusive.

Data Sources

VISTA/PH

A broad collection of resources were used to provide the information and data included in this report. Most of these resources are publicly available via published reports, documents and the Internet. However, there is one data assessment resource cited in this report that is not directly accessible to the public. This source is the VISTA/PH data assessment system. For those who have an interest in understanding the sources of information used in the report, a brief description of VISTA/PH is provided.

VISTA/PH is a computer software program provided to and used by many local public health jurisdictions in Washington State for community health assessment activities. The VISTA/PH system was designed by the Seattle-King County Department of Public Health. VISTA/PH system uses federal, state, and local health status data sets to allow those individuals working the public health community to analyze health-related issues and problems.

United States Census

Every ten years, the US Census Bureau collects and compiles demographic, social and economic information pertaining to the US population. Though some populations are most likely not counted at census time (i.e., homeless people, undocumented immigrants), it is the best comprehensive information we have about the US population. The most recent census was completed in 2000. This report uses the 2000 census data as well as population estimates that are updated annually.

Vital Statistics

Vital statistics are taken from birth, fetal death and death records. Birth and death certificates are designed to gather information that meets the federal reporting requirements of the National Center for Health Statistics. It is important to note that the information captured has changed somewhat over the years so that it may be difficult to look at trends or make comparisons on some indicators. Also, the quality of the data is directly related to the accuracy with which the forms are completed.

Infectious Disease Reports

Washington State law requires that certain infectious diseases, over sixty in all, be reported to state and local health departments. Health care providers and laboratories report the diseases and the information is compiled and reported annually by the Washington State Department of Health.

Disease Registries

Washington State Department of Health also tracks various diseases. Most notably, they have an established cancer registry that track rates of cancer by site and other strata. It contains information on both incidence and mortality data.

Hospitalization Data

Data for hospitalization rates comes from the CHARS (Comprehensive Hospital Abstracting Reporting System) database. This data can provide a broader view of the patterns of illness and injury in the community than birth and death data. Non-fatal conditions and conditions with low-fatality rates that can be overlooked in mortality data become more evident in hospitalization counts. The impact of certain conditions like chronic obstructive pulmonary disease (COPD) or suicide attempt events can be examined.

The limitations of this data and what is NOT included here should be understood.

- ◆ Coding of certain clinical conditions is discretionary and may not be consistent.
- ◆ The impact of some conditions such as AIDS or diabetes can be masked since the primary diagnosis is often listed as the specific complication being treated, not the underlying disease.
- ◆ The data includes only those admitted to the hospital, not emergency room visits.
- ◆ Visits to clinics, other private practices, discharges from the Veteran's Administration, Naval Hospital, and state mental health institutions are not counted.
- ◆ It should also be noted that medical technology and the health care delivery system have changed drastically over the past several years. Therefore, falling hospitalization rates may not indicate a real reduction in disease prevalence. Many treatments formerly done in the hospital, such as chemotherapy, are now being done at home or on an outpatient basis.

2000-2001 Behavioral Risk Factor Surveillance System (Survey)

Throughout the report there are references to the 2000-2001 Health Department Behavioral Risk Factor Surveillance System (BRFSS), which is a standardized telephone survey established by the Centers for Disease Control and Prevention (CDC). It asks questions about health risk behaviors, use of preventive services, use of health care, attitudes about health related behavior, and such things as age and income.

Washington State collects data using BRFSS annually. Those survey results are used extensively in this report. Because of the survey methods, this system only reaches residents who have telephones, speak English, do not live in institutions, and agree to participate. In addition, because the data is self-reported, some health risk behaviors may be underestimated due to the survey respondent's desire to answer in a socially acceptable way. The BRFSS does, however, provide an efficient way to assess the health related behaviors and attitudes of a large cross section of the population.

The 2000-2001 BRFSS survey was similar to a baseline study conducted among Island County residents in 1996 of various behaviors and characteristics that are known to affect health. This current study was commissioned by the Island County Health Department in conjunction with other community health partners including Whidbey General Hospital, Island County Public Works Department, Whidbey Island Hospital Foundation, Island County/Stanwood Public Health and Safety Network, United Way of Island County, Stanwood/Camano Community Foundation, and Affiliated Health Services.

The survey was modeled after the Behavioral Risk Factor Surveillance System (BRFSS), a survey originally designed by the Centers for Disease Control and Prevention (CDC). The BRFSS, now conducted in every state, enables the CDC, state health departments and other health agencies to measure a variety of health risk behaviors and health-related characteristics of adults. This standardized assessment tool is used to measure health risks nationally, as well as state by state and other specific geographic regions. The survey is a household telephone survey and the sample is stratified to reflect age and sex distributions in Island County. The Island County assessment addresses health risk behaviors, as well as safety practices and environmental health risk opinions among Island County residents.

The BRFSS study of Island County residents is a primary part of an assessment in a community health process model that seeks to set goals and priorities that will help achieve a healthy Island County population. The methods for the BRFSS have been standardized over the past nineteen years by CDC. The survey itself consists of a core set of questions specified by CDC, together with questions added at the state level to address specific issues of importance to each state participating in the program. The Island County survey used some of the CDC core questions and included other question areas that addressed local needs. Respondent screening and wording of existing questions were done according to CDC specifications or the specifications of the agencies who had developed the questions.

