



Indicators Tool Kit

Information to share from the First Nations Centre of the National Aboriginal Health Organization (FNC@NAHO)

UNDERSTANDING, IDENTIFYING AND DEVELOPING KEY HEALTH AND WELL-BEING INDICATORS

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First Nations Health and Well-Being

Indicators Tool Kit

DRAFT

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This Tool Kit provides an overview of the basic concepts and ideas around health determinants and their influence on individual and community health. It also provides clarification of the term “health indicators”, what they are used for and how they factor into a community-based research project about the health of a First Nations population.

The aim of this Tool kit is to assist First Nations in understanding, identifying and developing key health and well-being indicators to enable them to self-monitor the trends or changes in the health of their communities. In particular, First Nations who are involved in conducting research into the status, and causes, of their communities’ overall health. The knowledge resulting from health surveillance will enable First Nations to better determine community health priorities and develop effective health policies and programs. The overall goal is to promote health and prevent disease.

Our intended audience includes health professionals, community researchers, community leaders, policy makers, and others involved in community development. We also hope that this Tool Kit will serve to enhance the awareness and understanding of First Nations health among government departments, academic researchers, as well as government analysts to. The struggle to improve the disproportionately poorer health of First Nations populations will be easier when external players acknowledge First Nations perspectives on how health should be described and explained. We wish to acknowledge the work of Cari St. Pierre in the development of this Tool Kit.

The First Nations Centre (FNC) offers additional tool kits that complement this one. They include:

- *Understanding Research;*
- *Health Surveillance;*
- *Privacy;*
- *Ethics in Health Research;*
- *Ethics II: Guidance Towards Developing a Community Code of Research Ethics; and,*
- *Understanding the Principles of Ownership, Control, Access, and Possession (OCAP).*

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FIRST NATIONS CONCEPT OF HEALTH AND WELL-BEING



Despite their geographic differences, First Nations have a similar view of “health and well-being”. This view is a holistic one, which focuses on achieving balance and harmony among the physical, mental, emotional and spiritual aspects of one’s life in relation to their environment, culture, family, and community. Well-being “flows from balance and harmony among all elements of personal and collective life”.¹ To achieve and maintain this balance means to achieve and maintain good health.

The World Health Organization defines health as “a state of complete physical, social and mental well-being, and not merely the absence of disease or infirmity”.²

The medicine wheel is a model used by many First Nations to show this holistic view of health and the interconnectedness between all aspects of life. This interconnectedness also applies when deciding on the indicators and determinants to be used in describing a population’s health.

Gathering Strength, the Report of the Royal Commission on Aboriginal Peoples, states that “achieving good health involves more than being free of disease or living longer. It includes having a strong physical body, a mind able to

learn and embrace change, a heart that is open and caring, and a spirit that is clear and connected to all that is around us. Thus, achieving health is a lifelong journey”.¹

“...Wellness is a community issue, a national issue, a women’s issue. It touches youth concerns, family considerations, even self-government and historical concerns. I firmly believe that no other issue so fundamentally relates to the survival of our people as that of health”.

- Tom Iron (Federation of Saskatchewan Indian Nations, quoted in the Royal Commission on Aboriginal Peoples. Vol. 3, Chapter 3, 1996:107)

¹ Gathering Strength RCAP 1996

² World Health Organization WHO Constitution of 1948

WHAT DETERMINES THE HEALTH OF A PERSON, COMMUNITY OR POPULATION?

A person's health and well-being is influenced by many factors and conditions. This may include: what we eat; where we live; our biological make-up; our ethnicity; our family history; the state of our environment; our relationship with friends and family; our education level; our income level; the collective health of our community, and so on. "Determinants of Health" is a term used to describe all of these social, economic, cultural, physical and environmental factors that interact with one another and influence our health as an individual, community, and population. In a First Nations holistic approach to health and well-being, consideration is given to the non-medical, cultural, and spiritual determinants of health³ such as use of traditional language, cultural practices and ceremonies.

Everything you interact with throughout your life is in some way a determinant of your health.

Determinants of health exert their influence – good or bad – upon the individual. For instance, income and

³ The Health and Well-Being of Aboriginal People in BC, 2001:5

housing conditions are health determinants. A person with low income is more likely to be poorly fed, unable to afford healthier foods, be overweight and therefore more likely to develop diabetes. A person living in an overcrowded house experiences more psychosocial stress, and is more likely to suffer depression or be anti-social in a way that is problematic. If the house has mould problems, that person is more likely to suffer from a respiratory condition. Impacts like these are difficult to measure at the individual level. How can it be proven that low income and a mouldy house resulted in diabetes and asthma for one person? We *can* diagnose this person's medical condition but we can seldom establish the cause of the health problems with absolute certainty.

On the other hand, when we consider a population of hundreds or thousands of individuals, the cumulative health effects of determinants like income and housing start to become clear. We can express the influence that these determinants have as statistics. The first step in dealing with a population health problem is to understand the causes of the problem. Health indicator statistics help us towards this understanding. Health indicator statistics are essential for the public health practitioner, designer of programs and services, the decision makers and the negotiator dealing with funding levels.

The following box⁴ illustrates the inter-connectedness and complex interactions between the determinants of health. Raven's asthma is clearly related to mould and

⁴ Adapted from the Public Health Agency of Canada. 2003. *What Determines Health?* website <http://www.phac-aspc.gc.ca/ph-sp/phdd/determinants/index.html>.

fungus. Let us say that the asthma will disappear if she moves to a mould- and fungus-free house. Yet the economic and other conditions responsible for the mould in her house and in others' houses remain. Since there are so many contributing factors that play a role in shaping health, it is difficult to point out the original source of the problem.

WHY IS RAVEN IN THE HOSPITAL?

Because she had an asthma attack.

WHY DID SHE HAVE AN ASTHMA ATTACK?

Because the mould and fungus in her house triggered the attack.

WHY DOES HER HOUSE HAVE MOULD AND FUNGUS?

Because there is poor indoor air quality in her house.

WHY IS THE INDOOR AIR QUALITY POOR?

Because there is chronic flooding, overcrowding, inadequate ventilation, and a lack of maintenance.

WHY IS THERE A LACK OF MAINTENANCE?

Because her mother cannot afford to do repairs.

WHY CAN'T HER MOTHER AFFORD TO DO REPAIRS?

Because she has a low income.

WHY DOES SHE HAVE A LOW INCOME?

Because she is a single parent and does not have much education.

BUT WHY...?

