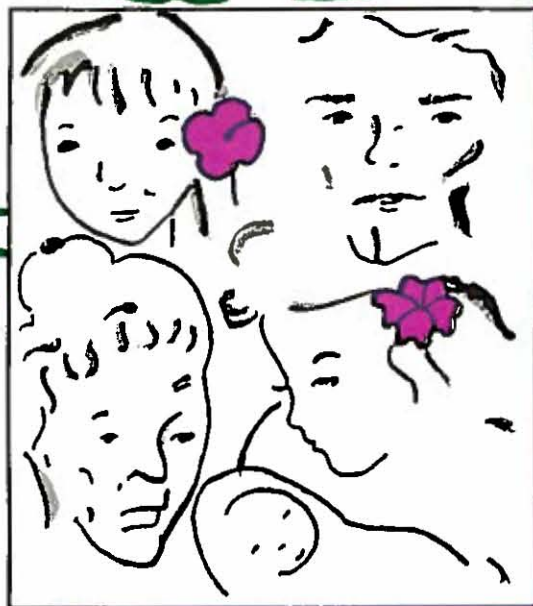


Governor's Conference on Health Promotion/ Disease Prevention



Guam Health Objectives
for
1990 and Beyond

A PRE-CONFERENCE REPORT

September 2-3, 1987
University of Guam,
Field House

**GOVERNOR'S CONFERENCE
ON
HEALTH PROMOTION AND DISEASE PREVENTION**

Objectives for 1990 and Beyond

**A
PRE-CONFERENCE REPORT**

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GOVERNOR'S CONFERENCE ON HEALTH PROMOTION AND DISEASE PREVENTION

A Pre-Conference Report

In 1986, several members of our island community began drafting specific objectives and recommendations pertaining to Preventive Health Services, Health Protection, and Health Promotion. These Objectives will be presented at the two-day Governor's Conference on Health Promotion and Disease Prevention that will be held on September 2 and 3, 1987.

This Pre-Conference Report has been prepared in order to familiarize Conference participants and other interested parties with the drafted Objectives. The Report includes a summary of the initiative behind the Guam Health Objectives for 1990 and Beyond, a description of the planning process, as well as the drafted problem statements and objectives that will be discussed at the Governor's Conference.

THE GUAM HEALTH OBJECTIVES FOR 1990 AND BEYOND

The local effort to develop territorial health objectives stemmed from similar projects conducted for the nation. In 1979, the U.S. Department of Health and Human Services published Healthy People - The Surgeon General's Report on Health Promotion and Disease Prevention. The report established five national health goals for the improvement of the health status of Americans by the year 1990. The following year, these five major goals were expanded to more than 200 specific objectives in 15 "health priority areas" and documented in Promoting Health/Preventing Disease: Objectives for the Nation.

Both these reports have served as guides to Guam's own initiative. In February 1986, the Governor of Guam appointed a Steering Committee for the Development of the Guam Health Objectives for 1990 and Beyond. The Steering Committee subsequently hosted an orientation workshop for health professionals from the military, Non-Profit Organizations, private and public sectors in March. The Committee laid out the framework for the Guam Health Objectives and invited those whose work was related to the issues of health promotion and disease prevention to participate in developing territorial health objectives and recommendations for implementation.

As a result of the orientation session, 15 working groups were created with the intent of addressing each of the "health priority areas" identified for the nation. These areas fall into three major categories and are listed below.

Preventive Health Services

High Blood Pressure Control
Family Planning

Pregnancy and Infant Health
Immunization
Sexually Transmitted Disease

Health Protection

Toxic Agent Control
Occupational Safety and Health
Accident Prevention and Injury Control
Fluoridation and Dental Health
Surveillance and Control of Infectious Diseases

Health Promotion

Smoking and Health
Misuse of Alcohol and Drugs
Improved Nutrition
Physical Fitness and Exercise
Control of Stress and Violent Behavior

The Working Groups were tasked with preparing problem statements as well as prioritizing objectives and recommendations for addressing the problems identified. Although each Group was given a copy of the national objectives as well as those developed for Hawaii and Texas, the Group was responsible for establishing objectives that were both relevant and practical for Guam.

THE PUBLIC FORUM

By June 1986, each of the 15 Working Groups had drafted territorial health objectives pertaining to their respective topics. The drafts were presented at a Public Forum hosted by the Steering Committee and the Department of Public Health and Social Services on August 5 and 6, 1986.

The two-day forum was intended to solicit community input on each of the Objectives prepared, and to allow the different Working Groups to familiarize themselves with the findings and recommendations of the other Groups. Approximately 150 individuals attended the forum and raised questions pertaining to the drafted Objectives. Some were concerned with the likelihood of reallocating limited government resources towards the implementation of the Objectives; others raised the issue of the inconsistency between Objectives and the island's culture and social structures; and others still suggested a reprioritization of Objectives. In addition, many expressed the need to raise awareness of existing programs and services that are unfamiliar to the public.

Once the forum was completed, each of the Working Groups was given the opportunity to revise the drafted Objectives in accordance with the comments and recommendations presented at the public forum.

THE GOVERNOR'S CONFERENCE

The Governor's Conference is the next step in the process of establishing health policies for the island. The Conference is designed to give participants an opportunity to review and comment on the more than 150 Objectives in health promotion and disease prevention. It also offers various leaders in the community the forum for presenting their position and plans for implementation. By examining the Working Groups' findings and recommendations, the Conference intends to stimulate a commitment to a health promotion and disease prevention strategy as a means of improving and maintaining the health status of Guam's population.

Given the sizeable number of Objectives as well as the variety and range of issues to be discussed at the Conference, it is essential that Conference participants familiarize themselves with the Objectives. It is also important for conferees to recognize that further analysis, refinement and prioritizing of these objectives will be an on-going activity, and that implementation will require the concerted efforts and commitment by the private, public and military sectors.

CONFERENCE FORMAT

The Conference offers and opportunity for participants to attend five of 15 concurrent sessions on topical issues during the two days. During these sessions, conferees are urged to share their views and reactions to the proposed Objectives for Guam in terms of their relevance, significance, timeliness and feasibility for implementation.

Following these sessions, Conference participants are invited to attend a panel discussion on the Community's Commitment to Implementation. As is the case with each of the regular sessions, conferees are encouraged to present their views and reaction to any or all of the issues discussed.

CONFERENCE REPORT

Once the Governor's Conference is completed, the Steering Committee and the 15 Working Groups will be asked to review each of the drafted Objectives in light of the Conference discussions. Any revisions will be included in the Governor's Conference Report which will include a summary of the Conference proceedings and each of the Working Group's complete reports.

HIGH BLOOD PRESSURE CONTROL

PROBLEM STATEMENT

The Office of Vital Statistics, Department of Public Health and Social Services lists "Diseases of the Heart" as the leading cause of death on Guam from 1960 to the present.

One of the major risk factors for cardiovascular disease is hypertension. In 1984 the U.S. Department of Health and Human Services defined hypertension in adults as a reading of 140/90 mmHg or greater. A diagnosis of hypertension in adults is made with two or more diastolic measurements of 90 mmHg or when the average of several systolic measurements is greater than 140 mmHg on two or more subsequent visits. A single elevated blood pressure reading does not make a diagnosis of hypertension but is clearly a sign that observation is necessary. The diagnosis of hypertension may vary from expert to expert and is dependent on the individual's circumstances and history. However, for purpose of standardization and guideline, the U.S. Department of Health and Human Services definition will be used as a baseline for these objectives.

It is difficult to make a conclusive statement about the prevalence of hypertension for the population of Guam because there is little accurate, monitored data available. However, various blood pressure screening programs have yielded some information. The Guam High Blood Pressure Council's mass screening efforts between November, 1980 and October, 1981 identified 20.8 percent of those screened as hypertensive, requiring referral to a physician or Public Health. FHP, Inc. Guam Medical Center identified 10.4 percent of those screened between December, 1976 and January, 1980 as having hypertension. The Department of Public Health and Social Services Chronic Disease Prevention and Control Program documented prevalence rates of 11.38 percent in 1982, 14.4 percent in 1983 and 17.74 percent in 1984. From these data it can be inferred that Guam does have a significant problem with hypertension.

Hypertension is usually a silent disease. As a result, there may be a large portion of the population who have this condition, but are unaware of it. Hypertension, once detected, can be controlled and resulting conditions such as stroke, kidney disease, and heart disease likewise reduced. Hypertension is recognized as one of the underlying causes of cardiac disease.

Objectives dealing with high blood pressure control primarily address: 1) education to increase public awareness about hypertension and the programs available; 2) screening and follow up services; 3) surveillance efforts to collect more accurate data; and 4) legislative and regulatory actions.

PREVENTIVE HEALTH SERVICES

"Those services provided to individuals by physicians, hospitals and other care providers."

OBSTACLES AND CONSTRAINTS

There are several realistic and pervasive factors that could stand in the way of achieving these health objectives.

These obstacles are

1. lack of funds,
2. limited human resource for implementing and maintaining health education programs,
3. limited expertise in the field of data collection, review and analysis,
4. people who are interested in improving the health of our community are already overcommitted, and
5. lack of cooperation and support from health care providers and agencies in submitting information and reports necessary to provide statistics to the community.

HIGH BLOOD PRESSURE CONTROL

GUAM HEALTH OBJECTIVES

OVERALL GOAL

To control hypertension and reduce the risk and incidence of cardiovascular disease.

OBJECTIVE 1

By 1990, at least 50 percent of the adult population will be able to state the principal risk factors for coronary heart disease and stroke, i.e., high blood pressure, cigarette smoking, elevated blood cholesterol levels and diabetes. Other contributing risk factors are obesity, family history, alcohol, inactivity and possibly stress.

Ranking High Priority

OBJECTIVE 2

By 1990, a system will be developed to determine the incidence of hypertension, coronary heart disease, congestive heart failure, hemorrhagic strokes and occlusive strokes. After demonstrated feasibility, ongoing sets of these data will be developed.

Ranking High Priority

OBJECTIVE 3

By 1990, 80 percent of the adult population (age 21 and over) will be screened for hypertension by blood pressure screening programs under the direction of the High Blood Pressure Council.

Ranking High Priority

OBJECTIVE 4

By 1995, 80 percent of the estimated hypertensive population will have successful control of their blood pressure (140/90 or below).

Ranking High Priority

OBJECTIVE 5

By 1990, 80 percent of the adult population will be able to state if they have hypertension or not.

Ranking Medium Priority

HIGH BLOOD PRESSURE CONTROL

NATIONAL OBJECTIVES

- A. By 1990, at least 60 percent of the estimated population having definite high blood pressure (160/95) should have attained successful long term blood pressure control, i.e., a blood pressure at or below 140/90 for two or more years.
- B. By 1990, the average daily sodium ingestion (as measured by excretion) for adults should be reduced at least to the 3 to 6 gram range.
- C. By 1990, the prevalence of significant overweight (120 percent of "desired" weight) among the U.S. adult population should be decreased to 10 percent of men and 17 percent of women, without nutritional impairment.
- D. By 1990, at least 50 percent of adults should be able to state the principal risk factors for coronary heart disease and stroke, i.e., high blood pressure, cigarette smoking, elevated blood cholesterol levels, diabetes.
- E. By 1990, at least 90 percent of adults should be able to state whether their current blood pressure is normal (below 140/90) or elevated, based on a reading taken at the most recent visit to a medical or dental professional or other trained reader.
- F. By 1990, no geopolitical area of the United States should be without an effective public program to identify persons with high blood pressure and to follow up on their treatment.
- G. By 1985, at least 50 percent of processed food sold in grocery stores should be labeled to inform the consumer of sodium and caloric content, employing understandable, standardized, quantitative terms.
- H. By 1985, a system should be developed to determine the incidence of high blood pressure, coronary heart disease congestive heart failure and hemorrhagic and occlusive strokes. After demonstrated feasibility, by 1990 ongoing sets of these data should be developed.
- I. By 1985, a methodology should be developed to assess categories of high blood pressure control, and a National baseline study of this status should be completed. Five categories are suggested: (1) Unaware; (2) Aware, not under care; (3) Aware, under care, not controlled; (4) Aware, under care, controlled; and (5) Aware, monitored without therapy.

HIGH BLOOD PRESSURE CONTROL
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FAMILY PLANNING

PROBLEM STATEMENT

Family planning can be defined as the combination of education, methods, and services used to prevent unintended, unplanned and unwanted pregnancies by providing men and women with the means to plan for and space their pregnancies. Family planning makes pregnancy a matter of choice rather than chance, and is essential for the promotion and maintenance of maternal and infant health. Unplanned pregnancies have far-reaching effects, including negative psychological, social, health and economic consequences to both individuals and the community at large. The risk of prematurity and low birth weight is increased in unplanned pregnancies, resulting in a greater than average occurrence of delayed development, mental retardation and learning disabilities. Groups at highest risk for unplanned pregnancies, teens, women over 34 years of age, and women who live in poverty, experience higher maternal and/or infant morbidity and mortality. The low esteem, inadequate problem-solving abilities, and lack of parenting skills which characterize many women at risk of unintended pregnancies increase the potential for a negative environment for infant growth and development, and may result in child abuse and neglect. For both married and single women, unplanned pregnancies disrupt many lives.

For teenagers, unplanned pregnancies have especially high social costs. Comparing 1984 Guam statistics with 1982 United States statistics shows the following. In Guam, teenagers 19 and younger account for 465 live births annually. In Guam, the fertility rate for women under 15 was 1.4 per 1,000, compared with 1.1 per 1,000 in the U.S. For women 15-19, the fertility rate was 94.0 per 1,000 compared with 52.9 per 1,000 in the U.S. The fertility rate for this age group on Guam increased by 19 percent between 1983 and 1984. The rate of premature births among teens is also high; 7.8 percent of Guam babies were low birth weight (which includes premature births), compared with a rate of 6.8 percent in the U.S. Among low birth weight babies on Guam, 25 percent were born to teenage mothers.

Unplanned pregnancies and parenthood usually interfere with the teens' normal growth and development, interrupting social and psychological development and further reducing the teenage mothers' career and income opportunities. Other costs not easily quantified, such as social costs related to responsibilities for early fatherhood, have not been documented. Unplanned repeat pregnancies, also high among teenagers, compound the negative consequences for this population.

Another problem significant to Guam is the increased incidence of larger family size. The incidence of fourth order and greater births is much higher in Guam than in the U.S. Guam's 1984 rate is more than double the U.S. rate for each age category. Birth order of fourth or more for Guam is 17.3 compared with the U.S. 1982 rate of 8.7 percent. For sixth or greater, the Guam rate is 4.3 percent compared with 1.6 percent for the U.S. Many studies have shown that the higher the birth order, and therefore, the older the woman, the greater the risk for complications of pregnancy. This problem in Guam is reflected also by the uniformly increased fertility rate in the high risk older age groups. Fertility rate for women age 35-39 in Guam was 62.7 compared with 3.9 for the U.S. The fertility rate for women 40-44 was 10.9 in Guam and 3.9 in the U.S. This group in Guam is obviously in need of outreach services.

STRATEGIES

The disease prevention and health promotion measures required to impact on Guam's 1990 objectives fall under the general categories of: 1) education, 2) health services, and 3) economics.

Education and information measures need to be improved to reach various sectors of the population. It is essential that there be programs aimed at the general population, including adolescents and health care professionals, to increase their awareness of family planning problems and the relative safety of available family planning methods compared to the social cost of unplanned pregnancies. Workshops and education programs for the professionals dealing with young people can ensure that teachers and counselors are adequately trained and students will gain more understanding of "family life education." In addition, the media can contribute much to educate the public, especially parents and young people, about the importance of providing effective sex education to children and the realities of problems associated with unplanned pregnancies. Because of Guam's unique cultural, ethnic and religious background, with the majority of the island's population adhering to the Roman Catholic Faith, it is hoped that the Church would take a strong role in teaching both young people and parents about responsible family planning and appropriate moral values.

Support of existing clinical family planning services now available should be increased. Confidentiality must be preserved. Increased outreach activities directed at sexually active teens, including availability of clinical services on campuses should contribute toward more effective measures.

OBSTACLES AND CONSTRAINTS

The barriers to achieving the 1990 objectives for Guam include the lack of sustained, adequate funding. Educational materials and measures to affect behavioral change in high risk groups, given a multitude of different ethnic and cultural groups on Guam, present a significant challenge.

Other constraints include family planning being a low priority issue in the community and the Roman Catholic Church's position on the family and the integrity of moral and sexual life.