Some question modules were based on those developed by other states and/or other Washington counties. Wording on a few new questions was pretested by Gilmore Research Group in random telephone interviews in Island County. A copy of the questionnaire is available from the Health Department.

The survey was conducted by telephone from the Gilmore Research Group central telephone facility in Seattle, Washington. A total of 1,037 randomly selected Island County adult residents were interviewed: 437 Whidbey residents in summer 2000 (August 18-September 30), 400 Whidbey residents in fall 2000 (November 2-December 13) and 200 Camano residents in winter 2001 (February 1-14). Because the Camano Island adult population was oversampled, their responses were weighted when combined with the Whidbey responses to reflect Island County as a whole. The weighted total for Island County reported in the Health of Island County document is 952. In addition to the Camano weighting, all response data were weighted by age and gender to provide an accurate picture of the county adult population. The confidence limits of findings based on the county-wide sample of 952 are about ± 3.0 at the 95% confidence level. For estimates based on population subgroups of the total sample, the confidence limits of findings are greater than ± 3.0 and vary depending upon the size of the subgroup.

References are made to demographic subgroups throughout the report. These subgroups are based on gender, age, income and geographic living area. Where appropriate, other factors such as having health coverage are examined. Any differences noted between subgroups in this report are statistically significant.

Environmental Health & Global Health Survey, Spring 2002

In February, 2002, students from the Research Methods in Developing Countries at the School of Public Health and Community Medicine at the University of Washington carried out a survey in Island County on Environmental Health and Global Health. The class worked with the Island County Health Department to design a study that could be used as a class assignment and also to share findings with the Health Department about the community's understanding of and concern about environmental and global health. Primary researchers for the project were Meredith Fort, Charlie Mock, and Steve Gloyd, all from the University of Washington.

The survey was a door-to-door survey of households on Whidbey Island. A full report outlining the methods that were used and key results and findings is available to the public. Included with the report are the survey instrument and the rules that were used in the field to select homes for interviews. Hard copies of the completed surveys are on file at the University of Washington and have been entered into Epi Info 2000. Both the data base and the surveys can be made available upon request.

The Research Methods in Developing Countries class was split into 12 teams of two interviewers (for a total of 24 people); two teams were in Freeland, four were in Coupeville and six were in Oak Harbor. The number of teams sent to each of the three sites was based on population size; the aim of the study was to collect information from a reasonably representative number of Whidbey Island households. The total number of survey responses that we received were 109 with the following breakdown by town: Oak Harbor (54) Coupeville (37), and Freeland (18). Survey results included

residents ranging in age from 19-92 years of age. The gender of respondents was 43% female and 57% male.

The surveys had 17 questions (both qualitative and quantitative) about environmental health in Island County and global health. The survey was designed with communication between the Island County Health Department and class instructors. Students from the class helped write questions and pre-tested the survey in Seattle. Analysis in the report is limited to quantitative questions.

Healthy People Objectives

When possible and appropriate, data in this report is compared to the *Healthy People 2010 and/or Healthy People 2000: National Health Promotion and Disease Prevention Objectives*. These objectives, set forth at the national level with input from states and local communities, are reviewed periodically to see how much progress has been made. The following websites give complete information and updates on the *Healthy People Objectives* <http://odphp.osophs.dhhs.gov/pubs/hp2000/> and <http://www.health.gov/healthypeople>.

Information and Cautions About the Data

Small Numbers

In Island County, the numbers of cases, events and individuals being discussed are often small enough so that a slight increase may appear great. For instance, if there is one case of a disease one year and two the next, it may appear that the rate has doubled. While it is true that the rate has doubled among the population, it does not indicate a serious health problem for the community. We attempt to lessen the impact of this problem by combining events for several years, but sometimes in Island County data there are small numbers of events even when presented in five-year increments.

Place of Occurrence – Place of Residence

Certain health issues can be described by using “*place of residence*” or “*place of occurrence*” data. Data by “place of residence” describes health issues for residents of a specified area only, regardless of where the event (i.e. death or injury) occurred. Data by “place of occurrence” allows us to look at the number of deaths occurring within an area’s boundaries and can include health events affecting residents and non-residents. The majority of community health data included in this report is described by place of residence.

Drawing Conclusions and Making Comparisons

Though health data is a powerful tool for assessing the health of communities, it can be difficult to pinpoint the causes of health problems in a population. Even the best data gives an incomplete picture of the complex mix of factors responsible for illness, injury and other indicators. Caution should be used in drawing conclusions about the true causes of health problems.

Comparing local rates to rates in other counties, the state or the nation can be interesting; however, it is important to remember the unique characteristics of Island County when doing so.

When appropriate, comparisons have been made to “counties like us” that have similar demographic characteristics.

Quantitative Versus Qualitative Data

Most of our data, even county-level data, is *quantitative data* from federal and state sources – that is a record of the number of events, cases or occurrences. Some quantitative data is available from local sources as well. Our quantitative numbers, however, do not reflect the whole picture.

The puzzle can be filled out somewhat with *qualitative data*, that is data that relies on the observations of community members to describe the situations around them. For example, the number of violent crime arrests for children under age 18 (quantitative) does not tell us why young people commit these crimes or how we might prevent them (qualitative) which are puzzle pieces only the community can describe.