Finally, not every health determinant can be measured scientifically such as spirituality and culture.

Mainstream society has long held a narrow view of what constitute the determinants of health. Fortunately, an enlightened perspective is rapidly becoming the norm. This is the internationally recognized **population health approach / health determinants framework** which now forms the basis for much of the World Health Organization's (WHO's) approach to health assessment⁵. This perspective arose from a growing recognition among policy-makers and researchers that population health and well-being are predominantly determined by social and environmental conditions, rather than simply by health services:

*A population health approach recognises that any analysis of the health of the population must extend beyond an assessment of traditional health status indicators like death, disease and disability. A population health approach establishes indicators related to mental and social well-being, quality of life, life satisfaction, income, employment and working conditions, education and other factors known to influence health*⁶.

⁵ <http://www.who.int/hia/evidence/doh/en/index.html>

⁶ <http://www.hc-sc.gc.ca/hppb/phdd/determinants/index.html#determinants>

The framework for applying this approach in Canada was developed in papers by the Federal/Territorial/Provincial Advisory Committee on Population Health (ACPH, 1999). This framework allows for the consolidation of research on key determinants of health and well-being - at the level of populations large and small. The following chart identifies some determinants of health and their influence on health. This list is not exhaustive.

Determinants of Health⁷	Factors	Influence on health⁸
Social and Economic Status	Age, income, poverty, social assistance	Higher income and social status are linked to better health. High income determines living conditions such as safe housing and ability to buy sufficient and healthier food. The greater the gap between the richest and poorest people, the greater the differences in health.
Education and Literacy	High-school, post-secondary graduation, training	Low education levels are linked with poor health, more stress and lower self-confidence. Education contributes to health and prosperity by equipping people with knowledge and skills for problem solving, and helps provide a sense of control and mastery over life circumstances. It increases opportunities for job and income security, and job satisfaction. And it improves people's ability to access and understand information to help keep them healthy.
Employment and Working Conditions	Unemployment, underemployment, workplace safety, work stress	People in employment are healthier, particularly those who have more control over their working conditions. People who have fewer stress related demands of the job are healthier and often live longer than those in more stressful or riskier work and activities.
Lifestyle and Personal Health Practices	Physical activity, healthy eating, traditional diet, smoking, safe sex, drugs and alcohol	Lifestyle and Personal Health Practices refer to those actions by which individuals can prevent diseases and promote self-care and make choices that enhance health. Balanced eating, traditional diet, physical activity, smoking, drinking, practicing safe sex all play a role in determining our health.

⁷ 2002, NAHO, Evidence-Based Decision Making Framework, unpublished and Online: www.naho.ca/firstnations/english/faq.php)

⁸ <http://www.who.int/hia/evidence/doh/en/index.html> and <http://www.phac-aspc.gc.ca/ph-sp/phdd/determinants/determinants.html#employment>

Genetic and Biological Factors	Height, birth weight, disabilities, inherited predispositions to health conditions or diseases, (diabetes, FAS, autism, asthma, allergies, depression, cancer, heart disease)	Inheritance plays a part in determining lifespan, healthiness and the likelihood of developing certain illnesses. In some circumstances genetic endowment appears to predispose certain individuals to particular diseases or health problems.
Individual Capacity and Coping Skills	Personal characteristics, disabilities, sense of control, resilience, self-esteem, problem solving skills	Ability to cope with life's stresses and challenges, develop self-reliance and solve problems affect health
Social Support Networks	Social capital ⁹ , community support	Greater support from families, friends and communities is linked to better health.
Available Health and Social Services	Traditional healing practices, traditional medicine, access to healers, childhood immunization, use and access to health care services, dental care, mental health care, home care, prescriptions, First Nations representation in health professions	Access and use of services that prevent and treat disease influences health. Health services, particularly those designed to maintain and promote health, to prevent disease, and to restore health and function contribute to population health. The health services continuum of care includes treatment and secondary prevention
Community Factors	Community wellness, community engagement, community services	Social or community responses can add resources to an individual's repertoire of strategies to cope with changes and foster health. The strength of social networks within a community, region, province or country. It is reflected in the institutions, organizations and informal giving practices that people create to share resources and build attachments with others
Culture	Cultural ceremonies and practices, traditional language, traditional beliefs and values, spirituality, discrimination, marginalization, loss of culture, loss of language	Customs and traditions, and the beliefs of the family and community affect health. The caring and respect that occurs in social relationships and the resulting sense of satisfaction and well-being, seem to act as a buffer against health problems. Some persons or groups may face additional health risks due to a socio-economic environment, which is largely determined by dominant cultural values that contribute to the perpetuation of conditions such as marginalization, stigmatization, loss or devaluation of language and culture and lack of access to culturally appropriate health care and services.
Childhood Development	Early child care, postnatal care, food security, special needs, positive parenting	Childhood development is a powerful determinant of health. Early development, school readiness, learned behaviour.

⁹ Mignone, J., and O'Neil, J.. (2005) Social Capital as a Health Determinant in First Nations: An exploratory Study in Three Communities. Journal of Aboriginal Health, Vol. 2, Issue 1. (26-33) "Social capital of a community is composed of the following elements: social relationship, networks, social norms and values, trust, and resources".

Gender	Socially determined roles, traditional roles, personality traits, attitudes, behaviours and values	Men and women suffer from different types of diseases at different ages. Gender refers to the array of society-determined roles, personality traits, attitudes, behaviours, values, relative power and influence that society ascribes to the two sexes on a differential basis. "Gendered" norms influence the health system's practices and priorities. Many health issues are a function of gender-based social status or roles.
Sexuality and Reproductive Health	Sexual orientation ¹⁰ , access to info on sexually transmitted diseases, pregnancy, access to prenatal care	Access to quality prenatal and post-natal care leads to better health of the mother and the baby.
Physical and Built Environment	Housing quality, mould, water quality, sanitation facilities, air quality, pollution	Safe water and clean air, healthy workplaces, safe houses, communities and roads all contribute to good health. At certain level of exposure, contaminants in our air, water, food and soil can cause a variety of adverse health effects, including cancer, birth defects, respiratory illness and gastrointestinal ailments. In the built environment, factors related to housing, indoor air quality, and the design of communities and transportation systems can significantly influence our physical and psychological well-being.
Territory	Isolated community	Where you live has an impact on your health. If your community is isolated, you may not have access to local services. The delay in getting treatment can impact health.
Living Conditions	Crowding, exposure to second hand smoke, access to phone or internet, smoke detector	A person living conditions greatly affect their health.
Self-Determination	Cultural continuity ¹¹ , community control, health transfer agreements, community development	The extent of control your community has over its education services, health services, governance, laws, lands, etc... the greater the health of the community will be.
Family History	Colonization, residential schools, inter-generational trauma, relocation, justice institutions, Children Aid Services	Family history, negative and positive, influence health.

