

# Yukon-Kuskokwim Delta Service Area

## OVERVIEW

### Alaska Native 2006 User Population.

YUKON-KUSKOKWIM SERVICE AREA		24,214
Unit 1	Emmonak	2,330
Unit 2	St. Mary's	2,720
Unit 3	Aniak	1,382
Unit 4	Kwethluk	2,211
Unit 5	Bethel	5,806
Unit 6	Kasigluk	1,354
Unit 7	Kipnuk	1,867
Unit 8	Toksook Bay	2,222
Unit 9	Hooper Bay	2,701
Unit 10	Quinhagak	974
Unit 11	Holy Cross	647

Users are defined as beneficiaries who used a facility that reports through the Indian Health Service data system at least once between 10/1/2003 and 9/30/2006. Health care units include several villages, and are named after the most populated village in the unit, and/or the location of the unit's sub-regional clinic (i.e. St. Mary's).

**Environmental Factors.** The Yukon-Kuskokwim Delta (YKD) is located in Southwestern Alaska, approximately 400 air miles from Anchorage. It encompasses 75,289 square miles of coastal wetlands, tundra, and mountains. It includes the town of Bethel and 50 villages along the coast of the Bering Sea and on the banks of the Yukon and Kuskokwim Rivers and their tributaries. On the Yukon, the YKD begins at the village of Grayling and follows the River to Kotlik where it empties into the Bering Sea. The Kuskokwim River boundary begins at the community of McGrath and follows the River down the coast to Quinhagak.

Map 10.1





The coastal YKD communities have temperatures ranging from -2 to 62 degrees Fahrenheit, and interior communities have temperatures ranging from -55 to 87 degrees Fahrenheit.

**Utilities.** Electricity, water, waste water, and solid waste collection are available to most Bethel households. The surrounding villages have electricity, but there are still many village homes without adequate water or waste water facilities. Almost all of the YKD villages have a shower facility and a laundromat (often combined as a “Washateria”). Lack of water and sanitation infrastructure is a major public health and community development problem encountered throughout the YKD.

Table 10.1

**Yukon Kuskokwim Service Area  
Number of Homes With and Without Complete  
Water and Sewer Service<sup>1</sup>**

	# Homes With	# Homes Without	Total # of Homes <sup>2</sup>
<b>YUKON KUSKOKWIM SERVICE AREA</b>	<b>3,265</b>	<b>2,248</b>	<b>5,513</b>
Yukon Kuskokwim Health Corporation	3,265	2,248	5,513

<sup>1</sup> Complete service means operable plumbed indoor water and sewer service. Information applies only to year-round primary homes, including individual homes, duplexes and apartment units. Data from FY 2002.

<sup>2</sup> Excludes homes covered by urban local government and sewer service.

Source: Alaska Area Native Health Service Office of Environmental Health.

**Transportation.** The State-owned Bethel Airport is a regional transportation center, and is served by a number of passenger airlines, cargo carriers, and numerous air taxi services. Bethel, the third busiest airport in Alaska, has daily flights to Anchorage. The two sub-regional clinic locations of Aniak and St. Mary’s also have daily commercial flights to Anchorage. The river systems and a network of lakes provide linkage by boat between the villages during summer, and by snowmachine, truck/car or all terrain vehicle after freeze up. Many villages are more than 100 miles from the hospital in Bethel. Fuel and supplies are delivered, during the summer, to all YKD coastal villages by ocean barge. For Yukon River villages, fuel and supplies are shipped on the railroad from Anchorage to Nenana, and then by barge down river. The Kuskokwim River villages, with the highest transportation costs, receive supplies by ocean barge from Seattle to Bethel, and then by smaller barge upriver. Many goods are delivered by air at all times of the year.

**Housing.** Rotating health care providers have little incentive to purchase housing in Bethel, since there is no re-sale market. Frequently, there is no rental housing available. There are staff quarters available in Bethel adjacent to the Yukon Kuskokwim Delta Regional Hospital.