Terms

Age-Adjusted Rates: These are rates that have undergone statistical transformation to allow for an improved comparison between groups that may differ in a characteristic that could affect or skew the presence of disease or injury in a population. Rates are standardized using the 1940 US population. Cancer deaths are standardized using both the 1940 and 1970 US population.

Age-Specific Rates: These are rates for specific age groups rather than the population as a whole. The denominator used to calculate the rate includes the population for the age group of interest rather than the population as a whole.

Case or Crude Rates: These are rates that describe the number of reported cases/events in a population during a specified time period.

Incidence Rates: These are rates that describe the number of “new” cases of a disease or injury occurring within a population during a specified time period.

Incidence: The number or proportion of “new” cases, events, or conditions in a specified population during a specified time period.

Medicaid: State-funded health insurance, also referred to as “Title XIX” or “medical coupons” in Washington State. Income level, age, and health status (i.e. pregnancy) determine program eligibility.

Medicare: Federally-funded health insurance for Americans age 65 and over.

Median: The middle value in a distribution, above and below which lie an equal number of values.

Morbidity: This refers to a number of measures that indicate a departure from a state of physical and psychological well-being, whether subjective or objective.

Mortality: This is a measure of deaths occurring in a given population, location, or other group of interest during a specific period of time.

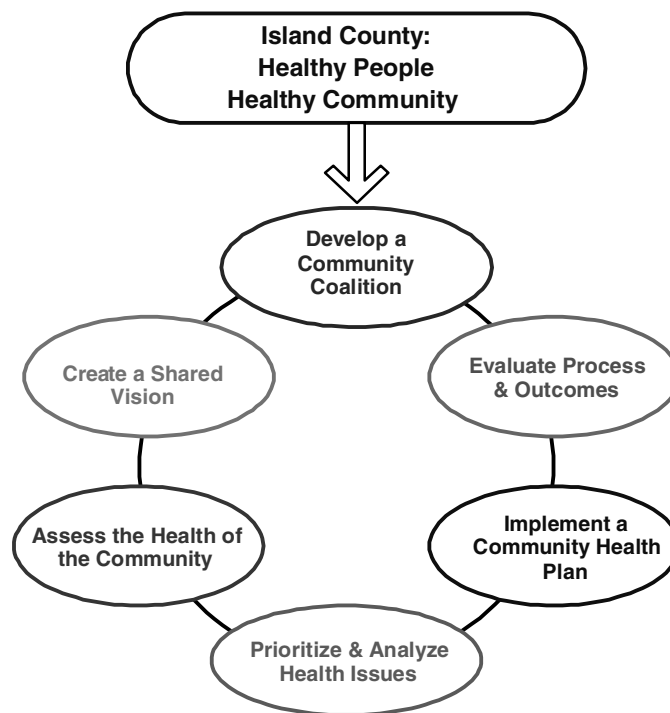
Prevalence: This is the “total” number or proportion of cases, events, or conditions in a specified population at a specific point in time. specified population during a specified time period.

Prevalence Rates: These are rates that describe or estimate the total number of events in a population at a specific point in time.

Rates: We use rates in addition to number of events (i.e. deaths, injuries, or cases) to allow for comparison between different populations. A rate reduces the impact of population differences in size and age structure and gives a clearer basis for determining whether one county is improving or declining on a measure of health or how they compare with another county or the state.

CHAB's Community Health Model

The Island County Community Health Advisory Board uses a Community Health Model to organize their work. The model (adapted from the Missouri CHART Manual) is displayed below. In 2000-2002 they assessed the health of the community and prioritized and analyzed health issues. This report has grown out of that work and their findings are summarized below.



CHAB Findings: Health Issues

Throughout much of 2001-2002, CHAB looked at health data in thirteen different health modules (same as the chapters of this report). At the end of each module CHAB listed health issues for Island County. At the end of each presentation and at the end of all presentations, CHAB scored the health issues. Thus, they scored them twice, once as they examined the data as an independent topic and again as a composite list of issues at the end. The process for scoring health issues is described as follows.

As CHAB heard the health presentations, the following issues emerged:

Health Issue	Synopsis
General Health Status	
Poverty (income < \$20K/year)	Poverty is associated with poor health status. BRFSS respondents earning \$20,000 or less had higher levels of poor/fair health compared to those earning more than \$20,000 (25% and 6%). 6.6% of persons in IC live below the Federal Poverty level and 10.4% of all children (compared with 10.2% and 15.2% in WA state).
Infectious Disease	
Enteric Disease Outbreaks	Disrupt the body's digestive system, typically producing nausea, vomiting, diarrhea or all three symptoms. IC had higher than average outbreaks in 2000 (Salmonella, Shigella and Giardiasis).
Pertussis Outbreaks	There were pertussis outbreaks in 1999 (34 cases) and 2000 (10 cases).
STD Rates Very High	In 1998 Whidbey Island had 185 cases of STDs, 107 reported by Whidbey Naval Hospital. STDs are under-reported, particularly by physicians in private practice. By mid-2001, Island County had already surpassed chlamydia rates of 2000.
Adult immunization	Pneumonia and influenza deaths together constitute the 6th leading cause of death. In 1998 64% of adults > 65 years received shots for the flu and 46% for pneumococcal .
Unintentional Injury	
Water Safety/Life Jacket Use	37% of adults surveyed had been in a small boat (< 20 ft.) in the past year. Of these 21.6% never wear a lifejacket. IC had 3 drownings in 2001.
Firearms Safety/Storage	38% of adults surveyed had firearms in the house, 47% of those were unlocked, 21% were loaded (about 50% of these were also unlocked).
Bicycle Safety/Helmet Use	16.7% of children use bicycle helmets sometimes (6.3), seldom (3.1) or never (7.3), according to parent report.
Falls	Falls constitute the highest number (65%) of non-fatal hospitalizations for unintentional injury. From Jan-June of 2001 WGH had 1560 incidents (emergency and outpatient) coded to falls, second only to "accidents".

