



MAE TAO CLINIC

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Annual Report 1999

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Introduction

In 1999 the Mae Tao Clinic marked its tenth year of operation providing free health care for Burmese refugees, migrant workers and people crossing the border from Burma into Thailand. Over the past decade the clinic has grown from a small house serving Burmese pro-democracy students fleeing the 1988 crackdown, to a busy clinic with inpatient and outpatient services, maternal and child health programs, eye-care, infant nutrition, immunization programs and family planning services. Each year the clinic trains a new class of medics to provide health care in camps and clinics on the Thai-Burma border. For villagers who live in remote areas, backpack medics based at the clinic provide health services and health education. Public health is also an important mission for the clinic. The Mae Tao Clinic works closely with Thai health authorities as well as local and international non-governmental organizations (NGO's) and governmental agencies. Visitors regularly come to the clinic from all over the world to volunteer medical care and teaching.

The Mae Tao Clinic also has community service programs including a primary school and a boarding school that provide education and care for 50 orphaned and abandoned children. The clinic also supports women's organizations, health education and public health projects at nearby refugee camps. These include Umphium refugee camp to the south, and Mae La Poh Hta to the north.

The past year saw many positive developments. The clinic opened a new 28-bed inpatient unit early in the year, and began construction on a new structure for eye care, classrooms, and a resource room. Another delivery room was added, and the OPD child and adult clinic facilities were improved. In addition, ground was broken on a new trauma and rehabilitation building. In June, Dr. Cynthia and her team were awarded the first annual "Jonathan Mann Health and Human Rights Award" by the Global Health Council in a ceremony hosted by former U.S. President Jimmy Carter. Later in the year the clinic was honored to receive the "John Humphrey Freedom Award" named for the Canadian statesman who drafted the Universal Declaration of Human Rights.

However the year was also witness to enormous challenges. Ongoing civil war within Burma and human rights abuses by State Peace and Development Council (SPDC) forces caused continued civilian displacement and migration to the Thai-Burma border, exacerbating the already serious problems of malaria and malnutrition. War casualties and landmine injuries increased the need for trauma and rehabilitation services. Huay Kaloke, a nearby refugee camp that was home to many of the clinic's community programs, was consolidated into a larger camp four hours' drive south. In November, mass deportation of Burmese migrant workers from Thailand decreased clinic access to all but the most seriously ill. Drug trafficking continued to be a significant problem along the Thai-Burma border. To meet these challenges the clinic has continued to adapt and grow.

This report summarizes Mae Tao Clinic activities and programs for 1999.

Inpatient and Outpatient Acute Care Services

The clinic's Inpatient Department (IPD) and Outpatient Department (OPD) saw 26,845 visits in 1999, an increase of 38% over the previous year and more than double the caseload seen in 1996 (see Figure 1, *Yearly Caseload*). Some patients made more than one visit, so the total caseload is greater than the total number of patients served. The rapid expansion in the demand for health services reflects the continued growth of the migrant worker population on the Thai-Burma border as well as the increasing number of displaced civilians within Burma.

Patient access and seasonal variations in disease patterns have an enormous impact on clinic visits. Figure 2, *Monthly Case Totals* shows the patterns of three of the major diseases that the clinic tracks: acute respiratory infection (ARI), acute diarrheal disease (ADD), and malaria. Because of the mobile and open nature of the clinic's patient population, incidence rates for these diseases are impractical to calculate. The sharp dip in visits seen in November is almost certainly due to mass deportations that made it difficult for patients to access the clinic. The tables below show the annual total and average number of cases per month seen in the OPD and IPD respectively, arranged by diagnosis. Tuberculosis and malaria are discussed in more detail in separate sections of this report.