# Yukon-Kuskokwim Delta Service Area

**Education.** In the YKHC service area, K-12 education is provided by the Lower Kuskokwim, Lower Yukon, Kuspuq, Iditarod, Kashanamiut and Yup'it School Districts. The Lower Kuskokwim School District in Bethel is the sixth largest school district in Alaska. The University of Alaska, Fairbanks has a Kuskokwim Campus (KuC) in Bethel.

**Natural Resources.** Several hundred individuals in the YKD region hold commercial fishing permits, primarily for salmon and herring roe net fisheries. Subsistence activities contribute substantially to villager's diets, particularly salmon, freshwater fish, game birds and berries. Poor fish returns since 1997 have significantly affected the communities

**Federally Recognized Tribes.** The Yukon Kuskokwim Health Corporation (YKHC) has resolutions from 58 federally recognized tribes to provide health care services on their behalf:

- Akiachak Native Community, P.L.93-638, Title I - P.O. Box 70, Akiachak, AK 99551
- Akiak Native Community - P.O. Box 52165, Akiak, AK 99552
- Village of Alakanuk - P.O. Box 167, Alakanuk, AK 99554
- Algaaciq Native Village (aka St. Mary's) - P.O. Box 48, St. Mary's, AK 99658
- Yup'it of Andreafski - P.O. Box 368, St. Mary's, AK 99658
- Village of Aniak - P.O. Box 176, Aniak, AK 99557
- Anvik Village - General Delivery, Anvik, AK 99558
- Asa'carsarmiut Tribe (aka Native Village of Mountain Village) - P.O. Box 32249, Mountain Village, AK 99632
- Village of Atmautluak - P.O. Box ATT, Atmautluak, AK 99559
- Village of Bill Moore's Slough - P.O. Box 20037, Kotlik, AK 99620
- Village of Cheforak - P.O. Box 29, Cheforak, AK 99561
- Chevak Native Village - P.O. Box 5514, Chevak, AK 99563
- Native Village of Chuathbaluk - P.O. Box 31, Chuathbaluk, AK 99557
- Chuloonawick Native Village - General Delivery, Chuloonawick, AK 99581
- Village of Crooked Creek - P.O. Box 69, Crooked Creek, AK 99575
- Native Village of Eek - P.O. Box 87, Eek, AK 99578
- Emmonak Village - P.O. Box 126, Emmonak, AK 99581
- Native Village of Georgetown - General Delivery, Bethel, AK 99559
- Organized Village of Grayling (aka Holikachuk) - General Delivery, Grayling, AK 99590
- Native Village of Hamilton - P.O. Box 20130, Kotlik, AK 99620

Table 10.2  
**Yukon Kuskokwim Delta Service Area  
 Education Status  
 for the Population 25 Years and Over**

	Males	Females
White Alone Population:		
High School graduate (includes equivalency)	228	61
Bachelors degree or higher	442	433
AI/AN* Alone Population:		
High School graduate (includes equivalency)	3,547	1,820
Bachelors degree or higher	120	230

\*AI/AN = American Indian/Alaska Native  
 Source: U.S. Census Bureau, 2000 Census Summary File 3.

Table 10.3  
**Yukon Kuskokwim Delta Service Area  
 Employment Status  
 for the Population 16 Years and Over**

	Males	Females
White Alone Population:		
In labor force	995	701
Employed	928	678
Unemployed	57	23
AI/AN* Alone Population:		
In labor Force	3,468	3,209
Employed	2,541	2,731
Unemployed	908	478

\*AI/AN=American Indian/Alaska Native  
 Source: U.S. Census Bureau, 2000 Census Summary File 3.