Substance Abuse	
High number of packs per day consumed by cigarette smokers	Percent of all adults that smoke in IC (19%) is lower than WA state (24%) or US (23%), but those that smoke in IC smoke more packs of cigarettes per day.
Adult chronic drinking	Percent of IC adults that consumed 60 or more drinks in the last 30 day period is higher than that of WA state (5% vs. 3%).
Adult binge drinking	Has increased since 1996 (13% to 15% of adults). Is higher than WA state (14%), lower than the US (16.6%) and significantly higher than the HP 2010 goal (6%).
Adolescent drinking	Lower than WA state and US rates; still 15% of 8th graders, 35% of 10th graders and 43% of 12th graders report using alcohol in last 30 days.
Adolescent use of marijuana	Downward trend across grades; still over 20% of 10th graders and 27% of 12th graders used marijuana in last 30 days.
Adolescent smoking	Downward trend, from 1998 to 2000 in all but 12th grade. Almost 30% of 12th graders smoke. Lower than the US rates across grades.
Adolescent use of crystal methamphetamine	Downward trend, from 1998 to 2000, in 8th and 12th grade, increased in 10th grade (2% of teens).
Adolescent use of inhalants	Trend toward decreased in use, since 1998 in 6, 8, 10th grade, increase in grade 12 (3% of teens).
Chronic Disease	
Cervical cancer screening (Pap Test)	Has improved in IC since 1996; is still lower (86%) than WA (87.3%) and US (86.8%). Has exceeded HP 2000 goal, trend is in right direction.
Colorectal cancer screening (colonoscopy)	Cancer of the colon is the second most common cause of cancer death. The HP 2010 goal is for at least 50% of adults over 50 to have a fecal occult blood screening every two years. IC has a rate of 21.4%.
Smoking	Tobacco consumption is the leading preventable cause of death in the US. 19% of IC adults are at risk for smoking related illnesses.
Hypertension (high blood pressure)	High blood pressure affects 28.5% of IC adults, this has increased from 1996 (22.8%). IC levels are above WA (22.1%) and US (23.9%) levels and significantly higher than HP 2010 goals (16%).

Chronic Disease continued	
Cardiovascular disease	Increases in reported incidence of heart attack (3.8 to 5.4%), angina (2.7 to 5.1%) and stroke (1.9 to 2.6) since 1996.
Lack of Physical Activity	Percentage of people at risk for health problems related to lack of exercise is 73%. 26 conditions have been identified as caused or worsened by inactivity, including heart disease, high blood pressure, depression, obesity and some cancers.
Overweight/Obesity	Affects 34% of the adult population in IC. Has significantly increased since 1996 (26% to 34%). Significantly higher than HP 2000 and 2010 goals of 20% and 15%. Increases the risk of many chronic diseases.
Diabetes	Affects 5% of the adult population of IC; has increased since 1996 (from 4.1%). Has increased nationally by 33% in the 1990's, reflecting the surge in obesity during the same time period.
Adult Asthma	10.9% of IC adults report that they have been diagnosed with asthma (WA 11.9%, US 10.5%). Is often considered to be an environmental disease and there are well known "triggers" that exacerbate symptoms (tobacco smoke, dust mites etc.)
Pediatric Asthma	14% of adults in IC said that they have at least one child that has been diagnosed with asthma. Most common disease of childhood; leading cause of absence from school and 4th leading cause of disability in children.
Colorectal cancer	Rates of death from colorectal cancer are higher in IC than WA state.
Multiple Chemical Sensitivity	Over 6% of adult respondents reported that they have a chemical sensitivity.
Oral Health	
Adult access to dental care	18% of adults have not seen a dentist in the last year. Of those, 22% did not see a dentist because of cost. 65% of adult respondents have some form of dental insurance.
Pediatric access to dental care	10.4% of children wanted dental care in the last 2 years but were unable to get it. IC Health Department initiated the Access to Baby and Child Dentistry (ABCD) program, aimed at increasing child access to dental care.
Maternal Child Health	
Teen pregnancies	With rates only slightly lower than WA, there has been an increase in the total number of IC girls (and percent of all girls) age 15 to 17 who became pregnant (from 1997-2000).