OPD Caseload by Diagnosis

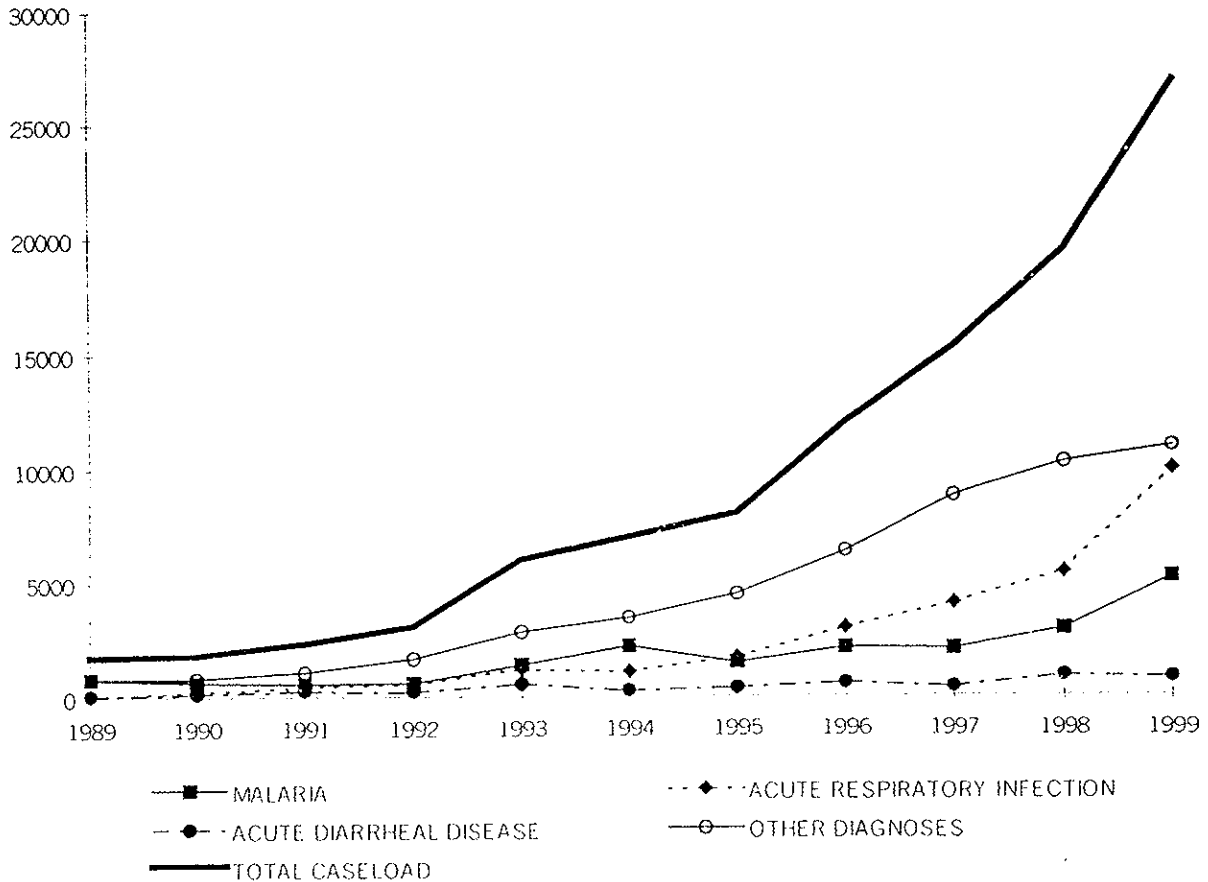
Disease	Annual Total	Monthly Average
Acute Respiratory Infection	9784	815.3
Malaria	4174	347.8
Other Diagnoses	3286	273.8
Anemia	2279	189.9
Peptic Ulcer	1243	103.6
Urinary Tract Infection	1163	96.9
Skin Diseases	1079	89.9
Acute Diarrhea Disease	647	53.9
Intestinal Parasites	627	52.3
Beri Beri	307	25.6
Reproductive Tract Infection	290	24.2
Mental Illness	120	10.0
Measles	12	1.0

IPD Caseload by Diagnosis

Disease	Annual Total	Monthly Average
Malaria	1005	83.8
Other	317	26.4
ARI	158	13.2
Acute Diarrhea	146	12.2
Gastritis/Ulcer	73	6.1
UTI	63	5.3
Typhoid	40	3.3
Malnutrition	33	2.8

Figure 1.