## Yukon-Kuskokwim Delta Service Area

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Holy Cross Village - P.O. Box 203, Holy Cross, AK 99602  
Native Village of Hooper Bay - P.O. Box 2193, Hooper Bay, AK 99604  
Iqurmuit Traditional Council (aka Native Village of Russian Mission) - P.O. Box 9, Russian Mission, AK 99657  
Village of Kalskag - General Delivery, Kalskag, AK 99607  
Kasigluk Traditional Elders Council (aka Native Village of Kasigluk) - P.O. Box 19, Kasigluk, AK 99609  
Native Village of Kipnuk - P.O. Box 57, Kipnuk, AK 99614  
Native Village of Kongiganak - P.O. Box 5069, Kongiganak, AK 99559  
Village of Kotlik - P.O. Box 20096, Kotlik, AK 99620  
Organized Village of Kwethluk - P.O. Box 84, Kwethluk, AK 99621  
Native Village of Kwigillingok - P.O. Box 49, Kwigillingok, AK 99622  
Native Village of Kwinhagak (aka Quinhagak), P.L. 93-638 Title I - General Delivery, Quinhagak, AK 99655  
Lime Village - General Delivery, Lime Village, AK 99627  
Village of Lower Kalskag - P.O. Box 27, Kalskag, AK 99626  
Native Village of Marshall (aka Fortuna Ledge) - P.O. Box 10, Fortuna Ledge, AK 99585  
Native Village of Mekoryuk - P.O. Box 66, Mekoryuk, AK 99630  
Native Village of Napaimute - P.O. Box 96, Aniak, AK 99557  
Native Village of Napakiak - General Delivery, Napakiak, AK 99634  
Native Village of Napaskiak - P.O. Box 6109, Napaskiak, AK 99559  
Newtok Village - P.O. Box WWT, Newtok, AK 99559  
Native Village of Nightmute - General Delivery, Nightmute, AK 99690  
Native Village of Nunapitchuk - P.O. Box 130, Nunapitchuk, AK 99641  
Village of Ohogamiut - General Delivery, Fortuna Ledge, AK 99585  
Orutsararmiut Native Council (aka Bethel) - 835 Ridgecrest Dr. P.O. Box 927, Bethel, AK 99559  
Oscarville Traditional Village - P.O. Box 1554, Oscarville, AK 99559  
Native Village of Paimiut - General Delivery, Hooper Bay, AK 99604  
Pilot Station Traditional Village - P.O. Box 5040, Pilot Station, AK 99650  
Native Village of Pitka's Point - P.O. Box 127, St. Mary's, AK 99658  
Village of Red Devil - P.O. Box 49, Red Devil, AK 99656  
Native Village of Scammon Bay - P.O. Box 126, Scammon Bay, AK 99662  
Shageluk Native Village - General Delivery, Shageluk, AK 99665  
Native Village of Sheldon's Point (aka Nunam Iqua) - General Delivery, AK 99666  
Village of Sleetmute - P.O. Box 21, Sleetmute, AK 99688  
Village of Stony River - P.O. Box SRV, Stony River, AK 99557  
Nunakauyarmiut Tribe (aka Native Village of Toksook Bay) - Nelson Island, Toksook Bay, AK 99637  
Tuluksak Native Community - P.O. Box 156, Tuluksak, AK 99679  
Native Village of Tuntutuliak -P.O. Box 77, Tuntutuliak, AK 99680  
Native Village of Tununak - P.O. Box 77, Tununak, AK 99681  
Umkumiute Native Village - General Delivery, Nightmute, AK 99690



## DESCRIPTION OF HEALTH-CARE DELIVERY SYSTEM

The Yukon Kuskokwim Health Corporation (YKHC) is headquartered in Bethel, 60 miles from the confluence of the Kuskokwim River and the Bering Sea. YKHC assumed operation of the Yukon-Kuskokwim Delta Regional Hospital in 1991, and is now operating the health services, programs and functions under a P.L. 93-638, Title V funding agreement. The YKD Regional Hospital, sub-regional clinics, mental health residential facilities, and village clinics are all accredited by The Joint Commission.

The **Yukon Kuskokwim Delta Regional Hospital** (P.O. Box 287, Bethel, Alaska 99559) is a 39-bed general acute care medical facility located in Bethel. It consists of a single-story steel frame structure encompassing 100,000 square feet of space. There are currently 16 adult medical/surgical beds, 14 pediatric beds, 8 obstetric beds, 2 psychiatric beds, 2 emergency-trauma rooms, and an endoscopy suite. Sharing the space are two outpatient clinics (Delta and Kusko), a specialty clinic, respiratory therapy, pharmacy, lab, and x-ray. Diagnostic imaging includes ultrasound, fluoroscopy, mammography, and teleradiology.