A current obstacle in developing the 1990 Family Planning Objectives for Guam was the difficulty in obtaining appropriate statistics. There is no centralized location for compiling all of the pertinent population data. This lack of information made it impossible to break down data on teen pregnancies by specific age. It also made it impossible to develop a meaningful numerical goal for reducing the number of fathers age 19 and younger.

There are currently no island-wide statistics on the number of unplanned pregnancies. Therefore the second objective had to be worded in terms of decreased total fertility rate rather than a decreased unintended birth rate which is in conformity with the national objectives. The 1990 goal was agreed upon by assuming all births to women 19 and younger and 40 and older were unplanned. Subtracting this number from the total number of births results in approximate 12 percent reduction of the total fertility rate. Although we know that not all births in the youngest and oldest age groups are unplanned, this should be balanced in the 20-39 age group.

The last goal was to encourage the uniform and centralized gathering of appropriate population statistics so that they can be more readily utilized for assessing the achievement of 1990 goals and in order to be used for more realistic planning for the 21st century.

FAMILY PLANNING
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, a family life education multi-disciplinary advisory group will be established to provide direction in the implementation of the following objectives.

Ranking High Priority

OBJECTIVE 2

By 1990, a comprehensive Health and Family Life Educational Program will be incorporated into the curriculum of all grades (Kindergarten through Grade 12) in public and private schools.

Ranking High Priority

OBJECTIVE 3

By 1990, health and human sexuality programs will be available to all parents.

Ranking High Priority

OBJECTIVE 4

By 1990, there should be virtually no births to girls 14 years or younger. Fulfilling this objective would probably reduce births in this age group to near zero.

Ranking High Priority

OBJECTIVE 5

By 1990, the fertility rate for 15-19 year old women should be reduced to 60/1000 or by at least 30 percent of the 1984 rate (94/1000).

Ranking High Priority

OBJECTIVE 6

By 1990, the number of fathers ages 19 or younger should be reduced.

Ranking High Priority

OBJECTIVE 7

By 1990, at least 75 percent of men and women over the age of 14 should be able to describe accurately the various contraceptive methods, including the relative safety and effectiveness of each.

Ranking Medium Priority

OBJECTIVE 8

By 1990, reductions in unintended births among women on Guam 15 to 49 years of age should reduce the fertility rate in this age group to 118/1000 or at least 12 percent of the 1984 rate (134.2/1000).

Ranking Medium Priority

OBJECTIVE 9

By 1990, increase the availability of family planning information and methods to residents of low educational levels.

Ranking Medium Priority

OBJECTIVE 10

By 1990, community education regarding family planning will include annually at least 100 hours each of quality prime time radio and television announcements, commercials, and programs to improve reproductive health.

Ranking Medium Priority

OBJECTIVE 11

By 1990, in-service and continuing education programs shall be available to all professionals involved or interested in family planning services.

Ranking High Priority

OBJECTIVE 12

By 1990, there will be improved dissemination of family planning information to all post-partum patients prior to discharge from the hospital.

Ranking Medium Priority

OBJECTIVE 13

By 1990, Guam will recruit Nurse Practitioners for all family planning programs.

Ranking High Priority

OBJECTIVE 14

By 1990, Guam's federally funded family planning programs should have established procedures for providing an initial infertility assessment.

Ranking Low Priority

OBJECTIVE 15

By 1990, the sale of oral contraceptives containing more than 50 micrograms of estrogen should have been reduced to 15 percent of total sales.

Ranking Medium Priority

OBJECTIVE 16

By 1990, a centralized and comprehensive population data recovery system will be implemented.

Ranking High Priority

FAMILY PLANNING
NATIONAL OBJECTIVES

- A. By 1990, there should be virtually no unintended births to girls 14 years or younger. Fulfilling this objective would probably reduce births in this age group to near zero.
- B. By 1990, the fertility rate for 15-year-old-girls should be reduced to 10 per 1,000.
- C. By 1990, the fertility rate for 16-year-old-girls should be reduced to 45 per 1,000.
- D. By 1990, the fertility rate for 17-year-old-girls should be reduced to 45 per 1,000.
- E. By 1990, reductions in unintended births among single American women (15 to 44 years of age) should reduce the fertility rate in this group to 18 per 1,000.
- F. By 1990, the proportion of abortions performed in the second trimester of pregnancy should be reduced to 6 percent, thereby reducing the death-to-case rates for legal abortions in the United States to 0.5 per 100,000.
- G. By 1990, the availability of family planning information and methods (education, counseling and medical services) to all women and men should have sufficiently increased to reduce by 50 percent the disparity between Americans of different economic levels in their ability to avoid unplanned births.
- H. By 1990, at least 75 percent of men and women over the age of 14 should be able to describe accurately the various contraceptive methods, including the relative safety and effectiveness of one method versus the others.
- I. By 1985, the sales of oral contraceptives containing more than 50 micrograms of estrogen should have been reduced to 15 percent of total sales.
- J. By 1985, 100 percent of Federally funded family planning programs should have an established routine for providing an initial infertility assessment, either directly or through referral.

FAMILY PLANNING
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PREGNANCY AND INFANT HEALTH

PROBLEM STATEMENT

Assuring that all parents and prospective parents receive education on pregnancy, childbearing, infant development, well and sick child management, nutrition and parenting is the highest priority in promoting health and preventing disease among Guam's infant population. Accessible, appropriate medical care for pregnant women and their infants is also a high priority.

Many local families still rely on the island's traditional healers (suruhanu) for medical care and advice. Prior to the late 1950's they were the primary medical providers to pregnant women and infants. This reliance may cause problems because many of their recommendations and treatments run contrary to accepted medical protocols and in some instances may cause more problems than they cure. As many of the suruhanu are elderly men and women this problem may be self limiting. However, a positive attitude and trust in the local medical community may still be lacking.

Even when this trust is not in question there is still the problem of seeing prenatal care and regular well-child care as a low priority medical need. Thus, often clients will report a lack of transportation, baby-sitter, or money as a reason for not seeking care when in truth it is of little importance to them to seek such services.

STRATEGIES

A recommendation of the Pregnancy and Infant Health Working Group is the establishment of a committee made up of health care providers, health insurance underwriters, educators, media specialists and other interested persons. One of the committee's functions would be to study the feasibility of writing and disseminating a parenting bulletin to be mailed monthly to all postpartum women on island for a period of one year after the birth of their babies. If found that it would be practical and possible to do this, the committee would then plan, develop, disseminate and evaluate the effectiveness of the mailers.

Another strategy to be utilized is to lobby for an expansion of the public transportation system. There are an adequate number of health care providers on island but accessibility is a problem for those families with only one vehicle which is primarily used by the breadwinner, or no vehicle at all.

OBSTACLES AND CONSTRAINTS

1. Funding may not be available for the expansion of the mass transit system in a timely manner
2. Interest and commitment of potential committee members may wane as time goes by. A system should be developed to replace members who drop out.

PREGNANCY AND INFANT HEALTH
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, an increased percentage of families will utilize the available prenatal and infant health programs (in reference to a baseline yet to be established). A thorough system of follow up and appointment reminders will be implemented.

Ranking High Priority

OBJECTIVE 2

By 1990, preventive health services should be made available and accessible to all infants. These services shall include parenting education, primary health care, well child care, infant nutrition and breastfeeding, growth and developmental assessment, immunization, screening, diagnosis, counseling and referral, dental services and treatment for special needs, specific screening and preventive counseling for conjunctivitis, Salmonella, and otitis media.

Ranking High Priority

OBJECTIVE 3

By 1990, all prospective parents should receive or have available prenatal education about nutrition, smoking, alcohol and fetal alcohol syndrome, drug use, infant care, the ethical and moral issues of childbearing, and family planning. Special emphasis will be placed on breastfeeding education to combat cultural myths and mores.

Ranking High Priority

OBJECTIVE 4

By 1990, all women and infants should receive needed care and services addressing prenatal, maternal, and infant health and development needs.

Ranking High Priority

OBJECTIVE 5

By 1990, legislation will be enacted which mandates the use of federally approved child restraint systems by children, four years of age and younger and/or 40 lbs and under, riding in a motor vehicle.

Ranking High Priority

OBJECTIVE 6

By 1990, a Pacific Basin inter-island committee will develop and implement a program to provide prenatal, maternal, perinatal and infant health education in the native languages of the cultures most frequently using the obstetrical facilities of Guam. Breakdown of ethnic mortality rates will be compiled and distributed as a rationale for the appropriate island health departments.

Ranking High Priority

OBJECTIVE 7

By 1990, the proportion of women who receive no prenatal care in their first trimester should not exceed 25 percent.

Ranking Medium Priority

OBJECTIVE 8

By 1990, Guam's infant mortality rate (deaths for all infants up to one year of age) should be reduced to no more than nine per 1,000 live births, and no ethnic group should have an infant mortality rate of greater than 15 per 1000.

Ranking Medium Priority

PREGNANCY AND INFANT HEALTH

NATIONAL OBJECTIVES

- A. By 1990, the National infant mortality rate (deaths for all babies up to one year of age) should be reduced to no more than 9 deaths per 1,000 live births.
- B. By 1990, no county and no racial or ethnic groups of the population (e.g., black, Hispanic, Indian) should have an infant mortality rate in excess of 12 deaths per 1,000 live births.
- C. By 1990, the neonatal death rate (deaths for all infants up to 28 days old) should be reduced to no more than 6.5 deaths per 1,000 live births.
- D. By 1990, the perinatal death rate should be reduced to no more than 5.5 per 1,000.
- E. By 1990, the maternal mortality rate should not exceed 5 per 100,000 live births for any county or for any ethnic group.
- F. By 1990, the incidence of neural tube defects should be reduced to 1.0 per 1,000 live births.
- G. By 1990, Rhesus hemolytic disease of the newborn should be reduced to below a rate of 1.3 per 1,000 live births.
- H. By 1990, the incidence of infants born with Fetal Alcohol Syndrome should be reduced by 25 percent.
- I. By 1990, low birth weight babies (2,500 gms. and under) should constitute no more than 5 percent of all live births.
- J. By 1990, no county and no racial or ethnic groups of the population should have a rate of low birth weight infants that exceeds 9 percent of all live births.
- K. By 1990, the majority of infants should leave hospitals in car safety carriers.
- L. By 1990, 85 percent of women of childbearing age should be able to choose foods wisely (state special nutritional needs of pregnancy) and understand the hazards of smoking, alcohol, pharmaceutical products and other drugs during pregnancy and lactation.
- M. By 1990, virtually all women and infants should be served at levels appropriate to their needs by a regionalized system of primary, secondary and tertiary care for prenatal, maternal and perinatal health services.

- N. By 1990, the proportion of women in any county or racial or ethnic groups who obtain no prenatal care during the first trimester of pregnancy should not exceed 10 percent.
- O. By 1990, virtually all pregnant women at high risk of having a fetus with a condition diagnosable in utero, should have access to counseling and information on amniocentesis and prenatal diagnosis, as well as therapy as indicated.
- P. By 1990, virtually all women who give birth should have appropriately-attended, safe delivery, provided in ways acceptable to them and their families.
- Q. By 1990, virtually all newborns should be provided neonatal screening for metabolic disorders for which effective and efficient tests and treatments are available (e.g., PKU and congenital hypothyroidism).
- R. By 1990, virtually all infants should be able to participate in primary health care that includes well child care; growth development assessment; immunization; screening, diagnosis and treatment for conditions requiring special services; appropriate counseling regarding nutrition, automobile safety, and prevention of other accidents such as poisonings.
- S. By 1990, a system should be in place for comprehensive and longitudinal assessment of the impact of a range of prenatal factors (e.g., maternal exposure to radiation, ultrasound, dramatic temperature change, toxic agents, smoking, use of alcohol or drugs, exercise, or stress) on infant and child physical and psychological development.

PREGNANCY AND INFANT HEALTH

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IMMUNIZATION

PROBLEM STATEMENT

The prevention of infectious and communicable diseases is attainable through the use of vaccines. This is exemplified by the global eradication of smallpox since 1980. The introduction and widespread use of vaccines has resulted in the dramatic decline in the incidence of vaccine-preventable diseases namely: Diphtheria, Pertussis, Tetanus, Measles, Rubella, Mumps and Polio. The following table shows a comparison of the maximum number of cases by disease in the United States, 1990 target level, and 1982 cases of diseases preventable by vaccination during childhood.

TABLE 1

Disease Name	Number	Year	1982 Number of Cases	1990 Objective
Diphtheria	206,939	1921	2	50
Measles	894,134	1941	2,554	500
Mumps	152,209	1968(b)	2,852	1,000
Pertussis	265,296	1934	3,239	1,000
Poliomyelitis	21,269	1952	5	10
Rubella	57,686	1969(c)	603	1,000
Congenital Rubella Syndrome	20,000+	1964-65	0	10
Tetanus	601	1947(d)	70	50

Note: (a) 442 were imported cases
 (b) First reportable in 1968
 (c) First reportable in 1966
 (d) First reportable in 1947

Source: Alan R. Hinman and William S. Jordon Jr., "Progress Toward Achieving the 1990 Immunization Objectives", Public Health Reports, September-October, 1982, Vol. 5, page 437.

CDC MMWR, January 3, 1986, Vol. 34, Nos. 51 & 52, page 774.

The following table shows the comparison of the number of cases by disease in Guam for the years 1973 and 1985 and lists Guam's 1990 target levels:

TABLE 2

Disease Name	Cases 1973	Cases 1985	Cases 1990
Diphtheria (a)	0	0	0
Measles (b)	47	12(2)*	5
Mumps (c)	53	7	5
Pertussis (d)	0	0	0
Poliomyelitis (e)	0	0	0
Rubella (f)	156	4	5
Congenital Rubella Syndrome (g)	0	0	0
Tetanus (h)	0	0	1

- Note:
- (a) No reported case since 1973.
 - (b) There were 143 cases reported between 1980-85, 25 cases were imported.
 - (c) There was a mumps outbreak in 1974 with 388 cases.
 - (d) There were 2 reported cases in 1974 and 1975.
 - (e) There have been no reported cases since 1973.
 - (f) Reported cases between 1980-85 were 15.
 - (g) No reported case since 1973.
 - (h) There were 6 reported cases from 1974-84.

* Imported.

Source: Immunization Program, Department of Public Health and Social Services.

IMMUNIZATION
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, reported measles incidence should not be more than five cases per year - all imported or within two generations of importation.

Ranking High Priority

OBJECTIVE 2

By 1990, reported mumps incidence should not be more than five cases per year.

Ranking High Priority

OBJECTIVE 3

By 1990, reported rubella (german measles) incidence should not be more than five cases per year.

Ranking High Priority

OBJECTIVE 4

By 1990, reported congenital rubella incidence should be zero.

Ranking High Priority

OBJECTIVE 5

By 1990, reported diphtheria incidence should be zero.

Ranking High Priority

OBJECTIVE 6

By 1990, reported pertussis incidence should be zero.

Ranking High Priority

OBJECTIVE 7

By 1990, reported tetanus incidence should not be more than one case every year.

Ranking High Priority

OBJECTIVE 8

By 1990, reported polio incidence should be zero.

Ranking High Priority

OBJECTIVE 9

By 1990, all mothers of newborns under non-military jurisdiction should receive instruction prior to leaving the hospital or within three weeks after the birth of their children on the immunization schedule for their babies.

Ranking High Priority

OBJECTIVE 10

By 1990, at least 95 percent of children attending licensed day care facilities and schools in Kindergarten through 12th grade should be fully immunized.

Ranking High Priority

OBJECTIVE 11

By 1990, at least 90 percent of all children should have completed the basic immunization series by two years of age, as recommended by the Advisory Committee on Immunization Practices (ACIP) and the American Academy of Pediatrics (AAP).

Ranking High Priority

OBJECTIVE 12

By 1990, surveillance systems should be sufficiently improved so that:

- a. At least 100 percent of hospitalized patients and outpatients who have childhood vaccine-preventable diseases are reported and investigated within 24 hours of report, and

- b. uniform case definitions for childhood vaccine-preventable diseases are used on Guam.

Ranking High Priority

OBJECTIVE 13

By 1990, at least 60 percent of high risk populations as defined by the Advisory Committee on Immunization Practices of the U.S. Public Health Service (ACIP) should be receiving annual immunization against influenza.

Ranking Medium Priority

OBJECTIVE 14

By 1990, at least 60 percent of high risk populations, as defined by the ACIP, should have received vaccination against pneumococcal pneumonia.