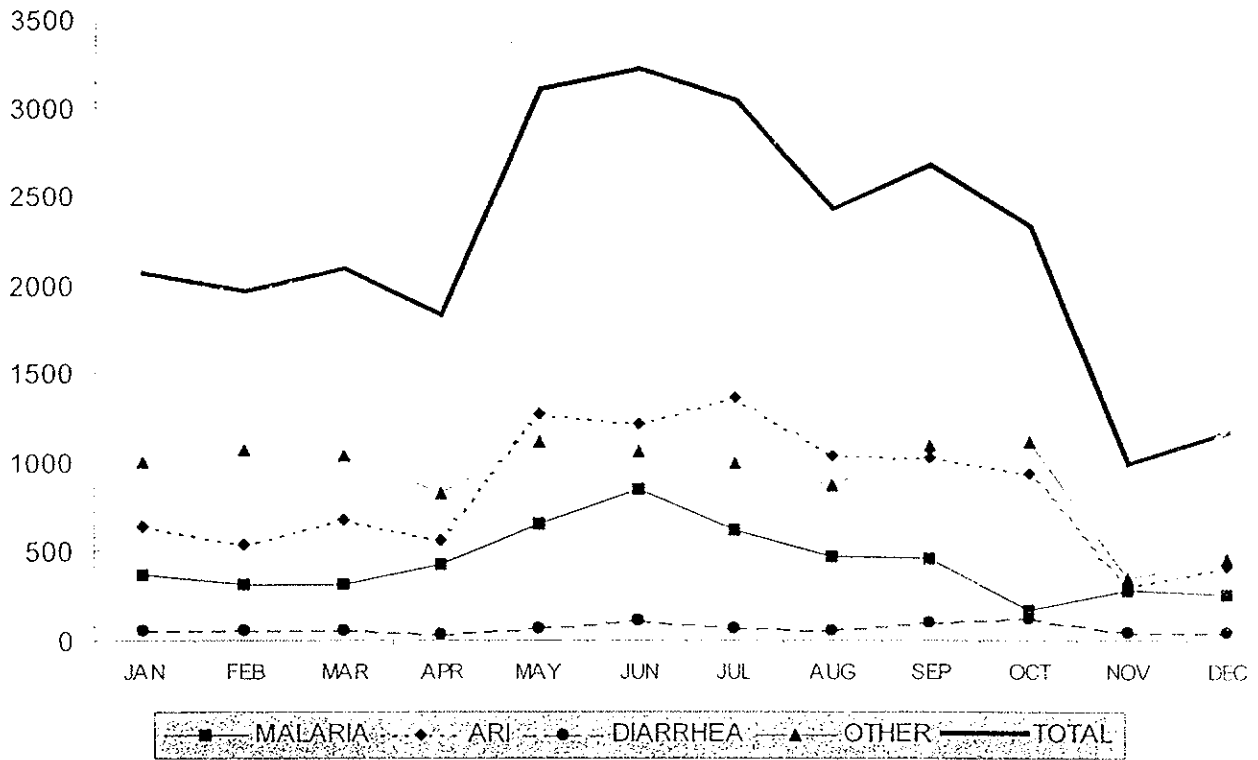
MAE TAO CLINIC YEARLY CASELOADS



	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
MALARIA	794	620	559	611	1402	2191	1461	2095	2063	2917	5179
ACUTE RESPIRATORY INFECTION	81	241	441	552	1203	1104	1691	2985	4063	5420	9942
ACUTE DIARRHEAL DISEASE	88	148	250	219	564	259	373	573	379	888	793
OTHER DIAGNOSES	797	818	1089	1677	2835	3436	4467	6338	8767	10246	10931
TOTAL CASELOAD	1760	1827	2339	3059	6004	6990	7992	11991	15272	19471	26845

Figure 2.

MONTHLY CASE TOTALS 1999

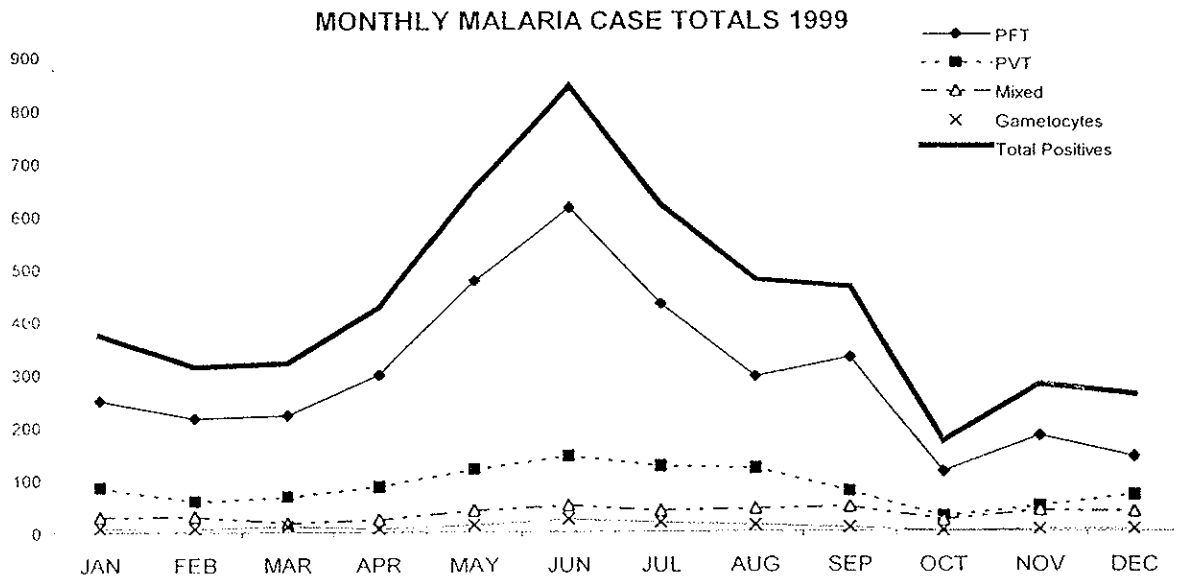


	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
MALARIA	371	312	319	424	652	842	618	475	461	170	277	258	5179
ARI	635	541	676	558	1263	1207	1358	1033	1020	931	308	412	9942
DIARRHEA	57	52	51	34	62	114	66	53	98	118	46	42	793
OTHER	998	1063	1036	817	1116	1049	988	861	1088	1105	351	459	10931
TOTAL	2061	1968	2082	1833	3093	3212	3030	2422	2667	2324	982	1171	26845