The *Community Health Care Building* is adjacent to the hospital. At three stories high, it is the tallest building in Bethel and houses the YKHC dental, eye care, audiology, behavioral health, nutrition, health education, injury prevention and Community Health Aide (CHAP) training. Administrative offices in the Community Health Care Building include CHAP, home health care, elder care, billing, and corporate offices. Medical, dental and optometry staff in Bethel provide scheduled field visits to the remote villages.

*Qavartarvik*, YKHC's patient hostel, is available for use by Natives and non-Natives who are from the Yukon-Kuskokwim Delta Region villages and have come to Bethel for medical care. It is adjacent to the hospital and community health care building.

The YKHC *Crisis Respite Center (CRC)* is a 5-bed facility in Bethel that provides emergency residential services for adults experiencing a life crisis so disruptive it cannot be managed in an outpatient setting. CRC provides evaluation, treatment, and referral for those individuals needing to be monitored and protected.

The YKHC *Residential Diagnostic Treatment (RDT) Center* provides emergency residential services for children experiencing a life crisis so disruptive it cannot be managed in an outpatient setting. Sharing the same 12-bed facility with the *RDT Center* in Bethel, the *Children's Receiving Home* provides short-term residential beds to children and youth who cannot remain at home due to family disturbances.

The YKHC *Tundra Swan Inhalant Abuse Center* is the only program in the country that treats adolescent inhalant abuse. The *Tundra Swan Inhalant Abuse Center* is located in Bethel's McCann Treatment Center, and shares space (16 residential beds) with the *Boy's Group Home (BGH)*. The *BGH* serves boys who are in state custody due to severe disruption in their ability to function in the community.

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The YKHC *Girl's Group Home (GGH)* is a 5-bed residential facility for adolescent girls between 12 and 18 years of age who have emotional, behavioral or substance abuse issues that require residential treatment.

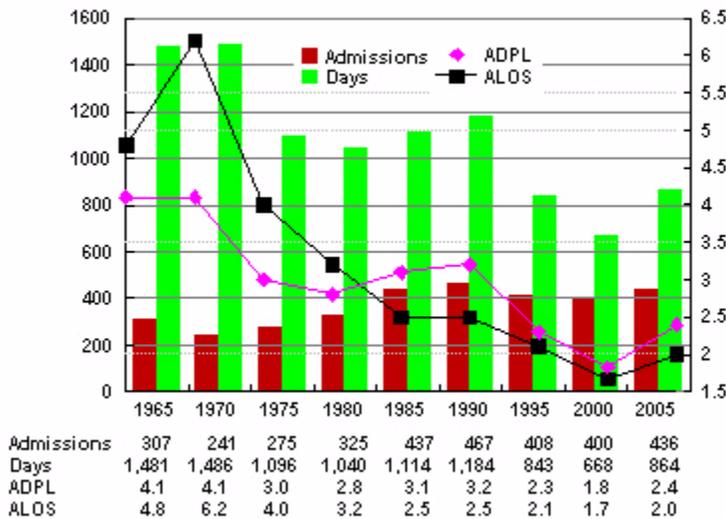
The YKHC *Phillips Ayagnirvik Treatment Center* in Bethel provides adult alcohol detox, residential short term (<30 days) and long term (>30 days) alcohol treatment, outpatient alcohol treatment, and treatment to individuals with dual substance abuse and mental health problems.

The YKHC *Morgan House* in Bethel provides residential treatment and transitional living skills training to adult clients with severe and persistent mental disorders. The *Bautista House* in Bethel provides long-term, residential placement for chronically mentally ill and developmentally disabled adults, who are at least 18 years old.

YKHC operates *Aeromed International*, an air ambulance service able to transport critical care medivac patients from the villages to the YKD Regional Hospital, and from the YKD Regional hospital to Anchorage. The secondary and tertiary referral location is the Alaska Native Medical Center in Anchorage.