Ranking Medium Priority

OBJECTIVE 15

By 1990, at least 50 percent of people in populations designated as targets by the ACIP should be immunized within five years of licensure of new vaccines for routine clinical use.

Ranking Medium Priority

OBJECTIVE 16

By 1990, at least 95 percent of all immunization records provided to children on Guam should be in a standardized format using common guidelines on immunization.

Ranking Medium Priority

IMMUNIZATION

NATIONAL OBJECTIVES

- A. By 1990, reported measles incidence should be reduced to less than 500 cases per year - all imported or within two generations of importation.
- B. By 1990, reported mumps incidence should be reduced to less than 1,000 cases per year.
- C. By 1990, reported rubella incidence should be reduced to less than 1,000 cases per year.
- D. By 1990, reported congenital rubella syndrome incidence should be reduced to less than 10 cases per year.
- E. By 1990, reported diphtheria incidence should be reduced to less than 50 cases per year.
- F. By 1990, reported pertussis incidence should be reduced to less than 1,000 cases per year.
- G. By 1990, reported tetanus incidence should be reduced to less than 50 cases per year.
- H. By 1990, reported polio incidence should be less than 10 cases per year.
- I. By 1990, all mothers of newborns should receive instruction prior to leaving the hospital or after home births on immunization schedules for their babies.
- J. By 1990, at least 90 percent of all children should have completed their basic immunization series by age 2 - measles, mumps, rubella, polio, diphtheria, pertussis and tetanus.
- K. By 1990, at least 95 percent of children attending licensed day care facilities, and kindergarten through 12th grade should be fully immunized.
- L. By 1990, at least 60 percent of high risk populations as defined by the Immunization practices Advisory Committee on the Public Health Service (ACIP) should be receiving annual immunization against influenza.
- M. By 1990, at least 60 percent of high risk populations, as defined by the ACIP, should have received vaccination against pneumococcal pneumonia.

- N. By 1990, at least 50 percent of people in populations designated as targets by the ACIP should be immunized with 5 years of licensure of new vaccines for routine clinical use.
- O. By 1985, the Nation should have a plan in place to mount mass immunization programs in the face of possible epidemics of influenza or other epidemic diseases for which vaccines may exist.
- P. By 1990, no comprehensive health insurance policies should exclude immunizations.
- Q. By 1990, at least 95 percent of all children through age 18 should have up-to-date official immunization records in a uniform format using common guidelines for completion of immunization.
- R. By 1990, surveillance systems should be sufficiently improved that (1) at least 90 percent of those hospitalized, and 50 percent of those not hospitalized, with vaccine preventable diseases of childhood are reported, and that (2) uniform case definitions are used nationwide.

IMMUNIZATION
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SEXUALLY TRANSMITTED DISEASES

PROBLEM STATEMENT

A sexually transmitted disease (STD) is any disease that is spread by various sexual practices between sexual partners. A list of diseases commonly known to spread in this manner includes:

Herpes Simplex II	Chancroid
Acquired Immune Deficiency Syndrome (AIDS)	Lymphogranuloma Venereum
Gonorrhea	Candidiasis
Syphilis	Trichomoniasis
Chlamydia	Gardnerella
Non-Gonococcal Urethritis	Molluscum Contagiosum
Pelvic Inflammatory Disease	Crab Lice (Pediculosis)
Hepatitis (all types)	Scabies
Cytomegalovirus	Pinworms
Venereal Warts	Gay Bowel Syndrome

Control activities for STD's on Guam have concentrated primarily on the diseases of gonorrhea and syphilis until 1982.

Gonorrhea remains the STD most frequently reported. Table 1 shows the number of reported cases in the past five years, indicating a steadily rising incidence rate on Guam.

TABLE 1
Frequency and Incidence Rates for Gonorrhea
Per 1,000 Population
Guam: 1980 - 1984

Year	Total Population*	Total Cases Reported	Gonorrhea Incidence Rate
1980	105,979	352	3.3
1981	109,581	377	3.4
1982	108,874	412	3.8
1983	112,185	438	3.9
1984	118,344	674	5.7
5-year Average:			4.0
*1980 Census of Population Plus net natural Increase for 1981, 1982, 1983, and 1984.			

Source: Department of Public Health and Social Services, Guam; U.S. Bureau of Census.

Tables 2 and 3 illustrate that when incidence rates are calculated separately for the civilian and military populations there is a significant difference in incidence rates; a 2.1 rate for civilians vs a 12.7 rate for military (rate per 1,000).

TABLE 2
Frequency and Incidence Rates for Gonorrhea
Per 1,000 Civilian Population
Guam: 1980 - 1984

Year	Civilian Population*	Civilian Cases Reported	Gonorrhea Incidence Rate
1980	87,411	162	1.9
1981	89,075	141	1.6
1982	90,761	164	1.8
1983	92,479	194	2.1
1984	94,229	271	2.9
5-year Average			2.1

Source: Department of Public Health and Social Services,
Guam.

TABLE 3
Guam's Reported Gonorrhea Cases
Per 1,000 Military Population

Year	Military Population	Military Cases Reported	Gonorrhea Incidence Rate
1980	18,558	190	10.2
1981	20,506	236	11.5
1982	18,113	248	13.7
1983	19,806	244	12.3
1984	25,115	403	16.0
5-year Average:			12.7

Source: Department of Public Health and Social Services,
Guam.

Despite the increases in reported gonorrhea cases, the number of cases with identified penicillin resistance (PPNG) has decreased over the same period. Table 4 below depicts this trend.

TABLE 4
Frequency of Gonorrhea Cases and PPNG Cases
Guam: 1980 - 1984

Group	1980	1981	1982	1983	1984
Gonorrhea	311	340	391	429	658
PPNG	<u>41</u>	<u>37</u>	<u>21</u>	<u>8</u>	<u>16</u>
TOTAL	352	377	412	437	675

Source: Department of Public Health and Social Services, Guam.

The reduction in PPNG cases reported is in large measure due to the discontinuance of testing by some military clinics in 1983 to identify this resistant strain. The civilian health care system continues to identify resistant cases, but the reported numbers of PPNG cases since 1983 is probably lower than the true incidence.

Syphilis incidence on Guam is extremely low compared to the U.S. mainland for cases with infectious disease (i.e. primary and secondary cases). However, serologic surveillance for the syphilis antibody indicates there are large numbers of individuals who are past infection, and who may be in the late latent stage of the disease.

In 1982 other STD's were included in Guam's reportable disease listing, and limited data are now available that suggest low infection rates for genital herpes simplex II, chancroid, and gardnerella, with a moderate to high prevalence of chlamydia, non-gonococcal urethritis, trichomoniasis, candidiasis, hepatitis, and genital warts.

The lack of laboratory diagnostic capability is likely the reason for the low reported numbers of cases, and observational data indicate that as capabilities improve a significant increase in these other STD'S will be recognized and reported.

Testing for diseases such as herpes simplex, chlamydia, hepatitis and other viral diseases used to entail extremely complex laboratory procedures, were very expensive, and, because they were only available off-island, were very cumbersome and time consuming.

New monoclonal technology has now made these tests available at a minimal setup cost and with simplified procedures that most laboratories can perform.

Acquired Immune Deficiency Syndrome (AIDS) has not as yet posed a significant health threat to Guam's population. One case was reported in July 1985; this person acquired the virus infection on the U.S. mainland. We do not however have very much information on the prevalence of the AIDS virus within our population. Increased activity in outreach, serologic surveillance/study and health education is necessary to assess Guam's current needs and plan for future control activities.

SEXUALLY TRANSMITTED DISEASES

GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, reduce reported gonorrhea incidence to a rate of 2.8 cases per 1,000 population.

Ranking High Priority

OBJECTIVE 2

By 1990, reduce the reported incidence of gonococcal pelvic inflammatory disease (GPID) to a rate of 30 cases per 100,000 population.

Ranking High Priority

OBJECTIVE 3

By 1990, reduce the reported incidence of primary and secondary syphilis cases to a rate of five cases per 100,000 population. Reduce the reported incidence of congenital syphilis to one case per 100,000 live births.

Ranking High Priority

OBJECTIVE 4

By 1990, provide accurate and timely STD education to every junior and senior high school student.

Ranking Medium Priority

OBJECTIVE 5

By 1990, 95 percent of the island's health care providers seeing suspected cases of STD's should be capable of diagnosing and treating all currently recognized STDs.

Ranking Medium Priority

OBJECTIVE 6

By 1990, establish the capability to conduct serologic surveillance and epidemiological investigation of AIDS cases.

Ranking Medium Priority

SEXUALLY TRANSMITTED DISEASES

NATIONAL OBJECTIVES

- A. By 1990, reported gonorrhea incidence should be reduced to a rate of 280 cases per 100,000 population.
- B. By 1990, reported incidence of gonococcal pelvic inflammatory disease should be reduced to a rate of 60 cases per 100,000 females.
- C. By 1990, reported incidence of primary and secondary syphilis should be reduced to a rate of 7 cases per 100,000 population per year, with a reduction in congenital syphilis to 1.5 cases per 100,000 children under 1 year of age.
- D. By 1990, the incidence of serious neonatal infection due to sexually transmitted agents, especially herpes and chlamydia, should be reduced to a rate of 8.5 cases of neonatal disseminated herpes per 100,000 children under 1 year of age, and a rate of 360 cases of chlamydial pneumonia per 100,000 children under 1 year of age.
- E. By 1990, the incidence of nongonococcal urethritis and chlamydial infections should be reduced to a rate of 770 cases per 100,000 population.
- F. By 1990, the proportion of sexually active men and women protected by properly used condoms should increase to 25 percent of those at risk of acquiring sexually transmitted diseases.
- G. By 1990, every junior and senior high school student in the United States should receive accurate, timely education about sexually transmitted diseases.
- H. By 1985, at least 95 percent of health care providers seeing suspected cases of sexually transmitted diseases, should be capable of diagnosing and treating all currently recognized sexually transmitted diseases, including: genital herpes diagnosis by culture, therapy (if available) and patient education; hepatitis B diagnosis among homosexual men, prevention through a vaccine (when proved effective), and patient education; and nongonococcal urethritis diagnosis, therapy and patient education.
- I. By 1990, at least 50 percent of major industries and Governmental agencies offering screening and health promotion programs at the worksite should be providing sexually transmitted disease services (education and appropriate testing) within those programs.

- J. By 1985, data should be available in adequate detail (but in statistical aggregates to preserve confidentiality) to determine the occurrence of nongonococcal urethritis, genital herpes and other sexually transmitted diseases in each local area, and to recommend approaches for preventing sexually transmitted diseases and their complications.
- K. By 1990, surveillance systems should be sufficiently improved so that at least 25 percent of sexually transmitted diseases diagnosed in medical facilities are reported, and that uniform definitions are used nationwide.

SEXUALLY TRANSMITTED DISEASES

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HEALTH PROTECTION

"Those efforts provided to people in groups by government, industry and other organization to reduce environmental hazards."

TOXIC AGENT CONTROL

PROBLEM STATEMENT

As the Territory of Guam progresses in its development, the amounts and types of toxic agents imported, distributed, used, and eventually discarded as waste, will increase significantly. This concern can be expected to increase with the introduction of new technology or industries traditionally responsible for toxic pollutants which may accumulate in air, soil or water. These toxic agents are a significant concern to both health professionals and the general public because of potential human exposure through consumer products, agricultural produce, potable water, recreational contact, or sudden releases as a result of accidental occurrences.

In addition, the effect of lead from automobile emissions, widespread use of x-rays for diagnostic purposes in medicine and dentistry, and exposure to non-ionizing radiation from radio towers may present previously unrecognized health problems.

Scientific knowledge concerning health effects of long-term exposure to low levels of toxic agents in the environment is most often not available. Consequently, primary care physicians may not be thoroughly knowledgeable in the principal health consequences of environmental exposure to these agents. Chronic exposure concerns include possible carcinogenic, mutagenic or teratogenic effects on the reproductive or nervous systems.

The general public is essentially unaware of the toxic nature of some consumer products and other environmental risks which they may come in contact with on a daily basis. In addition, Legislators and village Municipal Councils are not fully aware of Guam's air and water quality nor are they able to accurately identify problems affecting these concerns in their respective municipalities.

GUAM'S 1990 OBJECTIVES

The Toxic Agent Control Work Group reviewed each of the National Objectives as well as Hawaii's Objectives for 1990. None of the National Objectives were adopted in their original form. However, several of the Hawaii Objectives were adopted, based on the environmental similarities of Guam and Hawaii. The following objectives for Guam are listed in decreasing order of priority.

TOXIC AGENT CONTROL
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, a Territorial groundwater strategy will be fully developed and implemented.

Ranking High Priority

OBJECTIVE 2

By 1990, a storage facility will be available to the general public for receipt and proper disposal of unwanted small quantities of toxic materials.

Ranking High Priority

OBJECTIVE 3

By 1990, all Territorial laws concerning import, sale, and distribution of hazardous substances should be fully implemented.

Ranking High Priority

OBJECTIVE 4

By 1990, there will be a screening program for pesticide residues on agricultural produce imported and marketed within the Territory.

Ranking High Priority

OBJECTIVE 5

By 1990, protocols and plans for mobilization of governmental resources to toxic material emergencies shall be available.

Ranking High Priority

OBJECTIVE 6

By 1990, the number of medically unnecessary diagnostic x-ray examinations should be reduced.

Ranking Medium Priority

OBJECTIVE 7

By 1990, there will be a lead screening program to determine that extent to which children, six months to five years of age, are exposed to lead in their environment.

Ranking Medium Priority

OBJECTIVE 8

By 1990, periodic monitoring of toxic agents in wastewater effluent discharged into coastal waters and wastewater treatment sludge will be required for all public wastewater treatment systems.

Ranking Medium Priority

OBJECTIVE 9

By 1990, air quality throughout the Territory will be in compliance with the National Ambient Air Quality Standards during 95 percent of the year.

Ranking Medium Priority

OBJECTIVE 10

By 1990, the Territory will continue to maintain and expand its present air monitoring system.

Ranking Medium Priority

OBJECTIVE 11

By 1990, all primary care physicians should have access to information, training, or expertise on illnesses and injuries resulting from exposure to toxic agents or other environmental hazards.

Ranking Medium Priority

OBJECTIVE 12

By 1990, programs will be established for the purpose of educating adults and school-aged children about the risks associated with toxic agents and other environmental threats to health.

Ranking Medium Priority

OBJECTIVE 13

By 1990, all Legislators and Municipal Councils will be provided status summaries of air and water quality, and future potential problems regarding land use.

Ranking Medium Priority

OBJECTIVE 14

By 1990, a central clearing house for observation of agent/disease relationships and host susceptibility factors should be fully operational.

Ranking Low Priority

OBJECTIVE 15

By 1990, the public will not be exposed to radio frequency radiation above recommended levels.

Ranking Low Priority

TOXIC AGENT CONTROL

NATIONAL OBJECTIVES

- A. By 1990, 80 percent of communities should experience a prevalence rate of lead toxicity of less than 500/100,000 among children ages 6 months to 5 years.
- B. By 1990, significant progress should have been made toward preventing birth defects or miscarriages resulting from exposure to toxic substances through environmental intervention based on current information and expansion of the knowledge base related to hazardous substances and their effects on reproduction.
- C. By 1990, virtually all communities should experience no more than one day per year when air quality exceeds an individual ambient air quality standard with respect to sulfur dioxide, nitrous dioxide, carbon monoxide, lead, hydrocarbon, and particulate matter.
- D. By 1990, at least 95 percent of the population should be served by community water systems that meet Federal and State standards for safe drinking water.
- E. By 1990, there should be virtually no preventable contamination of ground water, surface water or the soil from industrial toxins associated with wastewater management systems established after 1980.
- F. By 1990, there should be no pesticides, herbicides, fungicides, or rodenticides available for sale which are known to be carcinogenic, teratogenic or mutagenic in man, unless determined to be vital to the National interest under certain conditions.
- G. By 1990, inhalation of fumes from toxic materials during transport of such materials should be eliminated.
- H. By 1990, the number of medically unnecessary diagnostic x-ray examinations should be reduced by some 50 million examinations annually.
- I. By 1990, at least 75 percent of all city council members in urban communities should be able to report accurately whether or not the quality of their air and water has improved or worsened over the decade and to identify the principal substances of concern.
- J. By 1990, at least half of all adults should be able to accurately report an accessible source of information on toxic substances to which they may be exposed -- including information on the interactions with other factors such as smoking and medications.