Malaria

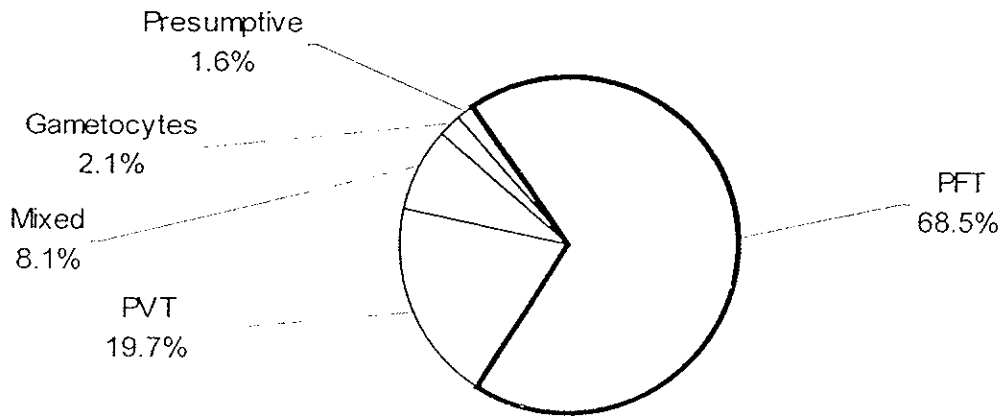
There were 5,179 cases of malaria treated at the clinic in 1999. Nineteen percent were admitted to the IPD for treatment, the remainder were treated as outpatients. Figure 3 below (*Monthly Malaria Case Totals*) shows the characteristic peak in the number of malaria cases seen during the rainy season months of June and July. The proportion of cases of *P. falciparum* (PFT) and *P. Vivax* (PVT) is shown in the pie chart in Figure 4.

Figure 3.



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOT
PFT	247	214	220	296	474	613	430	292	328	112	180	140	3546
PVT	84	58	66	86	118	143	124	120	76	28	48	69	1020
Mixed	29	30	17	24	41	50	40	43	47	21	40	37	419
Gametocytes	7	6	11	6	13	24	17	12	7	1	3	4	111
Presumptive	4	4	5	12	6	12	7	8	3	8	6	8	83
Total Cases	371	312	319	424	652	842	618	475	461	170	277	258	5179
Total Admitted	68	65	82	83	139	170	113	102	51	61	42	29	1005
% Admitted to IPD	18	21	26	20	21	20	18	21	11	36	15	11	19

Figure 4.



The total number of malaria cases included 678 patients under 5 years of age and 92 pregnant women. The overall admission rate was 19%; children under 5 had an admission rate of 28% and pregnant women had an admission rate of 48%. Twenty-four percent of patients who tested positive for *P. Falciparum* were admitted compared to 4% for *P. Vivax* and 10% for mixed infections.

Of the total admissions for malaria, 6.7% were complicated by cerebral malaria and 28.9% had severe anemia requiring blood transfusion. Accurate statistics are incomplete, but at least 1.3% of admissions were complicated by acute renal failure.

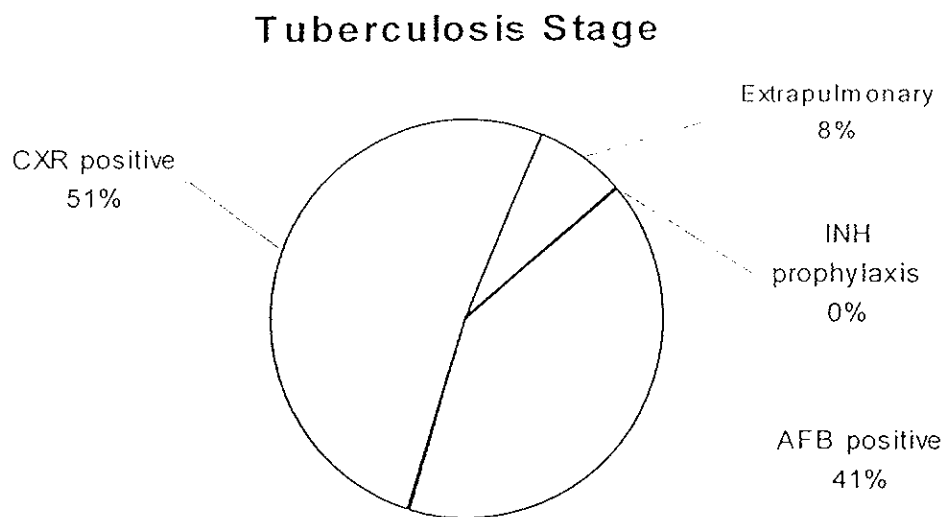
Tuberculosis Program

The Mae Tao Clinic saw 49 men and 39 women with tuberculosis during 1999. In some cases, the diagnosis was made elsewhere and the patient came to the clinic for follow-up. In other cases, the diagnosis was made in clinic and the patient was sent to Mae Sot Hospital for confirmatory microbiology tests and chest radiographs. Sometimes patients were referred to the hospital for treatment.

In September, the clinic and Doctors Without Borders (MSF) established a system in which new diagnoses were referred to MSF, who then sent health workers to visit the patients for directly observed therapy. Altogether 26 patients were referred outside the clinic during 1999, of which 22 were sent to MSF.

Of all the patients seen in 1999, one patient was under 5 years old, and 4 were between 6 and 14 years. Fifty-one patients were between the ages of 15-35, and 33 were older than 35. The proportion of patients in different stages of disease is shown in the pie chart below.

Figure 5.



Reproductive Health Program

The clinic conducts programs in prenatal care, deliveries, abortion complications and family planning.

In the prenatal program, women are screened for anemia, HIV, hepatitis B, and syphilis. Those with high-risk pregnancies (e.g. complicated by severe malaria or HIV infection) are referred to the Mae Sot Hospital for management. In 1999 the prenatal clinic served 1,014 women who made 3,393 visits. Thirty-percent of women were age 15 to 20, 62% age 21 to 35, and 8% were over 35 years. The majority of women (80%) were from the Mae Sot area, but 65 (6.4%) journeyed across the border from Burma for prenatal care. The following table shows statistics from prenatal screening tests performed at the clinic.