## INPATIENT/OUTPATIENT WORKLOAD.

Graph 10.1  
**Yukon Kuskokwim Delta Regional Hospital  
 Newborn Inpatient Workload  
 FY 1965 - FY 2005**



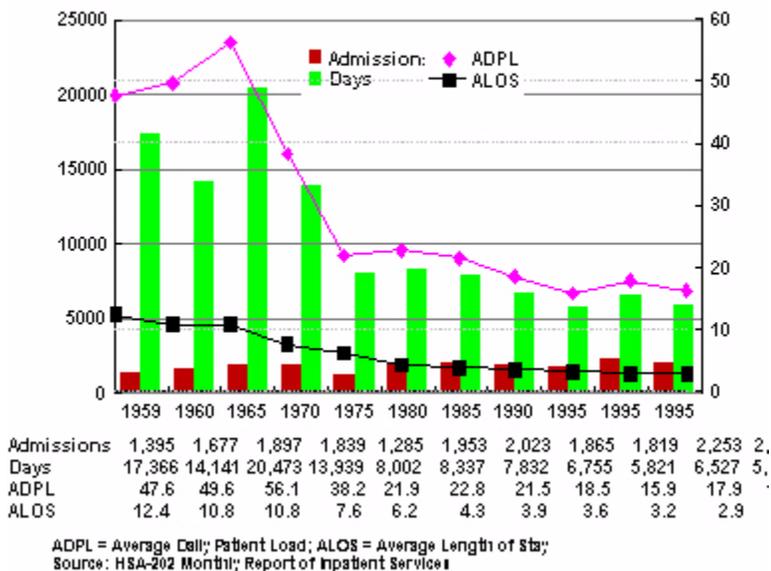
ADPL = Average Daily Patient Load; ALOS = Average Length of Stay;  
 Source: HSA-202 Monthly Report of Inpatient Services



# Yukon-Kuskokwim Delta Service Area

Graph 10.2

## Yukon Kuskokwim Delta Regional Hospital Inpatient Workload Excluding Newborns FY 1959 - FY 2005



Graph 10.3

## Yukon Kuskokwim Delta Service Area Outpatient Workload: FY 1959 - FY 2005

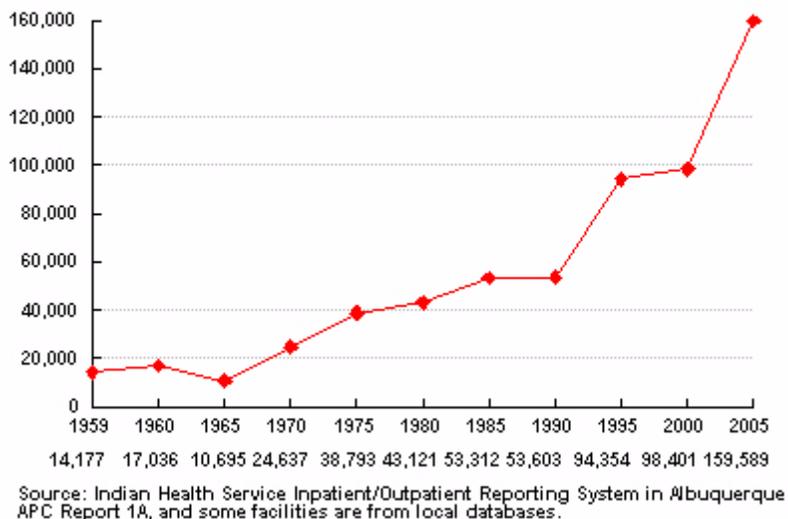




Table 10.4  
**Yukon Kuskokwim Delta Service Area**  
**Leading Causes of Outpatient Visits: FY 2001 - FY 2004**