- K. By 1990, at least half of all people ages 15 years and older should be able to identify the major categories of environmental threats to health and note some of the health consequences of those threats.
- L. By 1990, at least 70 percent of all primary care physicians should be able to identify the principal health consequences of exposure to each of the major categories of environmental threats to health.
- M. By 1990, at least 90 percent of all children identified with lead toxicity in the 1 to 5 age group (especially those aged 1 to 3) should have been brought under medical and environmental management.
- N. By 1990, the Toxic Substances Control Act and the Resource Conservation and Recovery Act should be fully implemented to protect the U.S. population against hazards resulting from production, use, and disposal of toxic chemicals.
- O. By 1990, individuals purchasing a potentially toxic product sold commercially or used industrially should be protected by clear labeling as to content, as to direction for proper use and disposal and as to factors that may make that individual especially susceptible (health status, age, sex, medications, genetic traits).
- P. By 1990, every individual should have access to an acute care facility with the capability to provide or make appropriate referrals for screening, diagnosis and treatment of suspected exposure to toxic agents.
- Q. By 1990, every individual residing in an area of a population density greater than 20 per square mile, or an area of particularly high risk, should be protected by an early warning system designed to detect the most serious environmental hazards posing imminent threats to health.
- R. By 1990, every populated area of the country should be able to be reached within 6 hours by an emergency response team in the event of exposure to an environmental hazard poisoning acute threats to health from a toxic agent, chemical and/or radiation.
- S. By 1990, a broad scale surveillance and monitoring system should have been planned to discern and measure known environmental hazards of a continuing nature as well as those resulting from isolated incidents.
- T. By 1990, a central clearinghouse for observations of agent/disease relationships and host susceptibility factors should be fully operational, as well as a National environmental data registry to collect and catalogue information on concentrations of hazardous agents in air, food, and water.

TOXIC AGENT CONTROL
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OCCUPATIONAL SAFETY AND HEALTH

PROBLEM STATEMENT

The Guam Department of Labor, Bureau of Labor Statistics Occupational Injury and Illness Survey for 1983, shows that one in every 42 workers on Guam risks incurring a job related injury or illness. The cases represent workers exposed to such conditions and risks as toxic chemicals, asbestos, physical hazards, excessive noise, as well as stress. A broad range of health problems are associated with such exposures, including but not limited to cancers, lung and heart diseases, birth defects, and psychological problems.

Occupational injuries and illnesses are endemic in Guam and the States. They occur in all work activities such as construction, agriculture, manufacturing, services, tourism, office work, and others. They affect the young and old, male and female, professionals, the skilled and unskilled, blue collar and white collar workers. The results in human suffering and economic costs are immense. Addressing and controlling these problems will require a coordinated, concerted, and continuing effort by government agencies, universities, employer and employee organizations. Occupational safety and health is no longer considered an industrial concern and must be viewed as a public health issue that can be as debilitating, harmful and costly as other traditional health problems.

Currently the private sector on Guam is monitored by the Federal Occupational Safety and Health Administration (OSHA). The military sector, Navy and Air Force have personnel assigned to monitor their workplaces, and they follow almost exclusively OSHA regulations.

The Government of Guam is without both a specially designated monitoring group, and safety and health regulations adopted for the Territory. Legislation is needed in this area.

GUAM 1990 OBJECTIVES

The Occupational Safety and Health Work Group reviewed each of the National Objectives as well as Hawaii's and Texas's Objectives for 1990. None of the National Objectives were adopted in their original form. Only sixteen of the original twenty National Objectives plus one Texas objective were adopted. The following are the objectives for Guam.

OCCUPATIONAL SAFETY AND HEALTH
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, the prevalence of noise-induced hearing loss should be reduced with increasing emphasis on juvenile education.

Ranking High Priority

OBJECTIVE 2

By 1990, occupational heavy metal poisoning (lead, arsenic, zinc) should be virtually eliminated.

Ranking High Priority

OBJECTIVE 3

By 1990, 75 percent of all firms with employees should have an approved plan of hazard control for all processes, all equipment and new installations.

Ranking High Priority

OBJECTIVE 4

By 1990, at least 75 percent of workers should be able, during the first month of employment, to state the nature of their occupational health and safety risks and their potential consequences, and 100 percent should be informed of changes in these risks while employed.

Ranking High Priority

OBJECTIVE 5

By 1990, all workers should be routinely informed of lifestyle behaviors and health factors that interact with factors in the work environment to increase risks of occupational illness and injuries.

Ranking High Priority

OBJECTIVE 6

By 1990, all managers of workplaces, regardless of size or operation, should be fully informed about the importance of and methods for controlling human exposure to the important toxic agents and hazardous conditions in their work environment.

Ranking High Priority

OBJECTIVE 7

By 1990, 100 percent of primary health care providers should routinely solicit occupational health exposures as part of patient history.

Ranking High Priority

OBJECTIVE 8

By 1990, at least one person in each workplace and/or division should have taken an Occupational Safety and Health Hazard Recognition course.

Ranking High Priority

OBJECTIVE 9

By 1990, lost workdays due to injuries should be reduced from 1.5 to 1 per 100 workers annually.

Ranking High Priority

OBJECTIVE 10

By 1990, increase by 25 percent the number of health hazard evaluations being done annually without compromising the quality of current evaluations.

Ranking Medium Priority

OBJECTIVE 11

An ongoing occupational health hazard/illness/injury coding system capability should be developed to include identification of workplace hazards and related health effects by 1990.

Ranking Medium Priority

OBJECTIVE 12

By 1990, a program should be developed to follow-up individual findings from health hazard and health evaluations, reports from unions and management, and other existing surveillance sources of clinical and epidemiological data, and use the findings to determine the etiology, natural history and mechanisms of suspected occupational disease and injury.

Ranking Medium Priority

OBJECTIVE 13

By 1990, at least 70 percent of all practicing engineers should be skilled in the design of plants and processes that incorporate occupational safety and health control technologies.

Ranking Low Priority

OBJECTIVE 14

By 1987, all workers should receive routine notification in a timely manner of the results of all health examinations or personal exposure measurements taken in work environments directly related to them.

Ranking Low Priority

OBJECTIVE 15

By 1990, at least one question about lifetime work history and known exposures to hazardous substances should be added to all appropriate existing health data reporting systems (e.g., cancer registries, hospital discharge abstracts and death certificates).

Ranking Low Priority

OBJECTIVE 16

By 1990, workplace accident deaths for firms or employers with one or more employees should be reduced.

Ranking Low Priority

OBJECTIVE 17

By 1990, the rate of work-related disabling injuries should be maintained at the 1983 case level or below per 100 full-time workers.

Ranking Low Priority

OCCUPATIONAL SAFETY AND HEALTH
NATIONAL OBJECTIVES

- A. By 1990, workplace accident deaths for firms or employers with 11 or more employees should be reduced to less than 3,750 per year.
- B. By 1990, the rate of work-related disabling injuries should be reduced to 8.3 cases per 100 full-time workers.
- C. By 1990, lost workdays due to injuries should be reduced to 55 per 100 workers annually.
- D. By 1990, the incidence of compensable occupational dermatitis should be reduced to about 60,000 cases.
- E. By 1990, among workers newly exposed after 1985, there should be virtually no new cases of four preventable occupational diseases - asbestosis, byssinosis, silicosis and coal worker's pneumoconiosis.
- F. By 1990, the prevalence of occupational noise-induced hearing loss should be reduced to 415,000 cases.
- G. By 1990, occupational heavy metal poisoning (lead, arsenic, zinc) should be virtually eliminated.
- H. By 1985, 50 percent of all firms with more than 500 employees should have an approved plan of hazard control for all new processes, new equipment and new installations.
- I. By 1990, all firms with more than 500 employees should have an approved plan of hazard control for all new processes, new equipment and new installations.
- J. By 1990, at least 25 percent of workers should be able, prior to employment, to state the nature of their occupational health and safety risks and their potential consequences, as well as be informed of changes in these risks while employed.
- K. By 1985, workers should be routinely informed of lifestyle behaviors and health factors that interact with factors in the work environment to increase risks of occupational illness and injuries.
- L. By 1985, all workers should receive routine notification in a timely manner of all health examinations or personal exposure measurements taken on work environments directly related to them.
- M. By 1990, all managers of industrial firms should be fully informed about the importance of and methods for controlling human exposure to the important toxic agents in their work environments.

- N. By 1990, at least 70 percent of primary health care providers should routinely elicit occupational health exposures as part of patient history, and should know how to interpret the information to patients in an understandable manner.
- O. By 1990, at least 70 percent of all graduate engineers should be skilled in the design of plants and processes that incorporate occupational safety and health control technologies.
- P. By 1990, generic standards and other forms of technology transfer should be established, where possible, for standardized employer attention to such major common problems as: chronic lung hazards, neurological hazards, carcinogenic hazards, mutagenic hazards, teratogenic hazards and medical monitoring requirements.
- Q. By 1990, the number of health hazard evaluations being performed annually should increase tenfold; the number of industrywide studies being performed annually should increase threefold.
- R. By 1985, an ongoing occupational health hazard/illness/injury coding system, survey and surveillance capability should be developed, including identification of workplace hazards and related health effects, including cancer, coronary heart disease and reproductive effects. This system should include adequate measurements of the severity of work-related disabling injuries.
- S. By 1985, at least one question about lifetime work history and known exposures to hazardous substances should be added to all appropriate existing health data reporting systems, e.g., cancer registries, hospital discharge abstracts and death certificates.
- T. By 1985, a program should be developed to: 1) follow up individual findings from health hazard and health evaluations, reports from unions and management and other existing surveillance sources of clinical and epidemiological data; and 2) use the findings to determine the etiology, natural history and mechanisms of suspected occupational disease and injury.

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ACCIDENT PREVENTION AND INJURY CONTROL

PROBLEM STATEMENT

Accidents are a major cause of death on Guam among all age groups. Between 1974 and 1984, motor vehicle accidents as well as "other accidents" such as drowning, falls and shooting mishaps consistently ranked among the island's ten leading causes of deaths.

During one reported five-year period, a total of 208 persons died as a result of injuries sustained in accidents on Guam. Injuries due to motor vehicle accidents were responsible for nearly half of the deaths. Many of these fatal motor vehicle accidents were alcohol-related. Thirty-seven deaths were due to drowning, followed by 23 deaths by falls, 21 deaths by water transport, five due to firearms mishaps, five by electric current, five by other types of mishaps, four due to fires, two due to suffocation, and one each due to mechanical suffocation, and being hit by an object.

Motor Vehicle Accidents. For the same period, motor vehicle accidents were responsible for 6,183 injuries, 102 of which were fatal. The Guam Police Department reported that 48 of the 102 persons killed in motor vehicle accidents were involved in alcohol-related incidents. In one year's time, an average of 1,236 injuries and 21 deaths can be attributed to traffic accidents.

To illustrate the problem of driving-while-intoxicated, the Guam Police Department for the same period of time issued a total of 3,049 citations for drunk driving, averaging 609 arrests per year. The Guam Police Department does not compile a report on alcohol involvement in non-fatal traffic accidents, so this information could not be included as part of this report, although it would have helped in determining the pervasiveness of the problem.

In 1984 alone, motor vehicle accidents were the fifth ranking cause of death overall, killing 25 people. The motor vehicle fatality rate for that year was 21.1 deaths per 100,000 population. In comparison, the U.S.A's baseline (1978) motor vehicle fatality rate was 23.6 per 100,000 population. In 1982, the U.S. rate fell to 19.8.

Certain population groups are at greater risk of becoming victims of accidents, particularly with respect to motor vehicle accidents. Males between the ages of 15 to 24 years accounted for a majority of motor vehicle fatalities with an average of 49.4 deaths per 100,000 population. This was closely followed by males aged 25 to 44 years with an annual average rate of 30.2 deaths per 100,000. Female death rates for all age groups combined are only equivalent to one-third of the male rates.

Other Accidental Injuries. Information on injuries sustained due to other causes such as recreational, athletic, and home accidents could not readily be obtained except with respect to those resulting in a fatality. No reliable data as to the extent of such injuries or the resulting restricted days of activity are available since accidents are not reported consistently.

Therefore, little mention will be made of these other categories in the problem statement, except to say that Guam needs to conduct more thorough research into the nature and extent of the problem.

During fiscal year 1985, the Guam Fire Department transported 723 persons injured in incidents unrelated to traffic accidents. Again, this figure does not include those persons transported by private means to hospitals or private medical clinics. However, it can be stated with some confidence that an estimate of 2,000 injuries are sustained as a result of accidents on Guam.

A major objective for Guam's accident prevention and injury control policy must be to reduce injuries and deaths, especially those involving motor vehicles. In addition, emphasis must be placed on the timely collection and analysis of accident injury data as well as the use of such data in raising public awareness.

Youthful Involvement In Accidents. Accidental injuries are the leading cause of childhood mortality and morbidity. This is verified by both national and local statistics, and is an issue with which the Emergency Medical Services System must consistently deal.

Statistically on the national level, accidents continue to rank as one of the leading causes of death in the age group of 1 to 24. In looking at Guam statistics from 1984, the most recent year for which detailed mortality figures are available, it can be seen that this ranking holds true in the individual age groups 1 to 4, 5 to 14, and 15 to 24. Accidental injuries accounted for half of all deaths of children ages 1 to 4, 40 percent of those children aged 5 to 14, and close to 57 percent of deaths of those youths ages 15-24.

The six leading causes of death in youths and children between birth and 24 years of age in 1984 are ranked as follows: (1) perinatal conditions (23 percent); (2) motor vehicle accidents (20.5 percent); (3) other external causes (12.8 percent); (4) homicide (8.9 percent); (5) congenital anomalies (7.7 percent); and (6) neoplasms at 5 percent tied with diseases of the nervous and sense organs.

Trauma and accidents are present in several forms. The National Burn Information Exchange states that burns and fires are the third leading cause of accidental death in the U.S., with infants and toddlers age two and under being the age group most likely to be burned severely enough to require admission to specialized burn units. Unfortunately, the Guam Memorial Hospital is capable of handling only moderate, uncomplicated burns, such as second degree burns with body surface area of 10 to 20 percent in children with less than 10 percent third degree burns not involving eyes, ears, face, hands, feet or perineum. Serious cases are stabilized and transferred to facilities in the mainland U.S. The incidence of injuries and trauma due to burns is not significant here on the island, so development of this particular critical care area takes secondary priority.

However, motor vehicle accidents represent a significant percentage of serious trauma in infants and youths. Slightly over 60 percent of those who died as a result of motor vehicle accidents were under 24 years of age. Since this age group only represents an estimated 52 percent of the population, they are overrepresented in traffic fatalities. Professionals in pediatric health care generally agree that the use of appropriate car seats and safety restraints reduces injuries and fatalities among children, and it is this finding which prompted the Office of Highway Safety to promote child seat loaner programs with the Department of Public Health and Social Services, the Guam Memorial Hospital, and the Naval Hospital.

The Insurance Institute for Highway Safety estimates that only 7 percent of children under ten years of age are properly restrained while riding in vehicles. It also has been projected that appropriate restraining devices for infants and children under the age of five would reduce traffic accident fatalities in this age group by 91 percent, while reducing injuries by 78 percent. Guam is attempting preventative measures to reduce this problem through legislation dealing with mandatory child safety restraints and seat belt usage (Bill No. 50), which was passed in November 1986. Bill No. 50 will begin to be enforced one year after passage, in November 1987.

The major obstacles to achieving the objectives for accident prevention and injury control are funding, manpower, and legislative support. Re-establishing driver's education and initiating the proposed home and water safety programs require adequate funding and qualified personnel to develop and administer the programs. The same is true for the establishment of an injury surveillance system. As resources become more and more scarce, identifying funds and manpower may pose problems in achieving certain objectives.

The accident mortality data compiled by the Office of Vital Statistics will be used to evaluate the progress in achieving the 1990 objectives. However, it is hoped that by 1990, accident injury data will also be available.

STRATEGIES

The Accident Prevention and Injury Control measures required to attain Guam's 1990 objective fall into the categories of education, services, economics, and legislative/regulatory actions.

Educational campaigns on the need for safety education, first-aid training, and CPR classes are strongly urged for the public. In addition, parents, schools, and the military must be active participants in encouraging and developing water safety consciousness. Informational programs need to be supported for educating parents, children, and health professionals about the importance of proper use of child safety seats and seatbelts in motor vehicles. Also needed is the expansion of public education efforts on home safety.