¹⁰ Robert Smith, *Determinants of Health Presentation. HIV Edmonton*. Not an officially recognized determinant of health by Health Canada. Website <http://www.hivedmonton.com/html/powerpoint/DETERMINANTS%20OF%20HEALTH.ppt>

¹¹ Chandler and Lalonde (1998) Cultural Continuity as a Hedge Against Suicide. The process of "cultural continuity"¹¹ refers to First Nations communities that have taken active steps to preserve and rehabilitate their own cultures. Cultural continuity includes title to traditional lands, self-government, control over education services, police and fire services, and health services and cultural facilities. This research shows that First Nations communities that have greater cultural continuity have lower youth suicide rates.

WHAT ARE HEALTH INDICATORS?

Health indicators measure and monitor trends or changes in the health of a population. They demonstrate whether population health is improving or worsening, or not improving when perhaps it should be. Health indicators measure the complex relationships between social, economic, cultural and environmental influences that determine health. They are subject to change as the health of a population changes.

An Indicator is a very specific inquiry or question into a much larger issue. For example, imagine that you have observed a trend that more youth are now interested in traditional healers and medicine. Consequently, your community requires information on the percentage of the community making use of traditional healers and traditional medicines. Measures must therefore be developed. The indicator is the question - often referred to as the tool - used to measure what percentage of people in your community are using traditional healers. The measure would be "Do you use Traditional medicines?"

"Indicators are measurement systems at the International, National, Provincial, Regional, or Community level. Indicators are used to monitor social systems, to help identify changes and

and to guide interventions".¹²

There are two major methods of collecting information:

1. **Quantitative Indicators (for quantitative data):**
These are generally used in a survey or questionnaire. They are measures of quantity that result in statistical data.
2. **Qualitative Indicators (for qualitative data):**
These involve open-ended questions, the answers to which reflect thoughts and views of the respondents. Unlike an objective measure (e.g., number of social assistance cases on 31 March), a qualitative indicator captures a view rather than a count.

An example of a quantitative indicator is the answer to the survey question: ***"Do you use Traditional medicines? – Regularly / Sometimes / Never / Don't Know"***. *The 2002/2003 RHS asked this question.¹³ Some enlightening patterns emerge when the answers are compared with the age groups of the respondents as follows.*

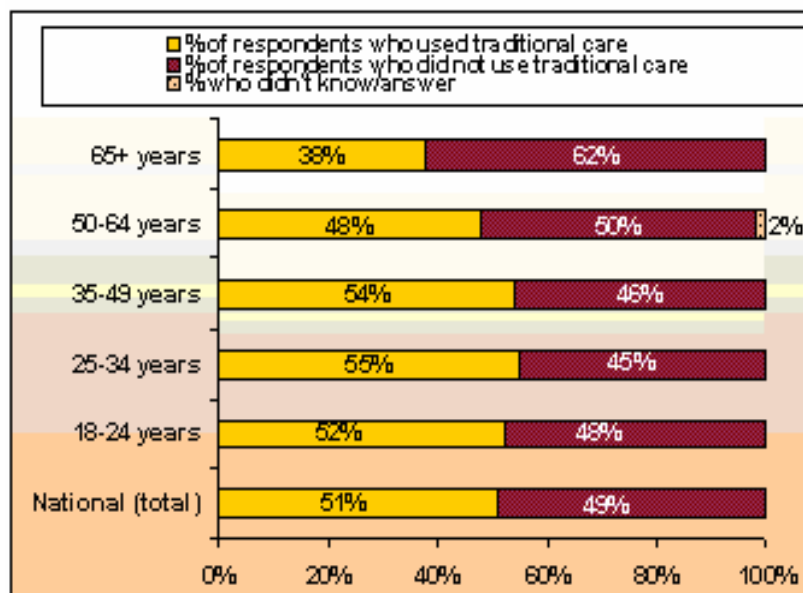
¹² 2001, University of Ottawa- Institute of the Environment, Akwesasne Mohawk Council, Little Red River Cree, and Miawpukek Community Health Indicator Project:: 22

¹³ First Nations Inuit Regional Health Survey, 2002-3 survey question #51

Chart 1: Reported use of traditional care, nationally and by age group¹⁴

The measurement of the responses to this indicator from respondents 18-24 years was that 51% of the youth used traditional care, compared to 48% of the youth who answered that they did not use traditional care.

Use of Traditional Healers and Medicines by Age Group



Variables represent the numerous smaller parts that influence and shape a much larger occurrence or trend. For instance, smoking is a trend. There are many variables surrounding why a person smokes such as: when he/she started smoking, why he/she smokes, family members who smoke, how much he/she smokes, how much it costs to smoke, etc... Therefore, an indicator is a variable or a group of variables you choose that are used to help you understand and tap into a specific concept or trend, or to monitor change of a trend.

Indicators are considered “relational”. In other words, they can compare and help you to evaluate a trend. There are four (4) types of Indicator Measures that differ in how the indicator is represented.

1. The simplest measure of an indicator is one that represents the number or simple count of an indicator.
2. Proportion or percentage of the occurrence of the indicator
3. Rate and Ratio, a comparative indicator
4. Aggregate or Aggregated measures

We have seen that “health determinants” are the factors that determine population health. “Health indicators”, on the other hand, are the statistics we use to measure the effect of each health determinant.

¹⁴ FNC-NAHO-March 2004:Chart 95

MEASURES OF...	INDICATOR AREA	HEALTH INDICATOR (The Statistic)
Health Status ¹⁵	Life expectancy Infant mortality Low birth weigh Self-reported health	<ul style="list-style-type: none"> Life expectancy at birth Infant mortality rates Low birth weight Self-reported health
Health Outcomes	Change in life expectancy Improved quality of life Reduced burden of disease and illness	<ul style="list-style-type: none"> Mortality rates (diseases, cancer, suicide, all causes of death) Total hip/knee replacement rate Incidence rate for cancer Potential years of life lost due to (cancer, stroke, suicide, unintentional injury), prevalence of diabetes
Quality of Service	Patient satisfaction Access to 24/7 first contact health services Home and community care services Public health surveillance and protections Health promotion and disease prevention	<ul style="list-style-type: none"> Overall health care services received Percentage having a regular physician Access to health care and information Utilization of home care services and ambulatory care Incidence of tuberculosis, HIV, Chlamydia Rates of smoking, physical activity, body weight

¹⁵ First Nations Comparable Health Indicators - Healthy Canadians: A Federal Report on Comparable Health Indicators 2002. Health Canada.