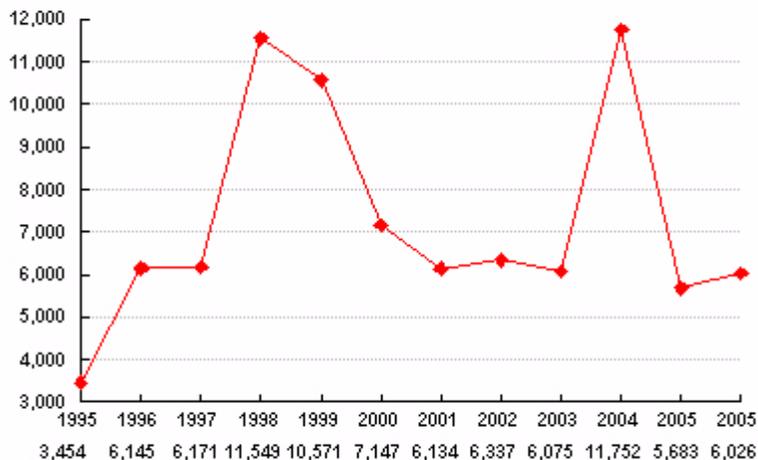
All Age Groups	FY 2001	FY 2002	FY 2003	FY 2004
Upper Respiratory Problems	6,228	5,844	5,644	5,466
Pregnancy, childbirth & puerperium	5,708	5,063	4,722	4,805
Hospital Medical/Surgical Follow-up	4,334	5,824	2,888	4,459
Refractive Error	3,293	2,645	2,445	3,529
Accidents & Injuries	5,229	4,694	4,014	3,212
Infected Skin & Abrasions	3,566	3,135	3,642	2,758
Otitis Media	3,688	2,887	2,200	2,327
Neuroses & Non-Psychotic Disorders	2,879	2,389	2,593	2,195
Assessment of Symptoms	2,549	2,442	2,089	2,130
Hypertension	5,806	3,195	3,763	2,084
Bone & Joint Disorders	1,990	2,047	1,910	1,649

Source: Indian Health Service Inpatient/Outpatient Reporting System, APC Report 1C.

**Clara Morgan Sub-Regional Clinic, P.O. Box 269, Aniak, Alaska 99557**

The YKHC subregional clinics have mid-level providers working with village community health aides, and are equipped with cardiac monitors, defibrillator, IV equipment, oxygen, casting equipment and other advanced life support equipment. Subregionals have more space (usually 10,000 sq. ft.) and have a greater laboratory and x-ray capability than village clinics. The four subregional locations in the YKD have airport runways capable of supporting jet landings. The Clara Morgan Subregional in Aniak serves the villages of Anvik, Red Devil, Russian Mission, Crooked Creek, Holy Cross, Lime Village, Upper Kalskag, Lower Kalskag, Chuathbaluk, Shageluk, Grayling, Sleetmute, Stony River, Napaimute, and Georgetown.

Graph 10.4  
**Clara Morgan Subregional Clinic (Aniak)**  
**Outpatient Workload: FY 1995 - FY 2005**



Source: Indian Health Service Inpatient/Outpatient Reporting System in Albuquerque APC Report 1A, and some facilities are from local databases.



Table 10.5

### Clara Morgan Subregional Clinic (Aniak) Outpatient Diagnosis: FY 2001 - FY 2004

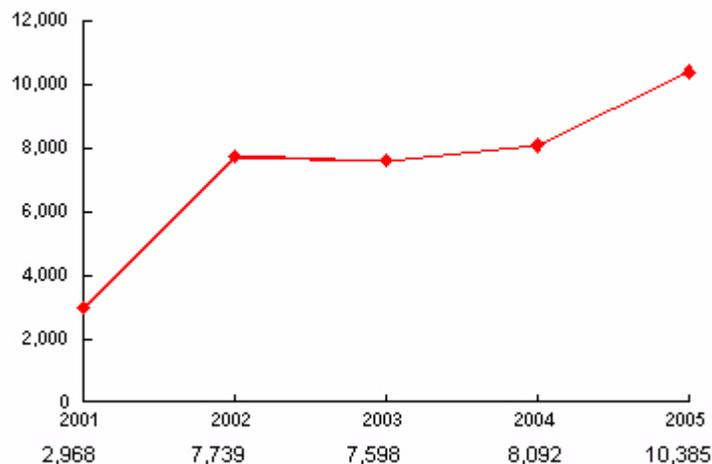
All Age Groups	FY 2001	FY 2002	FY 2003	FY 2004
Hypertension	59	n/a	107	450
Accidents & Injuries	465	410	355	378
Tests Only	448	368	332	311
Diabetes Mellitus	47	n/a	62	311
Upper Respiratory Problems	523	421	348	305
Pregnancy, childbirth & puerperium	82	n/a	114	231
Respiratory Allergies	125	116	93	202
Otitis Media	283	219	176	199
Hospital Medical/Surgical Follow-up	124	166	225	175
Bone & Joint Disorders	113	176	126	161
Physical Examinations	130	168	103	154