Maternal Child Health continued	
Limited child care availability	Total child care providers and child care slots available have decreased from 1997 to 1999, while referral calls for care have increased.
Limited child care choices	45% of IC parents report “few” to “none” choices in child care providers (compared to 34% in WA state).
Mental Health	
Scarce resources for child/adolescent mental health	Island Mental Health served 490 children/youth in 2000. There are limited mental health professionals in IC seeing children.
Resource “gap” for working poor and/or uninsured adults	WGH added a medical social worker to the community clinics’ staff who sees low-income/working poor/uninsured adults.
Scarce resources for mental health prevention services	IC has very few support groups/education resources focused on mental health issues.
Effectiveness of mental health structure	The current state structure for mental health services reduces the funding that is available for direct services at the local level.
Demand vs. Resources for mental health	There are limited mental health professionals in Island County and demand by certain groups (low-income, uninsured) exceeds the community’s ability to provide access.
Depression	IC adults with health impairments most frequently reported depression/anxiety/emotional problems (25.8%).
Crime and Violence	
Child abuse/death	The number of children (and percent of all children) age birth to 17 referred as victims of maltreatment and judged to merit an investigation has increased in Island County (394 in 1998, 441 in 2000). In 2000-2001 there were 2 incidents of child homicide.
Increase in teen runaways	There is an upward trend in teen runaways from 1997 to 2000 (from 250 to over 400 respectively).
Lack of parent support and education	There is a lack of programs and/or resources available to new parents and/or children in families that are “at risk”.
Need for early intervention/prevention	This issue was added by CHAB to reflect the belief that early intervention/prevention programs for young children and their families (e.g. the Healthy Families project), are a demonstrated way to prevent violence in society.

Prioritizing the Health Issues

CHAB Applies “A Guide for Establishing Public Health Priorities”

(Modified from CDC’s *Case Study: Translating Science into Practice*)

Establishing priorities from the multitude of public health problems facing communities today is a necessary and increasingly difficult task. Public health administrators and managers are often faced with an increasing range of pressing problems in light of decreasing resources. A method to establish priorities that is fair, reasonable, and easy to calculate is a necessary management tool.

The method described here provides means to compare different health problems in a relative, not absolute, framework, as equally as possible, and in a somewhat objective manner. CHAB decided to use this method in analyzing health issues. This method, called both the Hanlon Method and the Basic Priority Rating System (BPRS), is described in *Public Health: Administration and Practice* (Hanlon and Pickett, Times Mirror/Mosby College Publishing) and *Basic Health Planning* (Spiegel and Hyman, Aspen Publishers).

The method has three major objectives:

- 1) to allow decision-makers to identify explicit factors to be considered in setting priorities;
- 2) to organize the factors into groups that are weighted relative to each other; and
- 3) to allow the factors to be modified as needed and scored individually.

Basic Priority Rating Formula

Based on review of repeated trials conducted in identifying health problems, a consistent pattern of criteria became apparent. This pattern is reflected in the components of this system.

Component A = Size of the problem

Component B = Seriousness of the problem

Component C = Estimated effectiveness of the solution

Component D = PEARL factors (propriety, economic feasibility, acceptability, resource availability, legality)

These components translate into two formulas that provide a numerical score, giving highest priority to those diseases/conditions with the highest scores.

Basic Priority Rating (BPR) $BPR = (A+B)C/3$

CHAB used the Basic Priority Rating system to address the issues they found as they explored the various health modules.

It is important to recognize and accept that, as with many such processes, a large amount of subjectivity is present. The choice, definition, and relative weights assigned to the components are a group decision and flexible. Further, the ratings are the judgments of the individual raters. However, some scientific control can be achieved by using precise definitions of terms, and using appropriate and accurate statistical data.

Components

Component A – Size of the Problem

This component is one in which the factors are few in number. Choices usually are limited to a percentage of population directly affected by the problem, i.e. incidence, prevalence, or mortality rates and numbers.

Size can also be considered in more than one way. Both the entire population and potential target populations can be considered. Also, diseases with common risk factors that are amenable to a common solution might be considered together. For example, if tobacco-related cancers were considered, lung, esophagus, and oral cancers might be considered as one. If more diseases were also being considered, cardiovascular diseases might also be considered. The maximum value of this component is 10. The decision of how to define size is usually a group consensus.

Component B – Seriousness

The group should consider possible factors that define the seriousness of the problem; however, the number of factors should be kept reasonable. The group should be careful not to bring the issues of size or preventability into the discussion, as they fit elsewhere into the equation.

The maximum score in this component is 20. The factors must be weighted and carefully defined. By using this number (20), Seriousness is considered to be twice as important as Size.

Factors that could be used are:

- Urgency: emergent nature of the problem; trends in incidence, mortality, or risk factors; importance relative to the public; current access to needed service.
- Severity: survival rates, average age at death, disability, relative premature mortality.
- Economic loss: to the community (city/county/state), to the individual.

Each of the factors must be weighted. As an example using four factors, the weights could be 0-5 or any combination that would equal a maximum of 20. It is usually helpful to establish what would be considered minimum and maximum in each factor. This will help to establish boundaries to keep some perspective in establishing a numerical rating. A way to consider this is to use as scale such as 0=none, 1= some, 2=more, and 3=most. For example, if premature mortality is being used to define severity, then infant mortality would probably be a 5 and gonorrhea would be a 0.