Community Environments ¹⁶	Employment Income Educational attainment Participation and social integration	<ul style="list-style-type: none"> Employment rate, employment to population ratio Average employment income, children in low-income families High school graduation, post-secondary graduation Community control over health and social services, Aboriginal children in care, youth in justice institution
Healthy Growth and Development	Healthy child development Learning opportunities Healthy choices Healthy connections	<ul style="list-style-type: none"> Teen pregnancy rate School completion rate Smoking rate, binge drinking Family connectedness, school connectedness
Physical Environment	Housing and infrastructure Air quality Water quality Environmental change	<ul style="list-style-type: none"> Housing quality, housing need, community services Exposure to second-hand smoke Drinking water quality Mercury levels, progress in relationship to the land
Health Services	Accessibility Doing the right things right Culturally-appropriate services	<ul style="list-style-type: none"> Childhood immunization, pap smears, screening mammography Preventable admissions, children's dental procedures, antibiotic prescribing Aboriginal representation in health professions

¹⁶ Report on the Health of British Columbians Provincial Health Officer's Annual Report 2001: The Health and Well-being of Aboriginal People in British Columbia

WHY IT IS IMPORTANT TO UNDERSTAND, DEVELOP, AND USE HEALTH & WELL-BEING INDICATORS

Health indicators are essential for measuring population health, which is constantly changing if only in subtle ways. Tracking these changes is much more than just an academic exercise. It is very important to health planners and administrators who make decisions about actual services and allocation of funding between services. As well, tracking and monitoring these health changes, using health indicators, allows public health officials to plan their prevention and promotion activities. There is a need to identify and develop key health indicators that reflect the current major health concerns specific to First Nations communities. Until recently, if First Nations wanted to access any information about their Community or Nation they were largely dependent on:

- Information gathered and controlled by the Federal & Provincial Governments.
- Information gathered by University based research data that was contracted to examine and research First Nations Health related issues. In the past, and unfortunately in some cases today, much of this research is not guided by First Nations own agendas or needs, but by science for science sake. In addition, much of the raw data gathered by academic institutions was or often is, not available to First Nations for their own health

planning initiatives after the research has been completed.

Only recently has either body begun to actively engage in collaborative research in regards to health and well-being indicators. This means much of the past data available often does not meet with First Nations agendas or perspectives, is not available at a low level of data to First Nations, or is unreliable data due to poor representation.

Understanding, Developing and Using First Nations Health & Well-being Indicators will:

- Support and help communities to better “...understand their current situation and help them chart a course to make their community a healthy, vital place in which to live for current and future generations.”¹⁷
- Be useful in determining community health priorities and allocate resources, and to measure performance and outcomes¹⁸
- Assist with planning and development of community-based health and services.

¹⁷ 2001, University of Ottawa-Institute of the Environment, Akwesasne Mohawk Council, Little Red River Cree Nation, and Miawpukek Nation: 2.1

¹⁸ Aboriginal Health Reporting Framework Task Group. Aboriginal Health Reporting Framework. AFN. March 2005

- Enhance your ability to create affective project planning and development regarding community well being.
- Contribute to an understanding of the adequacy and effectiveness of efforts, including public education, product development and use, community and road design, and prevention and treatment resources.
- Be useful tools for decision and policy makers at the local and regional level.
- Empower and legitimize your community's position, issues, or concerns publicly, internationally, politically, and legally.
- Be useful in designing your own community policies and in doing support the self-determination for your Nation
- Guide and validate a movement towards First Nations' Self-Determination.
- Measure the performance or benefits from the project you have already initiated.
- Determine "...whether the health of Aboriginal people is improving, and the effects of positive health interventions."¹⁹
- Critical analysis and comparisons between Indigenous and non-Indigenous Health and Well Being indicators that can validate possible negative impacts of Non-Indigenous research, health surveys and systems on First Nations individuals and communities.
- Indicator development, research, and analysis by First Nations, for First Nations, can inform, guide and support the need for First Nations' control over decision making in regards to political, economic, environmental resource use, and socio-cultural issues effecting First Nations.
- Effective use of Health and Well-Being indicators, as well as a host of other indicators, can predict and monitor program, service and funding needs and benefits, from increased self-determination and the devolution of control over essential decision-making and programs to First Nations. Performance indicators are essential in illustrating the beneficial outcomes of this type of shift towards First Nations self-determination.
- Support the legitimacy of First Nations Self-Governing bodies by informing them on the needs and opinions of their members
- Own, control, create and regularly monitor your community, Region or Nation's indicators and health information.

¹⁹ The First Nations and Inuit Regional Health Survey (RHS), 1999: 242

Just as indicator development, research, and analysis can be used to support & guide First Nations self-determination and control over decision making, indicators can also be used to inform options and methods of Self-Governance that will be most effective in a Community, Region or Nation.

- Measure program performance or accountability
- Measure health outcomes and changes²⁰

It is important to be aware of the indicator categories used in regards to grouping measures, because they can represent the values of the system or body evaluating the programs, projects, or services. For example in some areas and for some Nations, an important health system performance category, not listed here, might be “discrimination.” Given that the FNIRHS, 1997 survey, illustrated that in some areas, discrimination of patients by external health professionals was almost twice the level of discrimination they faced, when health care professionals worked inside the community.²¹

PERFORMANCE INDICATORS

The primary function of a performance indicator is to answer "how" or "whether" a program, service, policy or health outcome is progressing towards its objective, or succeeding. The difference between performance indicators and health or well-being indicators is that performance indicators **evaluate** “something”, instead of **describing** “something”. The following performance indicator measure is an evaluation of patient satisfaction with their health services.

Performance Indicators can be used to:

- Inform policy
- Support further funding of a program
- Help to identify gaps or problems in a program

CATEGORIZING INDICATORS – THE DIFFERENCE BETWEEN AN “INDEX” AND A “DOMAIN”

To fully understand the many different causes and effects of the occurrence or trend, you may need to explore many interrelating indicators. This means you will be looking at large categories or groups of indicators, called an “**Index**” or “**Indices**” for plural. An indicator may be part of a larger

²⁰ (2000, Performance Indicator Framework for Population Health, Workshop Report, Melbourne Australia.)