Prenatal Clinic Screening

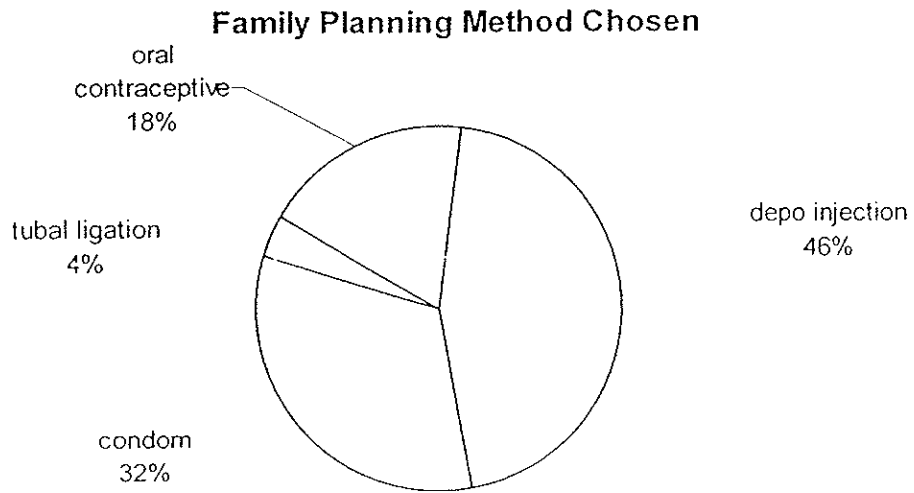
Total number of women screened	1014
Total prenatal care visits	3393
% with hemoglobin < 7 gm/dL	20.1
% with hemoglobin 7 to 11 gm/dL	83.7
% HIV positive	0.8
% Hepatitis B sAg positive	4.5
% VDRL positive	1.2

Three hundred and fifty-six women presented to the clinic for delivery; of these three-quarters were from Mae Sot and 8% were from Burma. Six percent had not received prenatal care at the clinic, and 27% were 20 years of age or less. Sixty-eight percent of women had received at least two tetanus toxoid immunizations. Of those who presented for delivery, 65 were referred to Mae Sot Hospital and 291 delivered at the clinic. There were no maternal deaths among women delivering at the clinic. The proportion of clinic deliveries that were low birthweight (<2500gm) was 5%, decreased from 6.3% in 1998 and 10.6% in 1997.

Though the clinic does not perform abortions, it does provide care for women presenting with complications of abortion such as infection and bleeding. Accurate statistics of spontaneous versus induced abortions are not available, but many are suspected to be induced at-home abortions. In 1999 there were 277 women who came to the clinic for post-abortion care. Of these women, 23% were less than 20 years old and for 29% it was the first pregnancy. One out of five women had had a previous abortion.

To reduce the need for such a dangerous method of family planning, the clinic offers family planning counseling for mothers bringing children to the nutrition, immunization, or outpatient clinics. Patients choose their own contraceptive method after discussion with their spouses. Couples counselling is provided if desired or appropriate. In 1999 there were just over 1,300 family planning sessions at the clinic. About one-quarter of visits were made by women age 15 to 21 years, and 10% of the visits were by women who did not have children. The methods chosen by patients receiving family planning counseling is shown in Figure 6.

Figure 6.

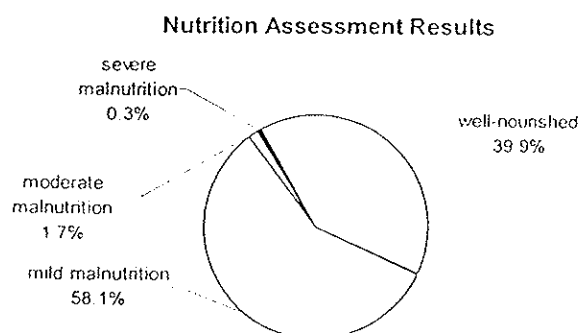


Mother-Infant Nutrition Assessment, Supplementation, and Immunization Program

The Mae Tao Clinic mother-infant nutrition assessment and supplementation program is synchronized with the immunization program to make it more convenient for parents to participate. The visits are used for health education on breastfeeding, supplementary feeding, oral rehydration therapy, diarrhea prevention and family planning. Children who are found to have acute health problems are referred to the OPD children's clinic.

In 1999 there were 5,617 visits made by 2,514 boys and 2,438 girls age 0 to 10 years. Rates of malnutrition were similar for both genders. Mild malnutrition was defined as 80-89% weight for height, moderate malnutrition 70-79% , severe malnutrition less than 70%. Overall only 40% of children were well-nourished. Fifty-eight percent had mild malnutrition, 1.7% moderate malnutrition, and 0.3% severe malnutrition. These figures are not necessarily representative of rates in the clinic's target population because the sample is not representative and additional clinical criteria for malnutrition are not used.

Figure 7.