Component C – Effectiveness of Intervention

This component should be considered as “How well this problem can be solved, if at all.” The factor is scored from 0 – 10. This may be the most subjective component of the formula. There is a large amount of data available from studies that document the success of interventions. If there were not any known effective interventions, CHAB members scored this with a 0.

The effectiveness rating, based on known success rates from the literature, is multiplied by the percent of the target population expected to be reached.

Example: Smoking cessation

Target population 45,000 smokers

Total attempting to stop 13,500

Effectiveness of smoking cessation classes 32% or 0.32

Target population x effectiveness $0.30 \times 0.32 = 0.096$ or 0.1 or 1

Example: Immunization

Target population 200,000

Expected number immunized 193,000

Percent of total 97% or 0.97

Effectiveness 94% or 0.94

Population reached x effectiveness $0.97 \times 0.94 = 0.91$ or 9.1

An advantage in considering the target population and the number expected to be reached is getting a realistic feel for resources needed and expected ability to meet set objectives.

CHAB analyzed the health data and scored the issues using the Hanlon process (twice—once as they heard individual presentations and secondly as they scored all the issues as a composite listing at the end). They ended up with two lists of fifteen top health issues, twelve issues were on both “top 15” lists. They examined the top issues and grouped them into four health priority areas. The four areas and their corresponding issues are listed below. CHAB formed four Health Action Teams to address the issues and they develop three special reports, which are available as separate publications.



CHAB's Next Steps

In summary, CHAB spent the better part of two years examining health data and prioritizing health issues. Health data included social and health indicators, compared local data to national and state data, measured our data to national targets, and monitored data trends affecting Island County over time. CHAB members scored health issues according to the size of the population affected, the seriousness of the health problem or impact on the community, and whether there are effective community-based model approaches that appear to make a difference. The work of CHAB culminated in a short list of 12-15 health issues that were grouped into four health priority areas.

CHAB then set about writing special reports about the health priority areas. The goals for the reports are to describe their findings, raise awareness about the issues, and make program and/or policy recommendations to Island County politicians, service providers, and community partners. Their intent is that the reports will be used locally to begin dialogue around the health issues and to incent others to implement strategies across systems-health, social service, environmental, educational, and political, to begin to plan for actions that help ameliorate or prevent the health issues. These special reports are available from the Assessment & Community Development section of Island County Health Department.

The four health priority areas are complex issues with multiple facets and multiple solutions. To make meaningful progress on these (and other) issues we are emphasizing two key areas:

- 1) we must engage many people and many organizations around the county in solutions to these issues; and
- 2) we must, with our many partners, be mutually accountable for our progress. Together we can realize our many goals and make a difference in our county's health.

Emphasis 1: Bring the community together on public health goals

Public health is a collective concern. No single agency, government or otherwise, can address all the social, economic, and behavioral issues that affect health. Government can, however, act as the catalyst to engage the community in the search for solutions to health issues. Engaging communities effectively is a real, yet critically important, challenge. We will continue efforts to increase our capacity to engage the public in health issues and work to provide coordinated resources for others attempting to do the same.

Emphasis 2: Hold ourselves and others accountable for results.

The concept of Accountability is vital to the strength of government efforts. Being accountable means making sure that we are using our resources wisely and well. The information for knowing if "we are doing the right things" may come in a variety of ways, including citizen feedback, stakeholder discussions, focus groups and opinion surveys, and statistical data.

It is important that public health activities around the county lead to measurable improvements in health status and healthy behavior. Prevention is undeniably hard to measure, and the factors that affect health are numerous and complex. We must continue to explore and identify contributions that public health can make toward assuring the conditions in which people can choose health.

The Island County Health Department and CHAB will continue to evaluate our own and others' performance through a variety of means, with an emphasis on improving health outcomes.

We will also continue to protect consumers by monitoring and responding to disease trends, environmental conditions, and health care quality. Accountability requires effective communication and trustful partnerships and we will work concertedly to make Island County a place where every person can be healthy.

Healthy People 2010 Goals

(Selected items as of 1-9-03)

Island County and Its People (Demographic and Economic Data)

Quality of Life/Social Context

- 1) Increase food security among 94% of U.S. households and in so doing reduce hunger. (IC 95%)

General Health Status

Health Care Access, Satisfaction, and Coverage

- 1) Increase the proportion of persons with health insurance to 100%. (IC 94%)
- 2) Increase the proportion of persons who have a specific source of ongoing care to 96% (97% among children and youth). (IC 89%)
- 3) Increase the proportion of persons with a usual primary care provider to 85%.
- 4) Reduce hospitalization rates for 3 ambulatory-care-sensitive conditions: pediatric asthma (17.3 admissions per 10,000 population under age 18), uncontrolled diabetes (5.4 admissions per 10,000 population ages 18-64), and immunization-preventable pneumonia and influenza (8 admissions per 10,000 population aged 65 years and older).

Environmental Health

- 1) Reduce the proportion of nonsmokers exposed to environmental tobacco smoke to 45%.
- 2) Increase recycling of municipal solid waste to 38%.
- 3) Reduce infections caused by key foodborne pathogens to 12.3 cases of *Campylobacter* species; 1 case of *Escherichia coli* O157:H7; .25 cases of *Listeria monocytogenes*; and 6.8 case of *Salmonella* species per 100,000 population.