n/a=not available. Source: Indian Health Service Inpatient/Outpatient Reporting System, APC Report 1C.

**Pearl E. Johnson Sub-Regional Clinic**, General Delivery, Emmonak, Alaska 99581 serves the villages of Emmonak, Alakanak, Hooper Bay, Kotlik, Scammon Bay, Nunam Iqua, Bill Moore's Slough, Chuloonawick and Hamilton.

Graph 10.5

### Pearl E. Johnson Subregional Clinic (Emmonak) Outpatient Workload: FY 2001 - FY 2005



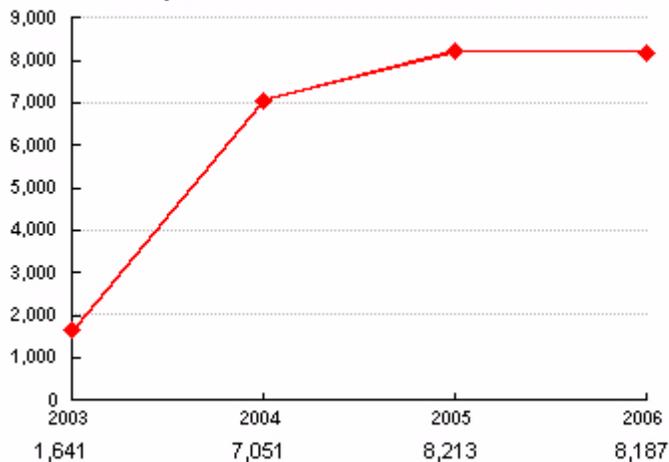
Source: Indian Health Service Inpatient/Outpatient Reporting System in Albuquerque, APC Report 1A, and some facilities are from local databases.



**John Afcan Memorial Sub-Regional Clinic**, General Delivery, St. Mary's Alaska 99658 services the villages of St. Mary's, Andreafski, Pitka's Point, Mountain Village, Pilot Station, Marshall, and Ohogomuit. There is a 22 mile gravel road between St. Mary's, Pitka's Point and Mt. Village.

Graph 10.6

**John Afcan Memorial Subregional Clinic (St. Mary's)  
Outpatient Workload: FY 2003 - FY 2006**

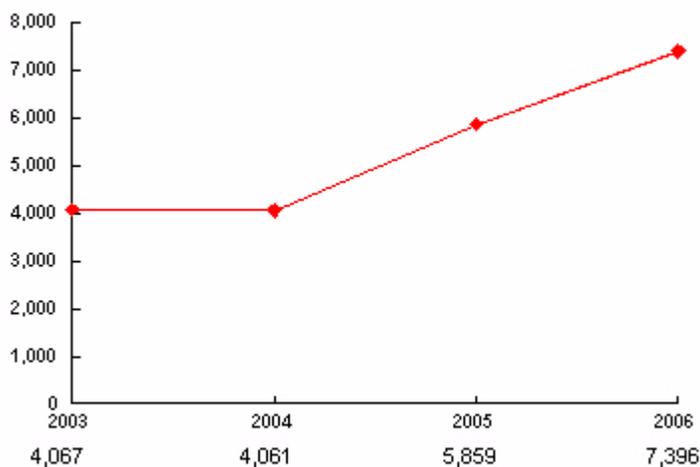


Source: Indian Health Service Inpatient/Outpatient Reporting System in Albuquerque, APC Report 1A, and some facilities from their databases.