Child immunization services continued during 1999. The Mae Sot Hospital donates DPT, OPV, measles and BCG vaccine to the clinic for this program. The transient and mobile nature of the clinic population continues to be a barrier to immunization. Some of the infants immunized were delivered at the clinic, while others were new arrivals who delivered elsewhere. Of the newly arriving older infants, some were only partially immunized while others had never been immunized. The number of immunization doses administered is summarized in the table below.

Immunizations Administered in 1999

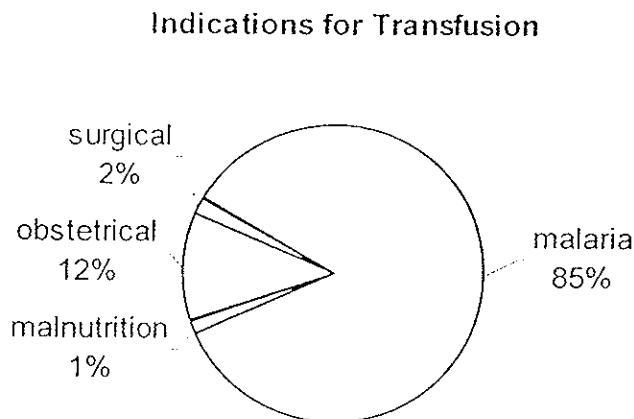
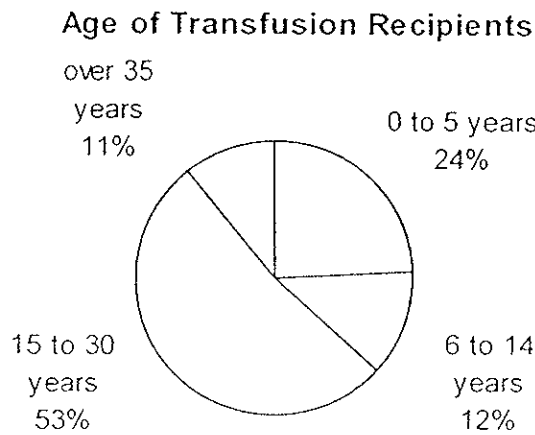
Age	BCG	OPV1	OPV2	OPV3	DPT1	DPT2	DPT3	DPT Booster	Measles
< 1 Year	534	488	250	128	488	250	128	66	170
> 1 Year	104	118	84	44	118	84	44	53	124
Total	538	606	334	172	606	334	172	119	294

Blood Donation Program

A blood donation program was established to address the shortage of blood needed for transfusion. Every week factory workers come to the clinic to donate blood. Blood is stored at Mae Sot Hospital. This year a new system of blood collection was implemented that includes pre-test HIV counseling, laboratory testing for HIV, Hepatitis B and VDRL. More than three hundred donors were screened, of which 1.6% were positive for HIV and 11.2% were positive for hepatitis B (for details please see the laboratory section of this report).

In 1999, 624 patients (273 male and 371 female) received blood transfusions at the clinic. The age distribution and indications for transfusion are shown in the pie charts below (Figure 8).

Figure 8.



Laboratory Activities

The clinic laboratory routinely performs a range of testing and screening services - this includes hemoglobin, urinalysis, HIV antibody, hepatitis B surface antigen, and VDRL. Mae Sot Hospital performs other tests not available at the clinic such as complete blood counts, metabolic tests, and renal function tests.

Malaria slides constitute the bulk of laboratory services. During 1999 the clinic's laboratory processed 16,787 slides as shown in the table below.

Malaria Slides Processed in 1999

	under 5 yrs	5 yrs and over	Pregnant Women	Malnourished Children	Total
PF	550	3889	30	41	4439
PV	153	970	8	14	1123
PF+PV	71	397	7	1	468
PFG	66	405	2	1	471
Total Positive	840	5661	47	57	6502
% Positive	27.5	41.2	36.2	25.2	38.7
Total Slides	3054	13732	130	226	16787

The following table summarizes the serologic tests done in 1999 and the indications for which they were performed.

Serologic Tests

Test	Blood Donor	Obstetric Emergency	Other Indication	Total	
HIV	total test	317	71	16	404
	total positive	5	3	2	10
	% positive	1.6%	4.2%	12.5%	2.5%
Hepatitis B	total test	340	61	10	411
	total positive	38	5	2	45
	% positive	11.2%	8.2%	20.0%	10.9%
VDRL	total test	78	48	1	127
	total positive	1	2	0	3
	% positive	1.3%	4.2%	0.0%	2.4%

Eye Clinic

The Eye Clinic provides eye care weekly at the Mae Tao Clinic. The Eye Clinic provides basic eyeglasses (i.e. same power lenses in both eyes). The clinic also treats trachoma, vitamin A deficiency (xerophthalmia), basic eye infections and minor accidents and injuries to the eye. Cataracts and other surgical cases are registered for referral to volunteer eye surgeons.

The following table summarizes eye clinic cases in 1999. The sharp drop in eye clinic visits in November is probably due to deportations in Mae Sot as well as the relocation of Huay Kaloke refugee camp to Umphium.