Unintentional Injury

- 1) Reduce deaths caused by unintentional injuries to 17.5 per 100,000 population. (IC 30.1 per 100,000)
- 2) Reduce deaths caused by motor vehicle crashes to 9.2 deaths per 100,000 population. (IC 9.6 per 100,000)
- 3) Reduce the proportion of persons living in homes with firearms that are loaded and unlocked to 16%. (IC 4.6%)
- 4) Increase use of safety belts to 92%. (IC 87.6%)
- 5) Increase use of child restraints to 100%. (IC 95.8%)
- 6) Increase functioning residential smoke alarms to 100% on every floor.
- 7) Reduce drownings to .9 per 100,000 population.

Infectious Disease

- 1) Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least 5 years to 90%.
- 2) Maintain vaccination coverage levels for children in licensed day care facilities and children in kindergarten through the first grade to 95%.
- 3) Increase the proportion of providers (physicians, public health) who have measured the vaccination coverage levels among children in their practice population within the past 2 years to 90%.
- 4) Increase the proportion of children who participate in fully operational population-based immunization registries to 95% of children under age 6.
- 5) Increase the proportion of noninstitutionalized adults who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease to 90%.
- 6) Reduce or eliminate indigenous cases of vaccine-preventable diseases: Measles to 0, pertussis to 2,000 children under 7 in the United States, Haemophilus influenza type b (children under age 5) to 0, Hepatitis B (ages 2-18) to 9 in the United States.
- 7) Reduce hepatitis A to 4.5 new cases per 100,000 population.
- 8) Reduce meningococcal disease to 1 new case per 100,000.
- 9) Reduce hepatitis C to 1 new case per 100,000 population.
- 10) Reduce tuberculosis to 1 new case per 100,000.
- 11) Increase the proportion of all tuberculosis patients who complete curative therapy within 12 months to 90%.
- 12) Increase the proportion of contacts and other high-risk persons with latent tuberculosis infection who complete a course of treatment to 85%.
- 13) Reduce gonorrhea to 19 new cases per 100,000 population per year.
- 14) Reduce the proportion of adults with genital herpes infection to 14%.

Chronic Disease and Physical Activity

Heart Disease

- 1) Reduce coronary heart disease deaths to 166 per 100,000. (IC 199.7 per 100,000 for all heart disease)
- 2) Reduce stroke deaths to 48 per 100,000. (IC 44 per 100,000)
- 3) Reduce the proportion of adults with high blood pressure to 16%. (IC 28.5%)
- 4) Increase the proportion of adults with high blood pressure who are taking action (for example, losing weight, increasing physical activity, or reducing sodium intake) to help control their blood pressure to 95%.
- 5) Increase the proportion of adults who have had their blood pressure measured within the preceding 2 years and can state whether their blood pressure was normal or high to 95%.
- 6) Reduce the proportion of adults with high total blood cholesterol levels to 17%. (IC 34%)
- 7) Increase the proportion of adults who have had their blood cholesterol checked within the preceding 5 years to 80%. (IC 87.7%)

Lung Disease

- 1) Reduce asthma hospitalizations to 25/10,000 in children < 5, 7.7/10,000 in persons ages 5-64, and 11/10,000 in adults age 65 years or older.
- 2) Reduce hospital emergency department visits for asthma to 80/10,000 in children <5, 50/10,000 in adults age 65 and older.
- 3) Reduce deaths from chronic obstructive pulmonary disease among adults to 60 deaths per 100,000 adults.
- 4) Reduce the proportion of adults whose activity is limited due to chronic lung and breathing problems to 1.5% of adults older than 45 years.

Cancer

- 1) Reduce overall cancer deaths to 159.9 deaths per 100,000 population. (IC 175.6 per 100,000, age-adjusted rate)
- 2) Reduce the colorectal cancer death rate to 13.9 deaths per 100,000 population. (IC 15.8 per 100,000)
- 3) Reduce the prostate cancer death rate to 28.8 deaths per 100,000 males. (IC 39 per 100,000)
- 4) Increase the proportion of persons who use at least one of the following protective measures that may reduce the risk of skin cancer: avoid the sun between 10 am and 4 pm, wear sun-protective clothing when exposed to sunlight, use sunscreen with sun-protective factor (SPF) of 15 or higher, and avoid artificial sources of ultraviolet light. Target is 75% of adults use at least one of the identified protective measures.

Cancer Screening

- 1) Increase the proportion of women who have ever received a Pap test to 97% and increase the proportion of women who have had a Pap test within the preceding 3 years to 90%. (IC 97.9% and 90.8%)
- 2) Increase the proportion of women aged 40 years and older who have received a mammogram within the preceding 2 years. (83.2% in the over age 50)
- 3) Increase to 50% adults aged 50 and older who have received a fecal occult blood test (FOBT) within the preceding two years; and increase to 50% adults aged 50 and older who have ever received a sigmoidoscopy.

Diabetes

- 1) Prevent diabetes to 2.5 new cases per 1,000 population per year.

Physical Activity

- 1) Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiorespiratory fitness 3 or more days per week for 20 or more minutes per occasion.
- 2) Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.