Ongoing education should be provided to the public on the need for some fire safety procedures and smoke detectors in the home in order to reduce deaths and damage caused by fires. Greater use of media for public education is needed in controlling accidents and injuries.

Service measures include continued support for the enforcement of the drunkdriving law, checkpoints for speeding, and stiff penalties for convictions relating to driving-while-intoxicated. Services should be expanded to inform visitors and the public on unsafe swimming areas on Guam by use of handouts and more visible warning signs posted at public beaches. Training and certifications in CPR, first responder, first aid and other life saving techniques needs to be expanded throughout the island.

More rapid response of basic life support services and the establishment of advanced life support services are essential for reducing deaths caused by accidents. Lastly, a Committee/Task Force must be established to coordinate and support the various public and private health and social service agencies to promote health awareness and safety on Guam.

A comprehensive data collection system should be established to monitor and evaluate the status of accidents and injuries on Guam, as well as evaluate the impact of various control measures. The unavailability of reliable data creates difficulties in identifying the extent of the problems caused by accidents and factors contributing to injuries.

Legislative and regulatory actions include the mandatory use of car safety restraints by all occupants, children in particular. The Guam Vehicle Code must be revised to strengthen laws pertaining to implied consent, legal blood alcohol levels, and driving-while-intoxicated (DWI). Administrative remedies pertaining to moving violations should include participation of the offender in defensive driving courses and when warranted, DWI classes. Raising the drinking age from 18 to 21 will also have the potential of reducing fatalities due to DWI. Legislation increasing the liquor tax by \$2 will help fund driver education courses for the high schools and traffic offenders. This measure will also have the potential of reducing the consumption of alcoholic beverages by seven percent.

ACCIDENT PREVENTION AND INJURY CONTROL
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, the motor vehicle fatality rate should be reduced to 18 per 100,000 population.

Ranking High Priority

OBJECTIVE 2

By 1990, the five-year average motor vehicle fatality rate for children under 15 years should be reduced to seven per 100,000 children.

Ranking High Priority

OBJECTIVE 3

By 1990, fatalities from motor vehicle accidents involving drivers with blood alcohol levels of .10 percent should be reduced to less than eight per year for all ethnic and age groups.

Ranking High Priority

OBJECTIVE 4

By 1990, establish an agency or program to coordinate and support the various health and social service agencies to promote health awareness and safety on Guam.

Ranking High Priority

OBJECTIVE 5

By 1990, develop an injury surveillance system that includes data collection, analysis and reporting.

Ranking High Priority

OBJECTIVE 6

By 1990, insure the capability of basic life support response within six minutes for life threatening incidents, and establish advanced life support capability on island.

Ranking High Priority

ACCIDENT PREVENTION AND INJURY CONTROL
NATIONAL OBJECTIVES

- A. By 1990, the motor vehicle fatality rate should be reduced to no greater than 18 per 100,000 population.
- B. By 1990, the motor vehicle fatality rate for children under 15 should be reduced to no greater than 5.5 per 100,000 children.
- C. By 1990, the home accident fatality rate for children under 15 should be no greater than 5.0 per 100,000 children.
- D. By 1990, the mortality rate from falls should be reduced to no more than 2 per 100,000 persons.
- E. By 1990, the mortality rate for drowning should be reduced to no more than 3.0 per 100,000 persons.
- F. By 1990, the number of tap water scald injuries requiring hospital care should be reduced to no more than 2,000 per year.
- G. By 1990, residential fire deaths should be reduced to no more than 4,500 per year.
- H. By 1990, the number of accidental fatalities from firearms should be held to no more than 1,700.
- I. By 1990, the proportion of automobiles containing automatic restraint protection should be greater than 75 percent.
- J. By 1990, all birthing centers, physicians and hospitals should ensure that at least 50 percent of newborns return home in a certified child passenger carrier.
- K. By 1990, at least 110 million functional smoke alarm systems should be installed in residential units.
- L. By 1990, the proportion of parents of children under age 10 who can identify appropriate measures to address the three major risks for serious injury to their children (i.e., motor vehicle accidents, burns, poisonings) should be greater than 80 percent.
- M. By 1990, virtually all primary health care providers should advise patients about the importance of safety belts and should include instructions about use of child restraints to prevent injuries from motor vehicle accidents as part of their routine interaction with parents.

- N. By 1990, at least 75 percent of communities with a population of over 10,000 should have the capability for ambulance response and transport within 20 minutes of a call.
- O. By 1990, virtually all injured persons in need should have access to regionalized systems of trauma centers, burn centers and spinal cord injury centers.
- P. By 1990, at least 90 percent of the population should be living in areas with access to regionalized or metropolitan area poison control centers that provide information on the clinical management of toxic substance exposures in the home or work environment.
- Q. By 1990, at least 75 percent of the states will have developed a detailed plan for the uniform reporting of injuries.

ACCIDENT PREVENTION AND INJURY CONTROL
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FLUORIDATION AND DENTAL HEALTH

PROBLEM STATEMENT

The oral health status of people on Guam parallels that seen in many other rapidly developing areas of the world. As a result of an expanding economy and changing life styles, the population of Guam has dramatically modified its diet over the years as the island rebuilt from the destruction of World War II. The major dietary change was the replacement of locally produced, non-processed food items with mass produced foods that are convenient to obtain and use but high in refined carbohydrates. The amount of complex carbohydrates consumed in such indigenous foods as rice and taro was reduced and the frequency of eating refined carbohydrates, especially sugar, greatly increased.

These dietary changes in an environment with a fluoride deficient water supply resulted in caries rates rapidly increasing to epidemic proportions in children. The Government of Guam, recognizing this health problem, enacted Public Law 12-130 in 1974 calling for free dental care for all children up to age 17 years. A Public Health Dental Program was established to provide this care. Unfortunately, the funding provided for the program was not sufficient to support the manpower, equipment and supplies necessary to provide complete dental treatment for the eligible population. Over the years the Dental Program has provided emergency care for the relief of pain to all the population but complete dental care to a much smaller fraction that actively sought care. This group receiving complete care averaged 20 to 30 percent of the eligible population with the balance receiving episodic and emergency care. A survey conducted in 1977 found caries prevalence in Guamanian children to be double that of similar aged children on the mainland.

With the Government unable to provide the three to four fold increase in funding necessary to adequately expand the program to provide comprehensive treatment for all eligible children, an alternative approach emphasizing the reduction of the disease problem through prevention rather than treatment was initiated. This alternative became possible because safe and effective methods for the prevention of dental caries, specifically fluorides and sealants, became available. Changing the emphasis of the Dental Program from treatment of disease to prevention utilizing these two agents began in the early 1980's. The rationale for this approach was that the preventive methods could reduce the disease problem to a level that could be treated by an affordable level of dental manpower.

Fluoride use was initiated in the middle seventies with a program of weekly fluoride mouthrinsing in elementary and middle schools. The project was federally funded for three years and then the cost was assumed by the Government of Guam. Public water fluoridation, after undergoing a number of false starts, was completed island-wide in January 1986. Because the water supply is derived from multiple wells, sixty-six fluoridators are needed to properly fluoridate the water supply. The servicing and maintenance of this number of fluoridators requires a significant effort and expenditure of resources by the Public Utility Agency of Guam.

The application of pit and fissure sealants for preventing tooth decay in school children was initiated in the Public Health Dental Clinics in 1983. This technique involves the placement of a plastic protective covering on the chewing surface of the back teeth. Approximately half the school population in grades 1 to 8 were treated with sealants in the '83-'84 school year. The entire population of over 16,000 children in the selected grades was treated in the '84-'85 and '85-'86 school years, and this population is to be treated each year.

An oral health survey completed in March 1986 showed a more than 50 percent decrease in caries on occlusal surfaces of children treated with sealants. This reduction should increase annually as more children have all their posterior teeth sealed shortly after eruption. Likewise the preventive effects of fluorides, especially water fluoridation, will increase incrementally. The combined preventive effects will not reach maximum levels until after the year 2000 when children have a lifetime exposure to optimum water fluoridation. However, the significant decrease in cavities already documented will continue as long the preventive techniques are maintained and by 1990 the caries problem should be reduced by at least two-thirds. This reduced level of disease should permit the current level of resources allotted to the Dental Program at the Department of Public Health and Social Services to fulfill the intent of Public Law 12-130 by providing complete basic dental care to all the children of Guam.

There have been no systematic surveys of the oral health status of adults on Guam. Without such data it is difficult to establish oral health objectives. Certainly, given the high caries rates seen in children and the expected level of periodontal disease, the oral health status of adults on Guam would be worse than that of similar age groups on the mainland. Treatment needs, primarily the need to replace already lost or hopelessly diseased teeth, appear to far exceed the resources available and almost all senior citizens of Guam suffer from partial to full edentulousness.

Currently there are approximately twenty dentists participating in private practice, closed panel and open panel insurance programs. The capitation type insurance programs are regarded as having high co-payments for restorative care and are reported to be greatly underutilized. Like the mainland, the level of dental care sought tends to reflect the educational and income levels of individuals. It is estimated that less than a third of the adult population of Guam visits a dentist in a year and less than 10 percent obtain comprehensive care.

Public sector support for dental care for adults has been limited to young Medicaid recipients. Last year emergency care for the relief of pain was authorized for individuals qualifying as medically indigent. Expanding or even maintaining these programs in a period of shrinking federal and local health budgets will be a challenge to health planners.

Individuals residing on Guam who were physically or mentally handicapped to the degree that they could not be treated in a typical dental clinic environment were unable to obtain routine dental care until a few years ago. In 1984 the Department of Public Health and Social Services established a clinic for handicapped patients at Chief Brodie Memorial School and funded a dental in-patient hospital dental care program for the handicapped. This effort has been hindered by a lack of adequate funding but has been able to provide dental care to a majority of these special children.

The prevention and care programs currently available to the children of Guam will significantly improve their oral health status. In order for this improvement to be sustained throughout adult life, children and parents must be educated and motivated to assume personal responsibility for their oral health. Individuals must understand the risk factors involved in oral disease and be motivated to adopt behaviors and a life style that promotes oral health.

DATA AND EVALUATION

An age specific oral health status survey should be completed as soon as possible. As recommended in the third objective, the survey should include caries, periodontal, and treatment need indices. These data will serve as a baseline or starting point to evaluate and monitor progress towards improving the oral health status of our people. In addition these data will be invaluable in identifying our major oral disease problems and will be critical to the planning of programs to alleviate these problems.

Other evaluation instruments should be developed for measuring progress in achieving the stated Fluoridation and Dental Health Objectives. For example, examinations of school children's knowledge of oral diseases and their prevention can monitor progress in achieving the health education goals of Objective 1. For Objective 2, the maintenance of optimum water fluoridation, the Public Utility Agency of Guam will routinely test samples of water from all parts of the island for fluoride content and systematically collect and analyze these data. Similar measures of interim progress can be devised for each objective. However, actual improvement in people's health must be measured by surveys of disease prevalence.

FLUORIDATION AND DENTAL HEALTH
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990 at least 95 percent of school children and their parents should be able to identify the principal risk factors related to dental caries (cavities) and to periodontal disease (gum disease) and to be aware of the importance of fluoridation, toothbrushing and other preventive measures in controlling these diseases.

Ranking High Priority

OBJECTIVE 2

By 1990 at least 95 percent of the residents will have been served continuously beginning in 1986, with water that has been fluoridated at a level of 0.7 ppm F.

Ranking High Priority

OBJECTIVE 3

By 1990 an age specific oral health status survey should be completed and the analysis of these data used for planning oral disease programs for all age groups on Guam.

Ranking High Priority

OBJECTIVE 4

By 1990 over 95 percent of children grades 1 to 8 will be participating in the school-based fluoride mouthrinsing and clinic-based oral health education, toothbrushing and sealant treatment preventive programs.

Ranking Medium Priority

OBJECTIVE 5

By 1990, there will have been established a Guam Dental Task Force which will meet at least annually to survey the utilization of the dental assets of Guam.

Ranking High Priority

OBJECTIVE 6

By 1990, dental treatment for the relief of pain will be included for all persons covered by Medicaid and Medically Indigent Programs.

Ranking High Priority

OBJECTIVE 7

By 1990, children in grades Kindergarten through second grade should be participating in supervised toothbrushing sessions after lunch.

Ranking High Priority

FLUORIDATION AND DENTAL HEALTH

NATIONAL OBJECTIVES

- A. By 1990, the proportion of nine-year-old children who have experienced dental caries in their permanent teeth should be decreased to 60 percent.
- B. By 1990, the prevalence of gingivitis in children 6 to 17 years should be decreased to 18 percent.
- C. By 1990, in adults the prevalence of gingivitis and destructive periodontal disease should be decreased to 20 percent and 21 percent, respectively.
- D. By 1990, no public elementary or secondary school (and no medical facility), should offer highly cariogenic foods or snacks in vending machines or in school breakfast or lunch programs.
- E. By 1990, virtually all students in secondary schools and colleges who participate in organized contact sports should routinely wear proper mouth guards.
- F. By 1990, at least 95 percent of school children and their parents should be able to identify the principal risk factors related to dental diseases and be aware of the importance of fluoridation and other measures in controlling these diseases.
- G. By 1990, at least 75 percent of adults should be aware of the necessity for both personal oral hygiene and regular professional care in the prevention and control of periodontal disease.
- H. By 1990, at least 95 percent of the population on community water systems should be receiving the benefits of optimally fluoridated water.
- I. By 1990, at least 50 percent of school children living in fluoride-deficient areas that do not have community water systems should be served by an optimally fluoridated school water supply.
- J. By 1990, at least 65 percent of school children should be proficient in personal oral hygiene practices and should be receiving other needed preventive dental services in addition to fluoridation.
- K. By 1990, a comprehensive and integrated system should be in place for periodic determination of the oral health status, dental treatment needs and utilization of dental services (including reason for and costs of dental visits) of the U.S. population.
- L. By 1985, systems should be in place for determining coverage of all major dental public health preventive measures and activities to reduce consumption of highly cariogenic foods.

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SURVEILLANCE AND CONTROL OF INFECTIOUS DISEASES

PROBLEM STATEMENT

Before World War II infectious diseases were rampant on Guam. Frequent epidemics were noted by the number of deaths from diseases such as Tuberculosis, Leprosy, Measles, Poliomyelitis, Typhoid fever, Bacillary dysentery, Whooping cough and Influenza.

With the post-war rebuilding of Guam's infrastructure and the introduction of western medical technology, the morbidity and mortality rates for most of these infectious diseases has shown a drastic decline.

Several disease conditions however continue to occur at levels that adversely impact on the public health. These diseases include Salmonella, Shigella, Tuberculosis, Hepatitis, Streptococcal disease, Bacterial meningitis and other fecal-oral transmitted diseases.

Though these diseases do not contribute significantly to Guam's mortality rates, their morbidity rates are from 5 to 20 times the rate seen in the U.S. mainland.

The incidence of both salmonellosis and shigellosis has shown significant increases over the past 15 years.

TABLE 1

Mean annual number of cases (and mean annual incidence)
of salmonellosis and shigellosis on Guam by five year
periods, 1971-1985

<u>DISEASE</u>	<u>1971-75</u>	<u>1976-80</u>	<u>1981-85</u>
Salmonellosis	20.2 (22.1)	82.0 (80.6)	195.4 (173.4)
Shigellosis	7.4 (8.1)	22.6 (22.2)	56.6 (50.2)

The reasons that Salmonellosis and Shigellosis have been increasing by such alarming increments recently are not known. Both of these diseases attack children primarily; the peak incidence of Salmonellosis on Guam occurs at the age of three months while two-year-old children have the highest attack rate for Shigellosis. A Shigellosis outbreak investigated in 1984 was clearly associated with substandard living conditions (66 percent of cases lived in homes with inadequate sewage disposal facilities, and many of these homes had been built by low income families without construction plan inspection or approval on government land leased for agricultural purposes). Cases of Salmonellosis, on the other hand, appear to occur in all sectors of the community irrespective of economic status. As an example, the U.S. Naval Station, Guam, had the highest incidence of Salmonellosis of any area on Guam in 1984 (attack rate of approximately 43.5 cases per 1,000 infants) although sanitation standards maintained on military bases are more strict than those in the civilian community.