Eye Clinic Activity 1999

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Eye glasses	94	55	117	87	111	122	126	60	104	36	3	0	915
Pterygium	12	3	9	19	7	13	23	4	13	0	0	0	103
Cataract	13	9	13	13	8	12	14	5	0	0	0	0	87
Xerophthalmia	16	6	10	0	1	1	5	3	2	0	0	0	44
Minor Eye Injury	1	3	4	3	4	0	2	1	13	0	0	0	31
Trachoma	3	0	6	2	5	2	2	1	2	0	0	0	23
Other	7	5	7	4	7	5	7	3	1	2	0	0	48
TOTAL	138	78	158	104	142	146	157	79	129	62	4	0	1197

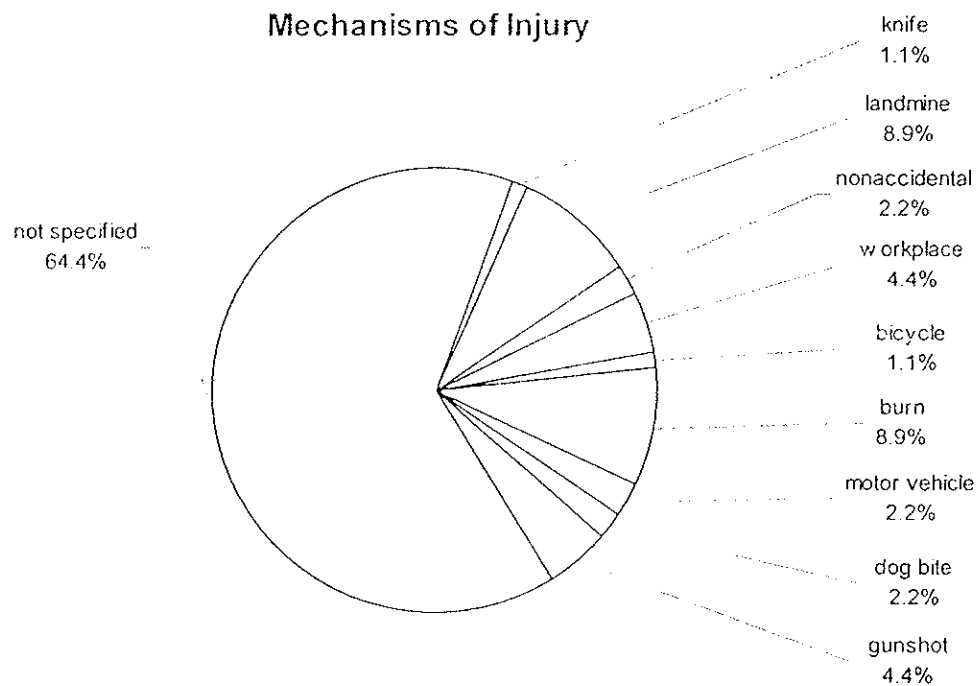
The Eye Clinic is also active in a variety of eye-related training activities including training in primary eye care during the health workers' training course, eyeglass and refraction training and trainer training in primary eye care.

Trauma Program

The clinic has a small surgical/trauma unit used for procedures. These include wound care, abscess drainage, dental procedures, and other minor surgery. In 1999 the unit conducted 1351 procedures, of which 622 were trauma related. One third of all patients were women, and 8% were children under 5 years of age.

A random sample of 200 cases treated by the surgical/trauma unit in 1999 revealed 90 injuries. The mechanisms of injuries are shown in the pie chart below. Most injuries did not have a specific mechanism noted in the case records (64.4%). "Nonaccidental" refers to all intentional injuries including domestic violence. "Motor vehicle" includes both car and motorbike accidents.

Figure 9.



Backpack Health Worker Program

Medics trained and based at Mae Tao Clinic provide preventive and curative health services to villagers and displaced persons on the Thai-Burma border who live in areas too remote or dangerous for clinics. The target population for this program is estimated to be around 120,000.

Backpack health workers are trained to provide medical care and to educate local health workers in four main areas: communicable diseases, reproductive health, primary health education, and landmines/war first aid. Regular backpack health worker team meetings are held at the Mae Tao Clinic to exchange information on epidemiology, safety, needs assessment, team management, and medical education.

Fifty teams consisting of 2 or 3 medics with at least one female team member were trained and assigned to regularly serve specific areas along the border. Teams were sent on missions lasting 4 to 6 months. Three emergency teams were formed to respond to urgent and unpredictable situations. The teams have proven to be effective but the work is extremely dangerous. One backpack health worker was killed by a landmine injury, and two were killed while evacuating civilians from fighting.

Future projects for 2000 include data collection on landmines, use of a rapid malaria test, guidelines for malaria diagnosis and treatment, and distribution of a school health curriculum. Blood transfusion guidelines with universal precautions, HIV testing and pretest counseling will also be implemented. Backpack medics will also be trained to conduct workshops on obstetric emergencies, family planning, and public health education.

Training and Exchange Programs

In 1999 the Mae Tao Clinic trained 59 new medics in primary health. The students came from several different areas and organizations on the Thai-Burma border. The curriculum included anatomy and physiology, microbiology, child health, obstetrics, first aid, public health, and family planning. Primary eye care was also taught. The students received extensive practical experience in each of the clinic's services as well.