Overweight and Obesity

- 1) Reduce the proportion of children and adolescents who are overweight or obese to 5%. (IC 9-11% of 8th-12th graders)
- 2) Reduce the proportion of adults who are obese to 15%. (IC 15.5%)
- 3) Increase the proportion of adults who are at a healthy weight to 60%. (IC 46.1%)
- 4) Increase the proportion of physician office visits made by patients with a diagnosis of cardiovascular disease, diabetes, or hyperlipidemia that include counseling or education related to diet and nutrition to 75%.

Physician Role

- 1) Increase the proportion of physicians and dentists who counsel their at-risk patients about tobacco use cessation, physical activity, and cancer screening to 85%.

Maternal Child Health

- 1) Increase the proportion of pregnant women who receive early and adequate prenatal care to 90%. (IC 86.1%)
- 2) Reduce low birth weight (<2,499 grams) to 5% and very low birth weight (<1500 grams) to .9%. (IC 5.5% low birth weight)
- 3) Reduce preterm births to 7.6%.
- 4) Increase abstinence from alcohol (94%), cigarettes (99%), and binge drinking (100%) among pregnant women. (IC 99.8% for alcohol, 88.52% for tobacco).
- 5) Reduce teen pregnancies to 43 per 1,000 (IC had 27 per 1000 in 2001).

Oral Health

- 1) Reduce the proportion of children and adolescents who have dental caries experience in their primary teeth to 11%.
- 2) Reduce the proportion of children with dental caries experience in their primary and permanent teeth to 42%.
- 3) Increase the proportion of low-income children and adolescents who received any preventive dental service during the past year to 57%.

Mental Health

- 1) Increase the proportion of adults with recognized depression who receive treatment.
- 2) Increase the number of States, Territories, and the District of Columbia with an operational mental health plan that addresses mental health crisis interventions, ongoing screening, and treatment services for elderly persons.

Substance Abuse

Tobacco Use

- 1) Reduce cigarette smoking by adolescents to 16%. (IC had 20% in 12th grade)
- 2) Reduce cigarette smoking by adults to 12%. (IC 19%)

Alcohol Use

- 1) Increase the proportion of adolescents not using alcohol (to 81%) (IC 61% of 12th graders) or any illicit drugs (to 90%) (IC 74% of 12th graders) during the past 30 days, total using neither is 79%.
- 2) Reduce the proportion of adults using any illicit drug during the past 30 days
- 3) Reduce the proportion of adults engaging in binge drinking of alcoholic beverages during the past month— adults reduced to 6% and adolescents to 2%. (IC 15% adult)
- 4) Reduce the proportion of persons engaging in binge drinking of alcoholic— Reduce the proportion of adults who exceed guidelines for low risk drinking to 50% (males may be at risk for alcohol-related problems if they drink more than 14 drinks per week or more than 4 drinks per occasion and females may be at risk if they drink more than 7 drinks per week or more than 3 drinks per occasion).

Other illicit substance use

- 1) Reduce past-month use of illicit substances. Increase the proportion of adolescents not using alcohol or any illicit drugs during the past thirty days to 89%. (IC 74% of 12th graders)
- 2) Reduce the proportion of adolescents reporting use of marijuana during the past thirty days to .7%. (IC 26% of 12th graders)
- 3) Reduce the proportion of adolescents who use inhalants to .7%.

Crime and Violence

- 1) Reduce homicides to 3 per 100,000 population.
- 2) Reduce weapon carrying by adolescents on school property to 4.9%.
- 3) Increase high school completion rate to 90% (IC had a drop-out rate of 7.5% in 2000-2001, 4th highest in the state).

Effective Interventions? Health Indicators? Where to Start?

Healthy Communities

www.healthycommunities.org

- Creating fact sheets on local issues
- Community toolbox (<http://ctb.ku.edu>)
- Indicators

The Community Guide

www.thecommunityguide.org

- Community interventions

Washington State Department of Health, The State of Washington's Health report

www.wa.doh.gov/HWS/

- Chapters on most health issues
- Contains information on effective interventions

Promising Practices

www.promisingpractices.net

- Children/family interventions

Center for Health Improvement/Health Policy Coach

www.healthpolicycoach.org

- Many short chapters on a number of the topics we are working on
- Healthy lifestyles fact sheets

Centers for Disease Control and Prevention

www.cdc.gov

- Health topics list many areas, interventions, examples
- Health topic education/awareness

The Sustainable Communities Movement

www.sustainable.org

- Overview of sustainability
- Many links to community indicator projects

California Healthy Communities

www.civicpartnerships.org

- Community-based systems change
- Sustainability toolkit
- "Fresh ideas" physical activity examples
- Public health awareness
- Community health education

Healthy People 2010

<http://www.healthypeople.gov>

Healthfinders

<http://www.healthfinder.gov>

Office of Disease Prevention and Health Promotion

<http://odphp.osophs.dhhs.gov>

Minnesota Department of Health

Strategies for Public Health

<http://www.health.state.mn.us/strategies/index.html>

Resources

<http://www.mnplan.state.mn.us.datanetweb/health.html>

Examples of county health indicator tables

www.health.state.mn.us