²¹ (2004, FNIRHS, Synthesis Report: 50)

sub-domain or topic group of indicators. For example, in the RHS, the smoking indicator Sub-domain is part of an even larger category or Domain called “Lifestyle”. Lifestyle is one of thirteen categories or “**Domains**” of indicators. When all Domains are grouped together, they could be said to represent a Quality of Life or Well-Being Indicator Index for First Nations in Canada.

How people categorize ideas and concepts such as indices, is a reflection of their worldview and often represents important cultural distinctions. Likewise, where people place certain indicators in their scheme of importance, further reflects that group’s value system.

HOW EFFECTIVE USE OF INDICATORS CAN SUPPORT FIRST NATIONS’ EFFORTS TO IMPROVE HEALTH AND WELL-BEING

An example of the disparity of First Nations’ health in comparison to other population groups in Canada is illustrated through current First Nations’ suicide rates. The following two studies by both the First Nations and Inuit Regional Health Study and Health Canada have suggested that all First Nations age groups up to age

65 are at increased risk of suicide, compared with the Canadian population.²² Studies have suggested that First Nations males are at higher risk than females, with the greatest disparity between the First Nations and Canadian rates are for females aged 15 to 24 and aged 25 to 39 whose suicide rates are approximately eight to five times the Canadian rates.²³

While the findings of these indicator measures are disturbing, they are important, because this type of information gives health workers and First Nation Leaders important information that can be used to help create successful interventions, and a better understanding of where priorities need to be placed in regards to funding and intervention programs.

²² Lemchuk-Favel. L. 1996.

²³ Health Canada, *A Statistical Profile on the Health of First Nations in Canada*. 2003.

Jan 2004, FNIRHS,
Synthesis of the
National and Regional
Report)

WHAT DOES HEALTH SURVEILLANCE HAVE DO WITH HEALTH INDICATORS?



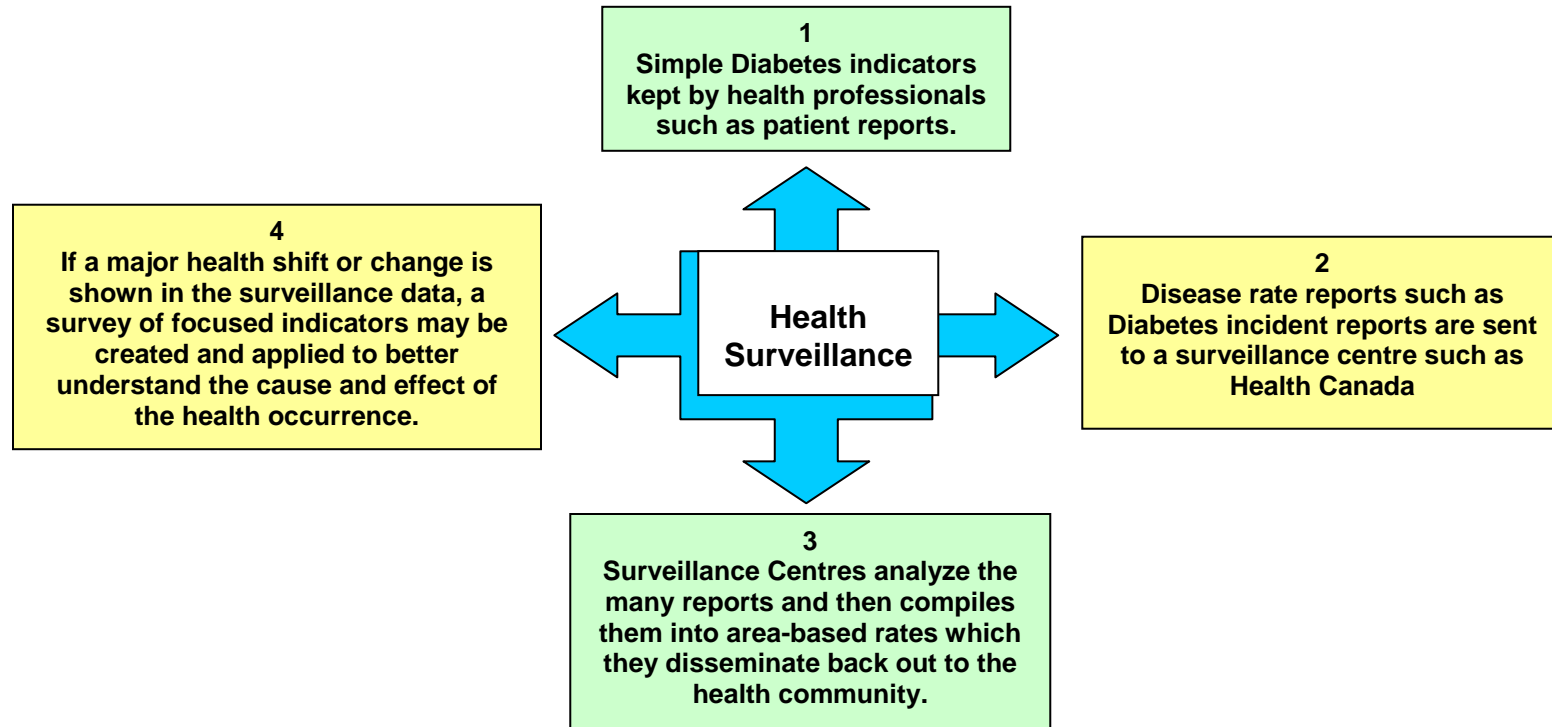
**Table 5-5: Mental Health
Ontario First Nations (1997) Compared to Canada (NPHS 1994)**

	Men		Women		Total	
	FN	Can	FN	Can	FN	Can
Major depression	13.3%	5.4%	18.4%	9.4%	15.9%	7.5%
The depression interferes with activities "some" or "a lot"	24.5%	13.5%	27.2%	17.7%	25.8%	15.7%
Consulted professional about emotional health in past year	13.7%	5.5%	19.4%	10.5%	16.6%	8.1%

Surveillance involves tracking the constantly changing health status of a population. Surveillance is a vital concern in public health, the branch of medicine and health services that is concerned only with prevention of illness and promotion of healthy practices. Surveillance and health indicators represent different steps of similar, but not the same process. "Surveillance is less detailed than research. Many surveillance systems collect just enough data to send a warning signal if a disease suddenly increases"²⁴ or if a health phenomena suddenly changes. Because health reports do not give the patients personal information, such as name or address, the final rates only allow health professionals to see the annual rate change of certain diseases or health occurrences across geographic areas and locations. Surveillance reports cannot suggest an explanation for who, why, where, or an in-depth understanding for when the shift occurred.