Each year the Mae Tao Clinic hosts health workers and students from abroad who are interested in the situation on the Thai-Burma border. Drs. Ben Brown from Sebastopol, California; Tao Sheng Kwan-Gett from Seattle, Washington; and Myron Semkuley from Calgary, Alberta visit the clinic each year, as does Inge Sterk, a midwife from Villingen, Germany who assists with midwife and family planning training. During 1999 medical students interested in health care in developing countries came from all over the world to do rotations at the Mae Tao Clinic.

This past year also saw increased interest in the field of mental health. In April the clinic hosted a visit of mental health professionals from Likhaan, a Filipino organization experienced in psychological trauma from human rights abuses in that country.

Plans for 2000 and Beyond

The Mae Tao Clinic plans to continue all of its current services and to expand its training and clinical programs during the year 2000. Injury tracking will be strengthened to identify areas for potential public health intervention. The blood transfusion program will be strengthened by the implementation of HIV pretest and post-test counseling. The administrative and budgetary aspects of this complicated program will also be improved.

Construction will be completed on a new 14 bed surgical service that will include rehabilitation facilities. Final touches will also be put on a new structure that houses a 70 student classroom, an eye care room, and a resource room. The clinic would also like to begin improving its facilities for inpatient obstetric care and emergencies by adding 8-12 beds, depending on space and design. And to accommodate its increasing water needs, the clinic will drill a well and improve the water and sanitation facilities.

Public health will also continue to be a strong interest at the clinic. A public health education program will begin on Saturdays, with a curriculum including mass education, family planning, immunization, nutrition, malaria, and tuberculosis. The clinic will continue to develop new public health education materials, and assist in health education for local factory workers especially in the area of reproductive health.

The next year will also see more training and exchange programs. The clinic will send two of its staff to the Philippines for mental health training with the Likhaan organization. This organization also plans to send a psychologist to conduct mental health training at the clinic in September. Another clinic representative will travel to the Philippines for gender monitoring training. The clinic hopes to secure financial support to send more of its health workers abroad for specialized intensive training in maternal child health, public health, and health care for refugees and displaced people. These programs are an opportunity for the Mae Tao Clinic to strengthen its ability to serve the people's health amidst the constantly changing, challenging environment of the Thai-Burma border.

Funders

The following organizations support the work of the Mae Tao Clinic with grants for specific projects.

<i>APHEDA</i>	Backpack health worker program and refugee women's organization support
<i>Brackett Foundation</i>	Child development center
<i>Burma Border Consortium</i>	Food for staff and patients, rent and utilities
<i>Burma Refugee Project Los Angeles</i>	Maternal child health programs at Mae La Poh Hta refugee camp
<i>Burma Relief Center</i>	Administration, transportation, basic supplies for staff, backpack health worker program, medication for IPD and OPD services
<i>Burmese Refugee Care Project</i>	Backpack health worker program, Bamboo Children's Home, women's projects in No Poe Refugee Camp, nursery school
<i>Canadian Embassy</i>	Electronic mail and communication
<i>Global Health Council</i>	Blood transfusion services, antimalarial and other medicines for IPD and OPD
<i>HelpAge International</i>	Eye Clinic programs
<i>International Center for Human Rights and Democratic Development</i>	New construction for classrooms, prenatal clinic, library, eye clinic, surgical unit
<i>IRC</i>	Eye Clinic program, training center renovation and upgrade, Pa Hite Clinic
<i>Mae Sot Hospital</i>	Vaccines, laboratory tests, obstetrical procedures, blood bank
<i>Medical Mercy Canada</i>	Medicine and clinic supplies, projects at Mae La Po Hta
<i>Terre des Hommes</i>	Shan Clinic in Fang district
<i>Unitarian Universalist Service Committee</i>	Laboratory services

<i>Women's Commission for Refugee Women and Children</i>	Reproductive health services
<i>Women's Education for Advancement and Empowerment (WEAVE)</i>	Primary health care training, women's projects in refugee camps, public health education materials
<i>Young Green Foundation</i>	Child clinic, nutrition and immunization programs; Eye Clinic programs

In addition, the generosity of the following organizations and many private individual donors support the clinic's many other projects and needs. These include orphan care and education, additional medications and supplies, first aid training programs, and refugee camp health education projects. A portion of the donations goes into a general fund to support clinic administration and rent.

Action Medeor

Australia/Burma Friendship Association

Australian Baptist World Aid

Burma Youth Volunteer Association, Japan

Burmese in Australia Water Festival Committee

Burmese Refugee Care Project

Burmese Relief Center, Japan

Euro Burma

Karen Development and Relief Foundation UK (KDRF)

Matriona

Clinic Staff

Physicians

Cynthia Maung	Director
Maria Guevarra	Head of IPD
Shee Sho	Head of Training

Administrative Staff

Tess
Say Paw
Win Tin

Department Heads

Kyi Soe	Pa Hite Clinic
Naw Htoo	Reproductive Program
Paw Ruth Say	Child Clinic Program
Aung Pe	Eye Clinic Program
Kyaw Hein	Laboratory
Maung Maung	OPD
Aung Mon	IPD Assistant
Htun Htun Oo	Surgical Unit