It is unlikely that Guam's government-operated drinking water supply per se (which served 99.6 percent of all Guam households in 1980) can be responsible for the observed increase in the level of enteric disease problems on Guam. The water system is carefully monitored for chlorination levels and contamination indicators, and certain diseases which are readily spread by means of community water supplies, Amebiasis and Infectious Hepatitis, have decreased in incidence over the past 15 years. The water system is carefully monitored for chlorination levels and contamination indicators. It is possible, however, that the aging water distribution system, particularly the lateral lines serving private residences, may have deteriorated enough to allow infiltration of contaminants during water outages. Anecdotal evidence also suggests that there is a problem of assuring that new construction is in compliance with sanitary code standards. For example, the owner of a new home experienced septic tank overflow soon after moving in. On the advice of sanitation inspectors, he excavated to determine if his leaching field had been clogged and found that no leaching field had been installed!

Tuberculosis rates in the past ten years reflect a steady decline in numbers from 79 cases in 1975 to 36 cases in 1985. These rates however are three times the rate for Hawaii and five times that for the U.S. mainland. The six deaths from Tuberculosis in the past ten years make it the number one leading cause of death from an infectious disease.

The continual influx of persons from Asia and other Pacific islands with endemic Tuberculosis will make the control of this disease difficult in Guam.

Present activity for the provision of government-funded Tuberculosis care for infected cases must continue through 1990, with increased emphasis placed on early detection of cases, thorough epidemiology, and health education efforts.

Viral Hepatitis incidence and prevalence for Guam, though lower than other Pacific island nations, are approximately twenty times the ratio of the U.S. mainland, for both Type A and B.

In the follow-up of Hepatitis cases from 1979 to the present, the following is evident:

- 1) a decreased number of reported cases of all types of Hepatitis,
- 2) a large proportion of cases reported as Hepatitis (unspecified),
- 3) the identification of an index case who never sought medical attention,
- 4) contacts who presented 30 to 90 days prior to the case with a symptom pattern characteristic of Hepatitis minus the Jaundice, and
- 5) reporting of cases greater than two weeks after onset of illness.

It might be mistakenly viewed that as a result of Public Health follow-up with Immune Serum Globulin prophylaxis of Hepatitis contacts that the number of cases have been reduced since 1980. One explanation is that the program of ISG administration resulted in more subclinical illness. There is a need to have the public and health care providers become more aware of Hepatitis particularly

- 1) for the public to seek medical attention when they have the symptoms,

- 2) have physicians conduct Hepatitis diagnostic profiles on all suspect cases (i.e., HBsAg plus Anti-HBC plus Anti-HAV),
- 3) have local laboratories equipped to run these diagnostic profiles so that the diagnosis-to-reporting time is reduced to less than two weeks, and
- 4) to screen Hepatitis B high risk groups to identify carriers.

Limited Hepatitis B study data suggest a five to six percent carrier rate among the civilian population. This carriage rate varies significantly by ethnicity. With the incidence of cirrhosis and primary hepatocellular carcinoma now associated with long-term chronic active Hepatitis B carriers, a closer review and analysis of these conditions on Guam is needed. Given the percentage of carriers in our population, there may indeed be many persons developing these consequences each year in the Territory.

Additional to the problem of disease incidence is the problem of timely reporting of these disease conditions and the need for networking between private health clinics, military health facilities and the Public Health epidemiologists. Infectious diseases occurring within the civilian or military systems affect the population as a whole as was demonstrated in past measles outbreaks and the current salmonella infection trend. There should be a better overall operating system that links all these health care systems to initiate disease reporting in a timely manner, and extend cooperative utilization of laboratory diagnostics and epidemiological expertise.

SURVEILLANCE AND CONTROL OF INFECTIOUS DISEASES
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, reduce the annual incidence rate for the diseases of Salmonella, Shigella, and Hepatitis A by 50 percent from 1980-85 averages.

Ranking High Priority

OBJECTIVE 2

By 1990, reduce the reported incidence of Tuberculosis in Guam to 25 cases per 100,000 population

Ranking High Priority

OBJECTIVE 3

By 1990, provide laboratory identification by type for all reported cases of Viral Hepatitis

Ranking High Priority

OBJECTIVE 4

By 1990, assure that Hepatitis B screening of all prenatal patients and the vaccination of infants born to HBV positive mothers is conducted.

Ranking High Priority

OBJECTIVE 5

By 1990, assure that 100 percent of all infectious disease reports meet all the requirements as specified by law or regulation.

Ranking High Priority

OBJECTIVE 6

By 1990, achieve 95 percent reporting compliance of infectious disease conditions identified in discharge summaries from the Guam Memorial Hospital.

Ranking Medium Priority

OBJECTIVE 7

By 1990 establish and implement minimum international port of entry disease monitoring and control requirements for all classes of persons and/or products entering Guam.

Ranking Medium Priority

OBJECTIVE 8

By 1990, 100 percent of all health care providers (hospitals, clinics, laboratories, and nursing homes) shall have an infectious disease control program that meets minimum Department of Public Health and Social Services infectious disease control standards.

Ranking Medium Priority

OBJECTIVE 9

By 1990, provide for an infectious disease control network between civilian and military health care units.

Ranking Low Priority

OBJECTIVE 10

By 1990, existing laboratory facilities on Guam shall be upgraded to provide necessary services to meet identification requirements for timely reporting of specific Class I and II diseases.

Ranking Low Priority

OBJECTIVE 11

By 1990, make available written health education materials for the ten leading infectious diseases of public health significance to the general public and health care professionals.

Ranking Low Priority

SURVEILLANCE AND CONTROL OF INFECTIOUS DISEASES

NATIONAL OBJECTIVES

- A. By 1990, the annual estimated incidence of hepatitis B should be reduced to 20 per 100,000 population.
- B. By 1990, the annual reported incidence of tuberculosis should be reduced to 8 per 100,000 population.
- C. By 1990, the annual estimated incidence of pneumococcal pneumonia should be reduced to 115 per 100,000 population.
- D. By 1990, the annual reported incidence of bacterial meningitis should be reduced to 6 per 100,000 population.
- E. By 1990, the (risk factor-specified) incidence of nosocomial infection in acute care hospitals should be reduced by 20 percent of what otherwise would pertain in the absence of hospital control programs.
- F. By 1990, 95 percent of licensed patient care facilities should be applying the recommended practices for controlling nosocomial infections.
- G. By 1990, surveillance and control systems should be capable of responding to and containing: (1) newly recognized diseases and unexpected epidemics of public health significance; and (2) infections introduced from foreign countries.
- H. By 1990, at least 50 percent of people in populations designated as targets by the Immunization Practices Advisory Committee of the Public Health Service should be immunized within 5 years of licensure of new vaccines for routine clinical use.
- I. By 1990, data report in systems in all States should be able to monitor trends of common infectious agents not now subject to traditional public health surveillance (respiratory illnesses, gastrointestinal illnesses, otitis media) and to measure the impact of these agents on health care costs and productivity at the local and State levels, and by extension at the National level.
- J. By 1990, the extent of epidemics of respiratory and enteric viral illnesses should be predicted within 2 weeks after they appear, through community-wide sentinel surveillance systems.
- K. By 1990, all State health departments should be linked by a computer system to Federal health agencies for routine collection, analysis and dissemination of surveillance data, rapid communication of messages, and epidemic aid investigations.
- L. By 1990, laboratories throughout the country should be linked for monitoring infectious agents and antibiotic resistance patterns and for disseminating information.

SURVEILLANCE AND CONTROL OF INFECTIOUS DISEASES
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HEALTH PROMOTION

"These are primarily an educational process aimed at the public and health care professionals about health risks and options for healthier lifestyles."

SMOKING AND HEALTH

PROBLEM STATEMENT

Tobacco use is the single most important preventable cause of death and disability in the U.S. The World Health Organization and the U.S. Food and Drug Administration have classified smoking as a form of drug addiction and consider it as addictive as heroin. Cigarette smoking is responsible for about 320,000 deaths annually in the country and is associated with heart and blood vessel diseases, chronic bronchitis and emphysema, 83 percent of cancer of the lung, 30 percent of all cancers (including larynx, pharynx, esophagus, pancreas and bladder) and with problems such as respiratory infections and stomach ulcers. Snuff and chewing tobacco are associated with oral cancers.

Furthermore, there is growing medical evidence that supports reasonable and sensible protection for the nonsmoker against the irritation and potential harm that come from other people's smoke. The 1987 Report of the Surgeon General on Smoking suggests that a certain percentage of lung cancer cases in non-smokers may be attributed to exposure to second-hand smoke. Young children exposed to cigarette smoke in the home have higher rates of respiratory infections than children of non-smokers. There is also strong evidence for serious effects on a fetus when the mother continues to smoke during pregnancy including low birth weights, birth defects, and miscarriages.

The percentage of smokers in the U.S. has steadily declined over recent years, and is now around 30 percent. However, tobacco use on Guam is higher, estimated at 40 percent for the adult population and 31 percent for young people aged 12-18. (Figures are derived from Kasperbauer, et. al, 1985; the Health Education Risk Reduction (HERR) survey, 1984; and a DMHSA Drug and Alcohol survey, 1980.)

In view of the U.S. Surgeon General's goal of a smoke free America by the year 2000, the following objectives should be a priority for all health agencies on Guam. In fact, the highest priority objective is to create a permanent, interagency group on smoking and health that will oversee the implementation of the remaining 14 objectives.

OBJECTIVES AND RECOMMENDED ACTIONS

The following objectives are ranked in priority order. Each objective is followed by recommended actions which will be initiated to reach the objective. Overall responsibility for the objectives will be given to the permanent, interagency group to be formed from the nucleus of the Smoking and Health Working Group. Particular agencies such as the American Cancer Society or the Department of Public Health and Social Services may take the lead for particular objectives.

Strategies to reduce tobacco use involve smoking cessation programs, education campaigns to increase public awareness, education for young people to convince them not to start smoking, physician counseling, employer/worksites involvement and legislation. Implementation of objectives 5 through 13 will have a positive impact on objectives 2, 3, and 4.

SMOKING AND HEALTH
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By the end of 1986, a permanent interagency group concerned with tobacco use will be formed.

Ranking High Priority

OBJECTIVE 2

By 1990, the proportion of the adult population who smoke will be reduced to no more than 30 percent.

Ranking High Priority

OBJECTIVE 3

By 1990, the proportion of the population aged 12-18 who smoke will be reduced to no more than 15 percent (1980 level = 31 percent).

Ranking High Priority

OBJECTIVE 4

By 1990, the proportion of pregnant women who smoke will be reduced to no more than 5 percent. (1986 estimated figure = 10 percent)

Ranking High Priority

OBJECTIVE 5

By 1990, all public and private school students (K-12) will gain knowledge of the harmful effects of cigarette smoking and smokeless tobacco.

Ranking High Priority

OBJECTIVE 6

By 1990, 90 percent of physicians will identify and regularly counsel their patients who smoke to quit smoking, including stressing the health risks involved in continuing to smoke.

Ranking Medium Priority

OBJECTIVE 7

By 1990, the proportion of GovGuam employees who smoke will be no greater than 15 percent (45 percent in the 1984 HERR Study).

Ranking Medium Priority

OBJECTIVE 8

By 1990, legislation will be enacted to regulate smoking in enclosed public areas and to designate nonsmoking sections in certain restaurants.

Ranking Medium Priority

OBJECTIVE 9

By 1988, 50 percent of public and private worksites will have an established smoking policy, and 50 percent of public and private employers will offer their employees smoking cessation programs or incentives to stop smoking.

Ranking Medium Priority

OBJECTIVE 10

By 1987 determine percentage of the population aware that smoking and use of smokeless tobacco is hazardous to health, and by 1990 increase that proportion to 75 percent.

Ranking Low Priority

OBJECTIVE 11

By 1990, the proportion of adults and youth who use smokeless tobacco will be reduced by 75 percent.

Ranking Low Priority

OBJECTIVE 12

By 1990, all health insurers and health maintenance organizations on Guam will be required by law to offer differential rates on policies to non-smokers versus smokers.

Ranking Low Priority

OBJECTIVE 13

By 1990, a mechanism will exist to periodically sample the population on tobacco use and awareness of health risks, in order to effectively plan efforts to reduce tobacco use.

Ranking Low Priority

SMOKING AND HEALTH
NATIONAL OBJECTIVES

- A. By 1990, the proportion of adults who smoke should be reduced to below 25 percent.
- B. By 1990, the proportion of women who smoke during pregnancy should be no greater than one half the proportion of women overall who smoke.
- C. By 1990, the proportion of children and youth aged 12 to 18 years old who smoke should be reduced to below 6 percent.
- D. By 1990, the sales-weighted average tar yield of cigarettes should be reduced to below 10 mg. The other components of cigarette smoke known to cause disease should also be reduced proportionately.
- E. By 1990, the share of the adult population aware that smoking is one of the major risk factors for heart disease should be increased to at least 85 percent.
- F. By 1990, at least 90 percent of the adult population should be aware that smoking is a major cause of lung cancer, as well as multiple other cancers including laryngeal, esophageal, bladder and other types.
- G. By 1990, at least 85 percent of the adult population should be aware of the special risk of developing and worsening chronic obstructive lung disease, including bronchitis and emphysema, among smokers.
- H. By 1990, at least 85 percent of women should be aware of the special health risks for women who smoke, including the effect on outcomes of pregnancy and the excess risk of cardiovascular disease with oral contraceptive use.
- I. By 1990, at least 65 percent of 12 year olds should be able to identify smoking cigarettes with increased risk of serious disease of the hear and lungs.
- J. By 1990, at least 35 percent of all workers should be offered employer/employee sponsored or supported smoking cessation programs either at the worksite or in the community.
- K. By 1985, tar, nicotine and carbon monoxide yields should be prominently displayed on each cigarette package and promotional material.

- L. By 1985, the present cigarette warning should be strengthened to increase its visibility and impact, and to give the consumer additional needed information on the specific multiple health risks of smoking. Special consideration should be given to rotational warnings and to identification of special vulnerable groups.
- M. By 1990, laws should exist in all 50 States and all jurisdictions prohibiting smoking in enclosed public places, and establishing separate smoking areas at work and in dining establishments.
- N. By 1990, major health and life insurers should be offering differential insurance premiums to smokers and nonsmokers.
- O. By 1985, insurance companies should have collected, reviewed, and made public their actuarial experience on the differential life experience and hospital utilization by specific cause among smokers and nonsmokers, by sex.
- P. By 1990, continuing epidemiological research should have delineated the unanswered research questions regarding low yield cigarettes, and preliminary partial answers to these should have been generated by research efforts.
- Q. By 1990, in addition to biomedical hazard surveillance, continuing examination of the changing tobacco product, and the sociologic phenomena resulting from those changes should have been accomplished.

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MISUSE OF ALCOHOL AND OTHER DRUGS

PROBLEM STATEMENT

The misuse of alcohol and other drugs is perceived as a major social and health problem on Guam. A number of indicators reveal that Guam's alcohol and drug problem may be getting worse. Available statistics indicate that alcohol is the most abused "drug" on Guam, followed by marijuana.

The pattern of drinking on Guam differs from the U.S. in that it is almost exclusively a social affair. Alcoholic beverages are consumed during parties or in the company of friends. Traditionally imbedded in Guam's culture are fiestas held in a variety of social settings where unlimited supply of alcoholic beverages (beer being the most popular) are customarily served. Heavy drinking and some degree of permissiveness and tolerance of drunkenness are observed during these occasions. In general, drinking on Guam can probably be broadly described as moderate to heavy sporadic social drinking.

The impact of alcohol and drug abuse on the family, on employment, and on the community is staggering. Alcohol abuse among Guam's youth, as well as spouse abuse and child abuse, are areas of increasing concern in the community. In the U.S., the divorce rate among alcoholics is seven times higher as compared to non-alcoholics. There is reason to believe that this may also be true on Guam.

The prevalence of cirrhosis of the liver indicate that approximately eight percent of chronic alcohol abusers develop the disease and it ranks as one of the ten leading causes of death in eight out of ten years on Guam. The highest mortality rate is between the ages of 45 to 64.

Guam's Chief Medical Examiner reported that from 1980 through 1984, a majority of traffic accidents were attributed to drunk driving; 76 people died on the island roadways, and 90 percent of all homicides were committed under the influence of alcohol, twice that of most U.S. communities. In 1984, of the 25 traffic fatalities on Guam, 17 (68 percent) were alcohol related. The rate of alcohol related fatalities in 1984 was .144, which was considerably higher than the national average of .106 in the U.S.