²⁴ First Nations Centre. Surveillance Tool Kit. NAHO.

Example of an Indicator's Relationship in Health Surveillance



HEALTH AND WELL-BEING INTERVENTIONS

health are not always health originated. Just as determinants of health are being linked to economic, socio-cultural, political, historical, and educational root causes, interventions to improve health are also socio-cultural, economic, environmental and political. The link between determinates-indicators and interventions is discovering the information you need to improve a situation.

BEST PRACTICES – FIRST NATIONS HEALTH AND WELL-BEING INDICATORS

1. The First Nations Regional Longitudinal Health Survey (FNRLHS)

The FNRLHS is the only national First Nations-driven research process. Three national survey instruments (child, youth and adult) were developed to address a comprehensive range of health status, wellness and health determinants measures, as well as, address First Nations priorities within a cultural and holistic framework. The questions were refined over two years and validated scientifically, and by First Nations. They provide some comparability with content in Canadian surveys (i.e. Canadian Community Health Survey, National Longitudinal Survey of Children and Youth). Today, the

Interventions are the policies, programs and services that are created to try to improve a person, family, community, or population's level of health. Interventions to improve

RHS is recognized as the First Nations survey of choice and has gained tremendous credibility among First Nations communities, leadership, and academic scholars because it is conducted in accordance with the principles of Ownership, Control, Access, and Possession (OCAP) as they apply to research.

OCAP, as a guiding principle to indicator gathering, has helped to ensure in the FNIRHS that the survey was focused on regional pertinent indicators, it has built research capacity within First Nations and Inuit groups at a community, regional and national level, and has ensured data sharing protocols with the communities involved and innovations in culturally appropriate research ethics and methods.

The 2002/2003 FNRLHS grouped data into 13 Domains or thematic areas. They include:

1. Children's health
2. Residential School and Elder Health
3. Chronic Diseases
4. Tobacco Report
5. Activity limitations and the need for continuing Care
6. The Search for Wellness
7. Health and Dental Services

2. EAGLE – Effects on Aboriginals From The Great Lakes Environment

A collaborative project that focussed on researching the effects that the contamination of the Great Lakes has had on the First Nation of the Great Lakes Basin. Particular emphasis was on developing indicators to measure the impacts upon traditional ways of life, and resulting socio-cultural Well Being as well as physical health. The EAGLE model used culturally relevant indicators of health for Aboriginal communities. This was done by combining community disease indicators, with community life indicators.

3. University of Ottawa - Institute on the Environment and the Mohawk Council Akwesasne, Little Red River Cree Nation and Miawpukek First Nation – Community Health Indicator Project.

This project was stated in 2000, as part collaborative effort between the three communities, the Assembly of First Nations and the Institute of the Environment at the University of Ottawa. The main focus of the project was to develop community health indicators that can be used by aboriginal communities and which come from a community perspective. Through a collaborative process, the “Life Indicator Wheel” concept was originally developed at the “*Effect on Aboriginals From the Great Lakes Environment (EAGLE)*” 2-day Workshop in 1994 and used, as a base model to develop to guide this research process. The four categories of indicators

expressed through the Life Wheel concept were economic – values, spirituality-religion, politics-responsibility and environmental-morale. Through integrating and measuring these connections, the group developed community health indicators that were measurable and quantifiable, but still reflected community perspectives, agendas and values. (University of Ottawa-Institute of the Environment, Mohawk council of Akwesasne, Little Red River Cree, Miawpukek first Nation, 2001)

4. The Draft First Nations Health Reporting Framework²⁵

This Framework represents a blend of concepts and elements taken from several existing frameworks. It follows a health determinants approach, meaning that it includes a wide range of factors that are known to influence health, rather than focusing exclusively on health status and health care services.

The proposed framework organizes domains contributing to health into a circle, which relates to the First Nations concept of the Medicine Wheel. Depicting the several health domains in a circle emphasizes the inter-connectedness and the balance of all these elements in the determination of individual health. The proposed health domains include: Individual Health; Health Determinants; Health Services; and Community Health.

²⁵ Assembly of First Nations Draft Health Reporting Framework, 2005.

An effort was made to strike a balance between health domains that would allow reasonable comparison with the general population and other areas that may not allow for comparison but that are relevant and specific to the First Nations population.

Insert the Diagram

5. Great Lake Basin - Quality of Life and Health Indicators²⁶

The diversity of values represented in the following Indicator conceptual framework illustrates why it is important for First Nations to not only think about what indicators are important to them and why, but what framework do they want to work from as a guide to their indicator process. It is this framework, that will guide the analysis and representation of these indicators in the future. The Health Wheel Concept is a culturally relevant model of the Great Lake Basin, First Nation's Quality of Life Indicators.

VALUES OF GOOD INDICATORS



²⁶ Effect on Aboriginals From the Great Lakes Environment (EAGLE)" 2-day Workshop in 1994

INDEX: Health Wheel, Based on the medicine wheel concept

OVERLAPPING DOMAINS:

Wholeness, Harmony, Balance, and Well Being

SUB DOMAINS:

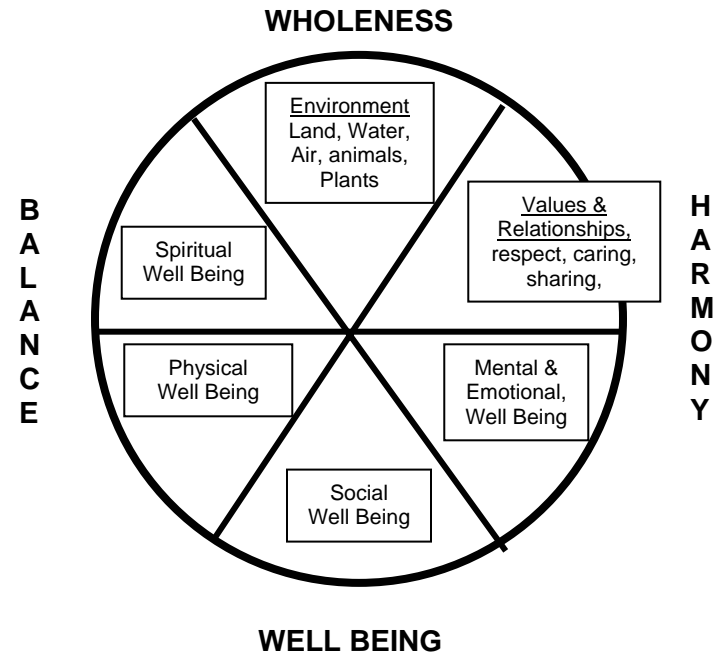
Environment, Values & Relationships, Mental & Emotional Well Being, Social Well Being, Physical Well Being, and Spiritual Well Being

AN INDICATOR example:

Under the Overlapping Domains of Balance and Wholeness;

In the sub domain of Spiritual Well Being might be:

"How many traditional ceremonies have you participated in the last 12 months?"



When developing indicators in your community or deciding to use an indicator for research or a funding proposal, consider the quality of the indicator. There is a general list of characteristics about indicators that science uses, which validates that the indicator is sound from a statistical and quantitative research perspective. They include:²⁷

- **Reliable and Reproducible**

If you repeat the measurement for the indicator under similar circumstances by the same or different individuals, you will get the same results.

- **Validity**

The indicator is measuring the intended property, qualities or characteristics.

- **Sensitivity**

It can detect differences at a fine level that is of interest to the user.

- **Acceptability**

The intended user should find the indicator understandable, credible and useful.

- **Feasibility**

The data can be collected and controlled without an overburdening financial or administrative cost to the user.

- **Universality**

The indicator can be used in different populations and settings.

If indicators are to be successful at the community level, they must be developed by the First Nations communities themselves and reflect the goals and priorities of their communities

Additional information to consider in deciding the value of an indicator:

Is it relevant to your community, group, or Nation's current policy or litigation positions?

Is it representative? In other words, is the indicator relevant or important to the marginal and popular perspectives in your community, group, or Nation?

Is it culturally sensitive?

Is it understandable to the average person who you will be sampling or interviewing?

²⁷ (Field and Gold, 1998; In Young, K. 2001:2)

DEVELOPING A FIRST NATIONS HEALTH AND WELL-BEING INDICATORS FRAMEWORK



In many cases, when you begin to isolate the determinants of health and well-being that interest you, or a trend that you would like to further explore, you may find that the indicators that have been used in the past, do not meet with your needs and in some cases, there may not be indicators available concerning the exact issues you are exploring. Increasingly, First Nations need to consider designing their own community, regional and national health and Well Being indicators and research processes. The need for indicators and indicator research in many First Nations communities, and organizations spans a wide spectrum of needs, such as resource use needs, to environmental contamination issues, to self-governance and self-determination negotiations and much more....

An important step in developing First Nation indicators is to decide upon the appropriate framework that will best represent your community, organization, or Nation's values, traditions, beliefs, and cultural agenda. This is important, because it is your conceptual and culturally determined framework that will guide your indicator and determinant development, categorizing and analysis.

The medicine wheel is only one example of a First Nations framework shared by some First Nations today for both ceremonial reasons and as a symbol of well-

being and balance. For some First Nations communities, organizations and Nations, the medicine wheel has become a framework to help guide and categorize Health and Well-Being indicators and determinants. Alternately, some Nations have their own traditional frameworks and interpretations of Health and Well Being that are more culturally appropriate as a framework to guide their Health and Well Being indicators, determinant, or development processes.

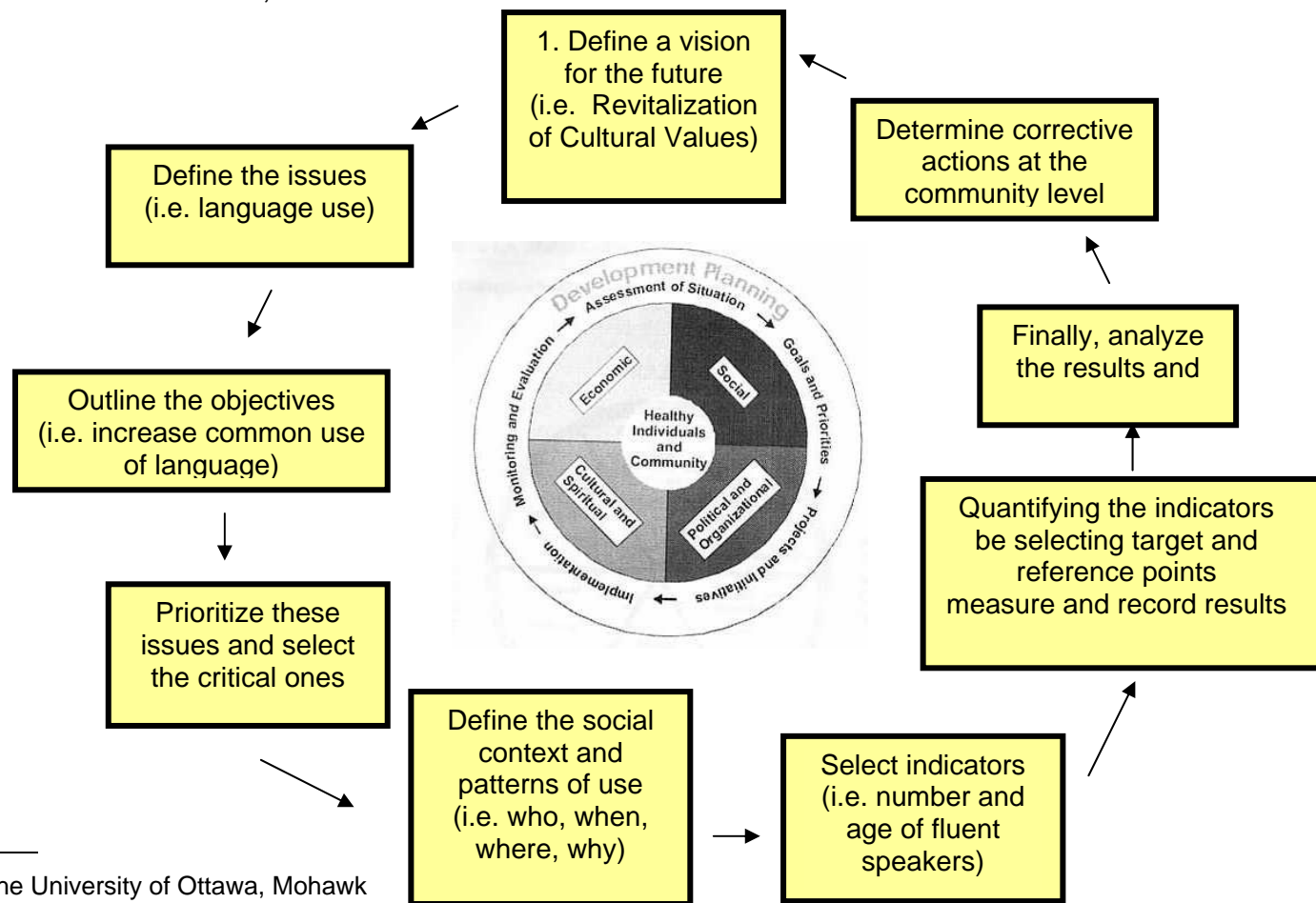
Well-Being and Quality of Life Indicators are Shifting Social Health Indicators to the Next Level of Holistic Analyses & Integration