Statistics from the Guam Police Department in 1983 indicated a total of 172 spouse assault offenses; of this number, 131 were alcohol related. From 1980 to 1984 there was a total of 2,730 DWI arrests. In 1983, there was a total of 632 DWI arrests of which 443 were adults between the ages of 21 and 45, and 104 were below age 20. Over a four-year period, 44 were arrested for public drunkenness, seven of whom were below age 21.

Statistics from the Superior Court Alternative Sentencing Office in 1984 reveal 420 DWI convictions for misdemeanor; 42 cases for possession of controlled substances; 21 cases for public intoxication; and three cases for manufacturing and possession of controlled substances, a felony offense.

The Catholic Social Services Aleo Shelter statistics indicate that from 1983 to 1985 there were 261 domestic violence cases; of this number, 160 or 61.3 percent were alcohol related problems.

The Department of Mental Health and Substance Abuse during a four-month period recorded 48 admissions for primary and secondary alcoholism. Alcohol use among Guam's youths was sampled during the 1981 Youth Alcohol and Drug Survey. A total of 785 junior and senior students participated. The result of the survey revealed the following: 23.4 percent stated a member of their family had an alcohol problem; 3.3 percent stated they had an alcohol problem they wished to discuss with someone.

The prevalence of the use of hard drugs (heroin, etc.) has declined since 1980, but the widespread use of marijuana especially among the youth appears to be on the rise, a situation which has raised much concern about the short and long-term effects of use on health, especially when used in combination with alcohol.

The Manamko (elderly) are a growing segment of Guam's population. They, too, are confronted with similar problems of the younger groups, such as driving while intoxicated. There is growing concern about the health needs of the elderly, particularly with respect to the practice of self-medication and the concurrent use of two or more drugs which could create serious health complications.

Misuse of alcohol and other drugs is complex as the problem is well enmeshed in the economic, cultural, and social fabric of the island. A single course solution obviously cannot and has not worked. On Guam there are evident shifts to more emphasis on prevention. The nature of the problem demands a coordinated approach to treatment and/or services in order to decrease the incidence of alcohol and drug abuse. It is realized that on Guam as well as in other countries, alcohol cannot be eliminated, and that it serves a legitimate economic and social function if used responsibly.

STRATEGIES

The various strategies that may be employed in addressing the drug and alcohol problem on Guam fall into four broad areas -- (1) prevention and education; (2) delivery of direct services; (3) fiscal issues; and (4) legislative and regulatory actions.

The prevention and education programs currently in existence on the island are generally fragmented and sporadic in nature. More coordination and a closer working relationship between the Department of Mental Health and Substance Abuse, Department of Education, and other involved agencies should be cultivated.

Early intervention and treatment services need to be expanded. The proposal to build a new free-standing Department of Mental Health and Substance Abuse facility and the recruitment of qualified mental health professionals should be vigorously pursued.

The application for existing Federal Grants to support drug and alcohol programs should likewise be pursued.

Legislative and regulatory actions such as employing legal incentives to discourage the dispensing of alcohol to obviously intoxicated individuals, the inclusion of the "Implied Consent" provision into law, and imposing more severe penalties to DWI offenders should be adopted. Effective laws to eliminate the source of illicit drugs should also be instituted.

A comprehensive data collecting system should be established to monitor and evaluate the status and impact of the misuse of alcohol and other drugs.

It is felt that the implementation of these strategies would facilitate the achievement of the various objectives which follow.

OBSTACLES AND CONSTRAINTS

The chronic shortage, and in some instances the lack of qualified professionals, is a major obstacle in achieving the 1990 objectives. There are several reasons for this. The deficit budget GovGuam is currently operating under has precluded it from offering the necessary incentives and competitive salaries to prospective mental health professionals to work on Guam. The lower living standards but higher cost of living are additional deterrents as well as the fact that there is only one institution of higher learning and few resources that would attract the academic interest of professionals who may wish to broaden their professional growth.

Even the most basic services and resources which are generally taken for granted in small communities on the mainland, such as the services of a psychiatrist, nursing homes, homes for the mentally retarded, etc., are not consistently available on Guam.

Billions of dollars are spent annually on advertising by liquor and pharmaceutical industries to promote alcohol and over-the-counter drugs. In contrast, community health education, prevention, and treatment services continue to be under funded.

Problems associated with limited data collection have impeded progress towards the development of a comprehensive and coordinated service delivery system.

The achievement of the 1990 objectives will require legislative and federal support as well as changes in individual behavior and community attitudes. Governmental and community apathy and the reactive response of agencies involved in the delivery of services may represent barriers towards achieving these objectives.

Although Guam is geographically remote in relation to the rest of the U.S. including Hawaii, beer, liquor, pharmaceutical drugs, illicit drugs and other controlled substances are readily available and easily accessible. The recent marked increase of DEA, FDA and FBI activities in Guam is testimony to this.

An obvious obstacle in instituting preventive measures to curb the abuse and misuse of alcohol and drugs is the lifestyle of most people. People on Guam tend to take life easier and traditional customs reflect this outlook. It seems that there are always parties one can go to, and the number of bars and night clubs is quite high. Hence, the social and cultural fabric of Guam make it difficult to ensure effective measures will always work. However, it does not preclude any efforts to effectuate change to some extent.

One constraint that could impede the implementation of any health initiative is the public's reluctance to seek services unless they are viewed as life-threatening; frequently substantial health damage has been done before help is sought. However, this can be rectified given the proper resources to launch and sustain comprehensive programs.

There are too few agencies to monitor target groups and clients, and provide vital information needed to evaluate the efficacy of service programs. Guam needs more funding and/or human resources to adequately address the problems of drinking and drug use.

There are also problems associated with limited data collection and the development of methods to properly measure the incidence of drug and alcohol problems within a multi-ethnic community. By focusing on existing systems and identifying areas of concern where no system exists, Guam would be able to overcome this obstacle.

Lastly, a notable constraint is in gaining community interest, sensitizing the public to the issues. Therefore, agencies need to convince the public of the prevalence and severity of the problems alcohol and drug abuse cause.

MISUSE OF ALCOHOL AND DRUGS

GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, fatalities from motor vehicle accidents involving drivers with a blood alcohol level (BAC) of .10 percent should be reduced to less than eight per year for all ethnic and age groups.

Ranking High Priority

OBJECTIVE 2

By 1990, per capita consumption of alcohol should not exceed current levels.

Ranking High Priority

OBJECTIVE 3

By 1990, the proportion of problem drinkers among all adults aged 18 and over should be reduced to eight percent.

Ranking High Priority

OBJECTIVE 4

By 1990, pharmacists filling prescriptions should routinely counsel patients on the proper use of drugs designated as high priority by the FDA, with particular attention to prescriptions for pediatric and geriatric patients, and to the problems of drinking alcoholic beverages while taking certain prescription drugs.

Ranking High Priority

OBJECTIVE 5

By 1990, a comprehensive data capability should be established to monitor and evaluate the status and impact of misuse of alcohol and drugs on motor vehicle accidents, accidental injuries, violence, sexual assault, vandalism and pregnancy.

Ranking High Priority

OBJECTIVE 6

By 1990, the cirrhosis mortality rate should not exceed nine per 100,000 per year.

Ranking Medium Priority

OBJECTIVE 7

By 1990, other drug related mortality should be reduced to two per 100,000 per year.

Ranking Medium Priority

OBJECTIVE 8

By 1990, the proportion of women of child bearing age aware of the risks associated with alcohol consumption during pregnancy, in particular the Fetal Alcohol Syndrome, should be greater than 90 percent.

Ranking Medium Priority

OBJECTIVE 9

By 1990, 80 percent of high school seniors should state that they perceive great risk associated with frequent regular cigarette smoking, marijuana use, barbiturate use or alcohol intoxication.

Ranking Medium Priority

OBJECTIVE 10

By 1990, standard medical and pharmaceutical practice should include drug profiles on 90 percent of adults covered under the Medicaid Program, and on 75 percent of other patients with acute and chronic illnesses being cared for in private and public facilities.

Ranking Medium Priority

OBJECTIVE 11

By 1990, a survey should be completed to determine the proportion of fatalities from other non-motor vehicle accidents that are attributed to drugs and alcohol use.

Ranking Low Priority

OBJECTIVE 12

By 1990, adverse reactions from medical drug use that are sufficiently severe to require hospital admissions should be reduced to 25 percent fewer such admissions per year.

Ranking Low Priority

OBJECTIVE 13

By 1990, the proportion of adolescents 12 to 17 years old who abstain from using alcohol or other drugs should not fall below 1981 levels.

Ranking Low Priority

OBJECTIVE 14

By 1990, the proportion of adolescents 14 to 17 years old who report acute drinking-related problems during the past year should be reduced to below 17 percent.

Ranking Low Priority

OBJECTIVE 15

By 1990, the proportion of young adults 18 to 25 years old reporting frequent use of other drugs should not exceed 1981 levels.

Ranking Low Priority

OBJECTIVE 16

By 1990, the proportion of adolescents 12 to 17 years old reporting frequent use of other drugs should not exceed 1981 levels.

Ranking Low Priority

OBJECTIVE 17

By 1990, the proportion of workers in major firms whose employers provide a substance abuse prevention and referral program (employee assistance) should be greater than 70 percent.

Ranking Low Priority

MISUSE OF ALCOHOL AND DRUGS

NATIONAL OBJECTIVES

- A. By 1990, fatalities from motor vehicle accidents involving drivers with blood alcohol levels of .10 percent or more should be reduced to less than 9.5 per 100,000 population per year.
- B. By 1990, fatalities from other (non-motor vehicle) accidents, indirectly attributable to alcohol use, e.g., falls, fires, drownings, ski mobile, aircraft, should be reduced to 5 per 100,000 per year.
- C. By 1990, the cirrhosis mortality rate should be reduced to 12 per 100,000 per year.
- D. By 1990, incidence of infants born with the Fetal Alcohol Syndrome should be reduced by 25 percent.
- E. By 1990, other drug-related mortality should be reduced to 2 per 100,000 per year.
- F. By 1990, adverse reactions from medical drug use that are sufficiently severe to require hospital admission should be reduced to 25 percent fewer such admissions per year.
- G. By 1990, per capita consumption of alcohol should not exceed current levels.
- H. By 1990, the proportion of adolescents 12 to 17 years old who abstain from using alcohol or other drugs should not fall below 1977 levels.
- I. By 1990, the proportion of adolescents 14 to 17 years old who report acute drinking-related problems during the past year should be reduced to below 17 percent.
- J. By 1990, the proportion of problem drinkers among all adults aged 18 and over should be reduced to 8 percent.
- K. By 1990, the proportion of young adults 18 to 25 years old reporting frequent use of other drugs should not exceed 1977 levels.
- L. By 1990, the proportion of adolescents 12 to 17 years old reporting frequent use of other drugs should not exceed 1977 levels.
- M. By 1990, the proportion of women of childbearing age aware of risks associated with pregnancy and drinking, in particular the Fetal Alcohol Syndrome, should be greater than 90 percent

- N. By 1990, the proportion of adults who are aware of the added risk of head and neck cancers for people with excessive alcohol consumption should exceed 75 percent.
- O. By 1990, 80 percent of high school seniors should state that they perceive great risk associated with frequent regular cigarette smoking, marijuana use, barbiturate use or alcohol intoxication.
- P. By 1990, pharmacists filling prescriptions should routinely counsel patients on the proper use of drugs designated as high priority by the FDA, with particular attention to the prescriptions for pediatric and geriatric patients and to the problems of drinking alcoholic beverages while taking certain prescription drugs.
- Q. By 1990, the proportion of workers in major firms whose employers provide a substance abuse prevention and referral program (employee assistance) should be greater than 70 percent
- R. By 1990, standard medical and pharmaceutical practice should include drug profiles on 90 percent of adults covered under the Medicare program, and on 75 percent of other patients with acute and chronic illnesses being cared for in private and organized medical settings.
- S. By 1990, a comprehensive data capability should be established to monitor and evaluate the status and impact of misuse of alcohol and drugs on: health status; motor vehicle accidents; accidental injuries in addition to those from motor vehicles; interpersonal aggression and violence; sexual assault; vandalism and property damage; pregnancy outcomes; and emotional and physical development of infants and children.

MISUSE OF ALCOHOL AND DRUGS
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IMPROVED NUTRITION

PROBLEM STATEMENT

Issues related to nutrition and food consumption involve complex interactions among social, cultural, economic and physiological factors. Adequate nutrition is necessary for satisfactory rates of growth and development, physical activity, reproduction, lactation, recovering from an illness/injury, and general maintenance of health throughout the life cycle. Deficits of essential nutrients can lead to several specific diseases or disabilities as well as an increased susceptibility to other diseases. While the role of nutrients in certain chronic diseases is not definitely established, epidemiological and laboratory studies offer important insights which may help people in making food choices so as to enhance their prospects of maintaining health. On the other hand, insufficient data on factors such as serum blood cholesterol and body weight used as predictors for nutrition related diseases impede the process of planning comprehensive programs.

Excessive or inappropriate consumption of some nutrients may contribute to adverse conditions such as obesity, or may increase the risk for certain diseases, e.g. coronary heart disease, adult-onset diabetes, high blood pressure, dental caries and possibly some types of cancer. Over the ten year period from 1963 to 1973, the mean body weight of American men and women, ages 18 to 74, has increased by an average of six pounds for men and three pounds for women.

Other concerns are the low intake of iron, calcium, Vitamins A and C, among children the low intake of calcium and Vitamin B-6, the low rate of breastfeeding among certain ethnic groups, and the short duration of breastfeeding among women in general.

The relationship between the quality of food consumed (e.g., sodium content) and health status is an important one. Thus, the amounts of food, both too little and too much, as well as the types of food consumed represent a health concern.

STRATEGIES

The health promotion and prevention measures required to impact on Guam's 1990 objectives fall roughly under the general categories of: 1) education; 2) services; and 3) legislative/regulatory actions.

Education measures suggested are aimed at increasing the awareness about what constitutes an adequate, well-balanced diet and an understanding about the relationship between an adequate well-balanced diet and health. Measures include providing information and the behavioral skills necessary to make choices, providing support and information on the advantages and techniques of breastfeeding and impacting school age children through education as well as providing healthy foods to eat.

Education of the health professional is an important measure. Often, the opportunity to give nutrition information/counseling occurs with health professionals other than nutritionists. For example, when a physician is seeing a patient about high blood pressure, it is the physician who has the opportunity to counsel and/or make a referral.

Most of the objectives have a strategy which delineates the need for a data base and/or more research into the relationship between diet and health as well as into effective measures for educating and facilitating behavior change. Programs which provide food stamps, food supplements and nutritious foods continue to be needed. Screening programs and other services which facilitate behavioral changes and lifestyle adjustments should be encouraged.

Legislative and regulatory measures include requiring nutrition labeling on foods, funding a comprehensive nutrition education program for Guam's school system, allocating positions for Nutrition Education Specialists supporting nutrition in the University curriculum and establishing a State advisory/coordinating committee to plan, monitor, collect and disseminate data to appropriate agencies/groups.

OBSTACLES AND CONSTRAINTS

There are several barriers to meeting the objectives by 1990, the most obvious being the lack of funding for nutrition programs and activities. Nutrition is frequently given verbal, but not financial support. Consequently, significant gains and benefits are not visible or attainable. Improving nutritional status impacts at a socio-cultural level which inherently creates barriers. Making lifestyle changes is a difficult, long-term process, and cultural norms and traditions are formidable obstacles.

IMPROVED NUTRITION
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, 75 percent of adults should be able to identify a well-balanced diet, including the identification of the major foods which are low in fat, sodium, sugar and calories, and are good sources of fiber; and furthermore, 50 percent of adults will know the principal dietary factors related to disease conditions, i.e. coronary heart disease, high blood pressure, dental caries, some cancers and obesity.

Ranking High Priority

OBJECTIVE 2

By 1990, 50 percent of the overweight population should have adopted weight loss regimens combining an appropriate balance of diet and physical activity.

Ranking High Priority

OBJECTIVE 3

By 1990, the mean serum cholesterol in children aged 1 to 14 should be at or below 150 mg/dl.

Ranking High Priority

OBJECTIVE 4

By 1990, the mean serum cholesterol level in the adult population aged 18 and above should be at or below 200 mg/dl.

Ranking High Priority

OBJECTIVE 5

By 1990, the proportion of women who breastfeed their newborns at hospital discharge should be increased to 25 percent, and to 10 percent at six months of age.