- In many ways well-being and quality of life indicators are more transferable and compatible with First Nations perspectives, represented in frameworks such as the medicine wheel, than in classic health indicators or indicator domains that focused largely on disease, accidents, birth and death rates as a reflective measure of a communities health.
- Well-Being and Quality of Life indices rate individual, community, regional and National health through the combined analysis of indicators that fall within many domains, or topics, such as ecological, political, economic, social and cultural domains.

Stages involved in developing community indicators

The following model provides a practical perspective on the process involved in designing your own indicators. It

is an adaptation of the comprehensive research done by the University of Ottawa, Akwesasne, Little Red River and the Miawpukek First Nations. While this adaptation cannot reflect the full research done on this topic and may not apply to every First Nations' needs, it is a useful example to help explain some key concepts that need to be considered, and have worked for other Nations faced with designing their own health and well-being indicators.²⁸



²⁸ (Based on: Woodrow M, The University of Ottawa, Mohawk Council of Akwesasne, the Little Red River Cree Nation and the Miawpukek First Nation's Community Health Indicator Project, 2001: 2.12, 7.3).

Glossary²⁹

Aggregate data: refers to data that are presented or collected in a grouped or summarized form. Health status research is interested in aggregate data at the community, regional, and national levels

Anonymous Data: do not identify the individual persons that the data belong to. Anonymity in health data means that there is no way the user of the data can trace any item of data back to its origin.

Baseline data: is a set of information that is collected at the beginning of a research study. Health data are often collected to see whether the set of information changes over time, or if it changes as a result of a particular treatment or intervention that is being investigated.

Case: is a person who has a particular disease or illness. Cases are usually individuals that are seeking treatment or advice from a health care provider.

Descriptive Statistics: are used to organize and describe data such as the mean, median, mode and range.

Determinants of Health: Social, economic, physical and environmental factors which interact with one another and influence the health of a population. In a holistic approach to health and well-being, more consideration is

²⁹ Some definitions were taken from Gray, J. Presentation to International Network of Indigenous Health Knowledge and Development 2nd Bi-Annual Meeting, Vancouver, Canada, October 2005.

given to the non-medical, cultural, and spiritual determinants of health.³⁰

Data: is a collection of facts from which conclusions may be drawn (e.g. statistical data on health)

Epidemiology: is the study of the occurrence, distribution, and determining factors associated with health events and diseases in a population. The aims of epidemiology are to discover the sources and causes of health events and disease occurrences and to find ways to control and prevent them.³¹

Health³²: A state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

Health and Well-Being Indicators: In the simplest terms, they describe the health of a population. They are variables that are susceptible to direct measurement and which reflect the state of health of persons in a community.³³

Incidence: The number of new events or cases of a specific disease or illness during a specified period of time in a specified population. May be expressed as a number or a rate.

³⁰ The Health and Well-Being of Aboriginal People in BC, 2001:5

³¹ A Guide to HIV/AIDS Epidemiological and Surveillance Terms. (2002) Canadian Aids Society and Health Canada.

³² Definition taken from: the World Health Organization.

³³ Dictionary of Epidemiology, 2001

Indicators: “Variables that help to measure changes, directly, or indirectly”.³⁴

Information: Data that have been arranged in a systematic way in order to yield order and meaning.

Intervention: In the health sector, a program, policy, activity, or practices whose purpose is to improve health often by reducing the spread or effects of a disease or other malady in the population.

Mean: also referred to as the average, is an example of a descriptive statistic.

Performance Indicator: A measure of progress or efficiency. Many people think of performance indicators firstly in the business or program management context, but performance indicators are also used to describe health status. They do not directly measure health status, but instead they measure *change* in health status such as percent reduction in the incidence of some disease. Thus, performance indicators are useful when adjusting funding and efforts in order to meet a target. For instance, they can measure progress in reducing the rate of complications of Diabetes Type 2. Performance indicators answer "how" or "whether" a unit or programme is progressing towards its objective, rather than why such progress is or is not being made. They are usually expressed in quantifiable terms, and should

be objective and measurable such as numeric values, percentages, and scores.³⁵

Personal information: Information about an identifiable individual that is recorded in any form.

Prevalence: the number of existing cases of a disease or illness within a given population at a specified time.

Proportion:

Rates:

Sample: The group of people upon which a survey or study is conducted. The sample population can be much smaller than the overall population. In such cases it is assumed that what is observed in the sample population will be mirrored in the larger population; e.g., the percentage of people reporting contact with social services, or asthma, will be the same.

Survey: In the case of health and wellness indicators, a survey is a set of questions about health status that is asked to put to members of the sample population. Surveys record the subjective responses of the respondents. The Census, the APS, and the RHS are examples of surveys. Surveys are usually a questionnaire in paper form or on a notebook computer screen. Surveys are often administered by an interviewer; however, they can also be self-administered.

³⁴ World Health Organization, 1969

³⁵ USAID - Chapters 200 - 203.

Trends: are changes in frequencies, proportions or rates of an event observed over time. Trends may be irregular, flat or move in one direction. Trends can be expressed in many forms, including tables, graphs, and pie charts.³⁶

Variable: A category of data that varies according to what the respondent reports or what the counting captures. In health research, “variable” can be a quality or a quantity. This may have any value or any of value within certain limits. Variables are useful when classifying a quality or characteristic into categories that illustrate similarities and differences.³⁷

³⁶ A Guide to HIV/AIDS Epidemiological and Surveillance Terms. (2002) Canadian Aids Society and Health Canada. P.54.

³⁷ Kidder and Judd, 1990.

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