Ranking High Priority

OBJECTIVE 6

By 1990, 75 percent of the school food service personnel should be actively promoting and following appropriate dietary guidelines in the planning and preparation of school food, both breakfasts and lunches.

Ranking High Priority

OBJECTIVE 7

By 1990, mandate nutrition education as a required component of the curriculum for preschool to grade 12, to be included in health, physical education, sciences, and home economics education.

Ranking High Priority

OBJECTIVE 8

- A. By 1990, the Guam Legislature, local agencies, federal systems and the private sector should coordinate efforts and resources to develop a sound system for health and nutrition data collection, retrieval, dissemination, and surveillance.
- B. By 1990, local agencies should coordinate efforts and resources for compiling current data which can be used as baseline information for decisions on nutrition policies.

Ranking High Priority

OBJECTIVE 9

By 1990, nutrition education for health professionals and allied health professionals will be an integral component of their education and continuing education.

Ranking Medium Priority

IMPROVED NUTRITION

NATIONAL OBJECTIVES

- A. By 1990, proportion of pregnant women with iron deficiency anemia (as estimated by hemoglobin concentrations early in pregnancy) should be reduced to 3.5 percent.
- B. By 1990, growth retardation of infants and children caused by inadequate diets should have been eliminated in the United States as public health problem.
- C. By 1990, the prevalence of significant overweight (120 percent of "desired" weight) among the U.S. adult population should be decreased to 10 percent of men and 17 percent of women, without nutritional impairment.
- D. By 1990, 50 percent of the overweight population should have adopted weight loss regimens, combining an appropriate balance of diet and physical activity.
- E. By 1990, the mean serum cholesterol level in the adult population aged 18 to 74 should be at or below 200 mg/dl.
- F. By 1990, the mean serum cholesterol in children aged 1 to 14 should be at or below 150 mg/dl.
- G. By 1990, the average daily sodium ingestion (as measured by excretion) by adults should be reduced at least to the 3 to 6 gram range.
- H. By 1990, the proportion of women who breastfeed their babies at hospital discharge should be increased to 75 percent and 35 percent at six months of age.
- I. By 1990, the proportion of the population which is able to identify the principal dietary factors known or strongly suspected to be related to disease, should exceed 75 percent for each of the following diseases: heart disease, high blood pressure, dental caries and cancer.
- J. By 1990, 70 percent of adults should be able to identify the major foods which are: low in fat content, low in sodium content, high in calories, good sources of fiber.
- K. By 1990, 90 percent of adults should understand that to lose weight people must either consume foods that contain fewer calories or increase physical activity - or both.

- L. By 1990, the labels of all packaged foods should contain useful calories and nutrient information to enable consumers to select diets that promote and protect good health. Similar information should be displayed where nonpackaged foods are obtained or purchased.
- M. By 1990, sodium levels in processed foods should be reduced by 20 percent from present levels.
- N. By 1985, the proportion of employee and school cafeteria managers who are aware of, and actively promoting, USDA/DHHS dietary guidelines should be greater than 50 percent.
- O. By 1990, all States should include nutrition education as part of required comprehensive school health education at elementary and secondary levels.
- P. By 1990, virtually all routine health contacts with health professionals should include some element of nutrition education and nutrition counseling.
- Q. Before 1990, a comprehensive National nutrition status monitoring system should have the capability for detecting nutritional problems in special population groups, as well as for obtaining baseline data for decisions on National nutrition policies.

IMPROVED NUTRITION
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PHYSICAL FITNESS AND EXERCISE

PROBLEM STATEMENT

Although the health benefits of regular physical fitness and exercise are not completely understood, the substantial physical and emotional benefits from regular exercise are recognized by all.

Regular, vigorous and prolonged physical activity is essential for an effectively functioning cardiorespiratory system. "Appropriate physical activity" is defined as exercise which involved large muscle groups (arms, legs) in dynamic movement for minimum periods of 20 minutes (preferably even longer), three or more days per week and performed at an intensity requiring a person's heart rate to increase by 60 percent. Additionally, exercise improves flexibility and muscular strength which may reduce the frequency of problems in these areas.

Many people on Guam live a fairly sedentary life. No statistics are available on the proportion of the population that exercises regularly. A conservative estimate of the number of American who regularly exercise has been set at 35 percent. The rate in Guam is certainly no higher and is quite probably lower.

Most people feel better physically and emotionally when they exercise. Appropriate physical activity is an essential part of weight reduction programs as well as in the treatment and control of chronic conditions. Exercise is recommended for conditions such as heart disease, high blood pressure, diabetes, osteoporosis, respiratory diseases, and stress related problems.

Although physical fitness and exercise activities have increased in recent years, awareness of the health benefits of regular exercise is limited. Implementation of the following objectives should result in increasing levels of physical fitness. This should help reduce heart and lung disease rates, reduced injuries among the elderly, and an enhanced sense of well being which may reinforce positive health behaviors in other areas.

STRATEGIES

Physical fitness goals and objectives for Guam fall into two categories: education and legislation. The most important challenge of the 1990 physical fitness goals and objectives is to increase the participation of Guam's citizens in appropriate health related fitness activities.

To meet this challenge, the major driving force should be an effective educational effort in the school system. Initial effort and resources should be allocated to the Department of Education to encourage children to participate in healthful exercises and fitness activities that would enable them to become healthy adults.

Along with effort directed toward the children and young adults, continued educational efforts are needed to encourage physical fitness activities for every age. Educational efforts should also be directed toward the health providers islandwide to increase awareness, participation and understanding about cardiorespiratory fitness. Physical fitness should be promoted and advertised to recruit all segments of the community. Media support in this endeavor will be essential.

In order to coordinate efforts to increase the levels of physical fitness and exercise and monitor progress toward the 1990 objectives, it is recommended that a permanent group be formed to include all those interested and involved in providing physical fitness opportunities.

OBSTACLES AND CONSTRAINTS

Barriers which could delay or hinder the attainment of the 1990 physical fitness and exercise objectives include the lack of awareness of benefits and adequate facilities available to everyone. Financial constraints will also play a role, both for children and adults. Certified trainers and educators may not be available to meet the demand for physical fitness programs. Cultural and lifestyle variables may hinder total implementation; it will be difficult to get people to change their sedentary ways, particularly on Guam where the warm climate makes outdoor activities uncomfortable for many.

PHYSICAL FITNESS AND EXERCISE

OBJECTIVE 1

By 1990, the proportion of children and adolescents, age 6-17, participating regularly in appropriate physical activities, particularly cardiorespiratory fitness programs should be greater than 50 percent.

Ranking High Priority

OBJECTIVE 2

By 1990, the proportion of children and adolescents, aged 6-17, participating in daily school physical education programs should be greater than 60 percent. This objective should include training for children on what constitutes proper exercise and other educational information on the benefits of life-long exercise.

Ranking High Priority

OBJECTIVE 3

By 1990, the proportion of adults 18 to 65 participating regularly in aerobic exercise should be greater than 40 percent.

Appropriate aerobic exercise is defined as activity involving:

1) use of large muscle groups; 2) sessions of 20 minutes or more; 3) three or more sessions a week; and 4) performance at 60-75 percent or more of an individual's maximum heart rate.

Ranking High Priority

OBJECTIVE 4

By 1990, 30 percent of adults 55 years and older, with attention upon homebound senior citizens serviced by senior centers under the supervision of the Division of Senior Citizens, Department of Public Health and Social Services, should be participating in appropriate physical activity. Appropriate physical activity includes exercise to increase mobility, balance, flexibility, maintenance of muscular strength and aerobic conditioning.

Ranking High Priority.

OBJECTIVE 5

By 1990, the Governor and Legislature will designate an appropriate agency to develop and implement recommended guidelines and/or standards for exercise and fitness instructors and programs. Instructors and programs will be appropriately recognized for achieving the standards.

Ranking High Priority

OBJECTIVE 6

By 1990, greater than 50 percent of the primary physicians and other health care professionals such as physical therapists, chiropractors, physiotherapists, etc., should utilize and obtain a specific exercise history and will be able to refer patients to designated agency for assessment and recommendations as well as encourage patients to participate in regular physical exercise.

Ranking Medium Priority

OBJECTIVE 7

By 1990, employers with more than 50 employees will provide employer-sponsored fitness programs.

Ranking Medium Priority

OBJECTIVE 8

By 1990, data should be available to evaluate the effects on the health of participants in programs of appropriate physical activity and the current rate of participation among Guam's population.

Ranking Medium Priority

PHYSICAL FITNESS
NATIONAL OBJECTIVES

- A. By 1990, the proportion of children and adolescents ages 10 to 17 participating regularly in appropriate physical activities, particularly cardiorespiratory fitness programs which can be carried into adulthood, should be greater than 90 percent.
- B. By 1990, the proportion of children and adolescents ages 10 to 17 participating in daily school physical education programs should be greater than 60 percent.
- C. By 1990, the proportion of adults 18 to 65 participating regularly in vigorous physical exercise should be greater than 60 percent.
- D. By 1990, 50 percent of adults 65 years and older should be engaging in appropriate physical activity, e.g., regular walking, swimming or other aerobic activity.
- E. By 1990, the proportion of adults who can accurately identify the variety and duration of exercise thought to promote most effectively cardiovascular fitness should be greater than 70 percent.
- F. By 1990, the proportion of primary care physicians who include a careful exercise history as part of their initial examination of new patients should be greater than 50 percent.
- G. By 1990, the proportion of employees of companies and institutions with more than 50 employees offering employer-sponsored fitness programs should be greater than 25 percent.
- H. By 1990, a methodology for systematically assessing the physical fitness of children should be established, with at least 70 percent of children and adolescents ages 10 to 17 participating in such an assessment.
- I. By 1990, data should be available with which to evaluate the short and long-term health effects of participation in programs of appropriate physical activity.
- J. By 1990, data should be available to evaluate the effects of participation in programs of physical fitness on job performance and health care costs.
- K. By 1990, data should be available for regular monitoring of National trends and patterns of participation in physical activity, including participation in public recreation programs in community facilities.

PHYSICAL FITNESS AND EXERCISE

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CONTROL OF STRESS AND VIOLENT BEHAVIOR

PROBLEM STATEMENT

The Chamorro way of life as well as that of other ethnic groups who have chosen to live on Guam has changed dramatically in the past 25 years. Many of the most cherished cultural values have been swept aside or challenged by the wave of "progress" that has come with the tremendous growth and development in the Territory of Guam. For many, this change has been accompanied by a corresponding rise in stress resulting in a variety of social problems, i.e. alcoholism, family violence, juvenile delinquency, suicides, criminal behavior, etc. For individuals who tend toward sociopathic or criminal behavior, the result has been a more frequent loss of self-control and a drastic increase in their aggressive, often violent behavior.

Yet, it is important to recognize that stress is not always harmful and not always an enemy of health. In fact, the stress response is normal and essential. Before the advent of modern medicine, stress enabled man to survive in a hostile world by acting as a natural defense mechanism - an alarm-like internalization of pressures. Tragically, this important alarm is often the signal that triggers aggressive and violent behavior, an unacceptable adaptation of the alarm reaction. Understanding the normalcy of stress reactions and learning to respond appropriately to stressful events can be a key factor in the control of stress and violent behaviors.

Each year the statistics for murder, manslaughter, forcible rape, robbery and aggravated assault contained in the Annual Crime Report, an analysis of criminal incidents that have occurred throughout the Territory, point to the failure of our society to properly control stress and violent behavior. At the same time, physiological and psychological disfunctions such as severe depression, anxiety, loss of energy, and an incredible increase in the incidence of diabetes and coronary heart disease result in high levels of absenteeism and an escalation of health and insurance costs. Thus, the prevention and control of stress must be seen as important in the reduction of crime and antisocial behavior as well as health care cost containment and the physical and mental well being of the family unit and the community at large.

Additionally, the harmful effects resulting from social, cultural and language barriers which create socio-economic stressors must be considered as well as the problems of the handicapped, the economically disadvantaged and the elderly who may be suffering above average levels of stress associated with their greater exposure of adverse conditions.

Finally, the quality of life of Guam's youth, its greatest resource, is threatened by a rise in juvenile crime and delinquency, which reflects the failure to effectively respond to stress. The result has been, and will continue to be, an increase in maladaptive, self-destructive behavior, an increase that will be hard to control unless constructive, non-violent, problem solving skills are developed.

STRATEGIES

Setting health objectives is a useful and necessary process. However, the mechanism for implementing these objectives must also be made available. There is a need for more health-related data to assess needs and to utilize such information in formulating policies and in the planning and implementation of comprehensive intervention programs.

Resources should be provided to develop and implement appropriate interventions for all individuals. Stress-reducing interventions should focus on both the individual and the environment. Numerous factors underlie the cause of stress and violent behavior; coping mechanisms alone will not remedy this complex problem. However, there is enough evidence to justify the application of preventive intervention to reduce the risk of the negative consequences of stress. It is felt that the implementation of these measures will facilitate the achievement of the objectives for 1990.

OBSTACLES AND CONSTRAINTS

Monetary resources and social attitudes are seen as the primary constraints in achieving objectives. Lack of funds to implement programs and train personnel, and the lack of baseline data are major barriers. The fragmented network of services make it difficult to identify and coordinate the wide range of services needed to control stress and violent behavior.

CONTROL OF STRESS AND VIOLENT BEHAVIOR
GUAM HEALTH OBJECTIVES

OBJECTIVE 1

By 1990, increase public and professional awareness by 50 percent to recognize the fact that problems of stress and coping permeate all categories of health concerns and should be treated accordingly in every phase of health promotion and disease prevention.

Ranking High Priority

OBJECTIVE 2

By 1990, increase the reliability of data on the incidence of all forms of family violence (child abuse, sexual abuse, spouse abuse, elderly abuse) and other stress related problems or disorders within each of the appropriate governmental and private service providers.

Ranking High Priority

OBJECTIVE 3

By 1990, reduce child and spouse abuse (neglect, physical abuse, sexual abuse, emotional abuse) by at least 25 percent.

Ranking High Priority

OBJECTIVE 4

By 1990, reduce the rate of suicide/suicide attempts on Guam by at least 20 percent.

Ranking High Priority

OBJECTIVE 5

By 1990, stress identification and control should become integral components of at least 30 percent of all private and public sector work places.

Ranking High Priority

OBJECTIVE 6

By 1990, a structured program of social skills training and affective education (especially in non-violent conflict resolution) should be implemented as a regular part of the curriculum in K-12 classrooms in at least 75 percent of the schools.

Ranking

Medium Priority

CONTROL OF STRESS AND VIOLENT BEHAVIOR
NATIONAL OBJECTIVES

- A. By 1990, the death rate from homicide among black males ages 15 to 24 should be reduced to below 60 per 100,000.
- B. By 1990, injuries and deaths to children inflicted by abusing parents should be reduced by at least 25 percent.
- C. By 1990, the rate of suicide among people 15 to 24 should be below 11 per 100,000.
- D. By 1990, the number of handguns in private ownership should have declined by 25 percent.
- E. By 1990, the proportion of the population over the age of 15 which can identify an appropriate community agency to assist in coping with a stressful situation should be greater than 50 percent.
- F. By 1990, the proportion of young people ages 15 to 24 who can identify an accessible suicide prevention "hotline" should be greater than 60 percent.
- G. By 1990, the proportion of the primary care physicians who take a careful history related to personal stress and psychological coping skills should be greater than 60 percent.
- H. By 1990, to reduce the gap in mental health services, the number of persons reached by mutual support or self-help groups should double from 1978 baseline figures.
- I. By 1990, stress identification and control should become integral components of the continuum of health services offered by organized health programs.
- J. By 1990, of the 500 largest U.S. firms, the proportion offering work-based stress reduction programs should be greater than 30 percent.
- K. By 1985, surveys should show what percentage of the U.S. population perceives stress as adversely affecting their health, and what proportion of these are trying to use appropriate stress control techniques.
- L. By 1985, a methodology should have been developed to rate the major categories of occupation in terms of their environmental stress loads.

- M. By 1990, the existing knowledge base through scientific inquiry about stress effects and stress management should be greatly enlarged.
- N. By 1990, the reliability of data on the incidence and prevalence of child abuse and other forms of family violence should be greatly increased.

CONTROL OF STRESS AND VIOLENT BEHAVIOR
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ABOUT THE COVER

Images of bamboo and the family represent the continuous health outreach our community requires to achieve a better life. Cover designed by Frances Lujan Torres.