**Toksook Bay Subregional Clinic**, General Delivery, Toksook Bay, Alaska 99637 serves the villages of Toksook Bay, Mekoryuk, Tununak, Cheforak, and Nightmute.

Graph 10.7

**Toksook Bay Subregional Clinic  
Outpatient Workload: FY 2003 - FY 2006**



Source: Indian Health Service Inpatient/Outpatient Reporting System in Albuquerque, APC Report 1A, and some facilities are from local databases.



# Yukon-Kuskokwim Delta Service Area

**Community Health Aide Program (CHAP).** YKHC supports 44 village-built clinics with Community Health Aides that provide acute, chronic, emergency, dental, behavioral health and preventative health care services at the village level.

Akiachuk <sup>1</sup>	Chevak	Kalskag	Marshall	Nunapitchuk	Sleetmute
Akiak	Chuathbaluk	Kasigluk	Mekoryuk	Pilot Station	Toksook Bay
Alakanuk	Crooked Creek	Kipnuk	Mt. Village	Quinhagak <sup>1</sup>	Tuluksak
Aniak	Eek	Kongiganak	Napakiak	Red Devil	Tuntutuliak
Anvik	Emmonak	Kotlik	Napaskiak	Russian Mission	Tununak
Atmauthluak	Grayling	Kwethluk	Newtok	St. Mary's	
Bethel	Holy Cross	Kwigillingok	Nightmute	Scammon Bay	
Cheforak	Hooper Bay	Lower Kalskag	Nunam Iqua <sup>2</sup>	Shageluk	

<sup>1</sup> The CHAP in the villages of Akiachak and Quinhagak are managed by their local tribes under PL 93-638, Title I.

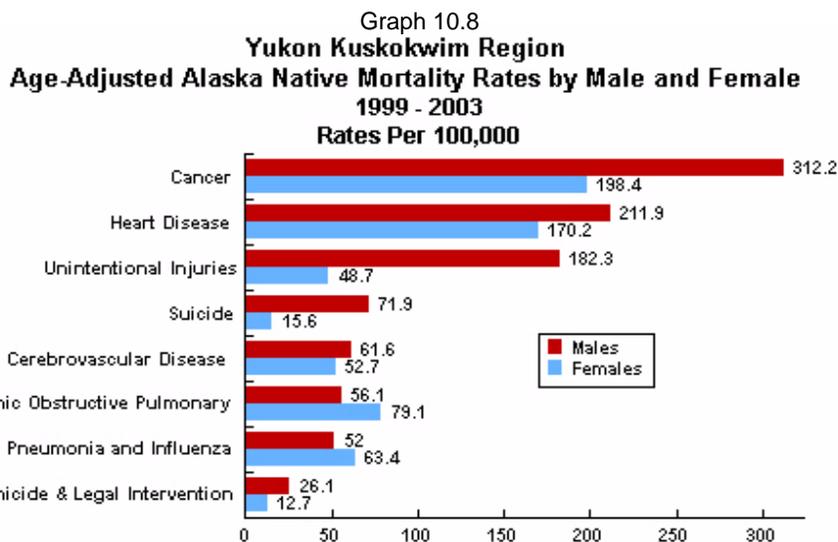
<sup>2</sup> Formerly Sheldon's Point.

## NON-TRIBAL HEALTH AGENCIES AND FACILITIES AND TYPES OF SERVICES PROVIDED TO SERVICE POPULATION

The *Bethel Family Clinic* is staffed by one physician and one mid-level health care provider. It is a non-profit, non-tribal HRSA, Section 330 Community Health Center. The *Bering Sea Animal Clinic* provides private veterinary services in Bethel. The State of Alaska provides public health nursing, social services, and public assistance to residents of Bethel and the surrounding villages. The State also provides resources for early periodic screening and diagnostic treatment (EPSDT) for all YKD children, and offers EPSDT training to community health aides.

## HEALTH STATUS OF ALASKA NATIVES LIVING IN THE YUKON-KUSKOKWIM DELTA SERVICE AREA

### Mortality.

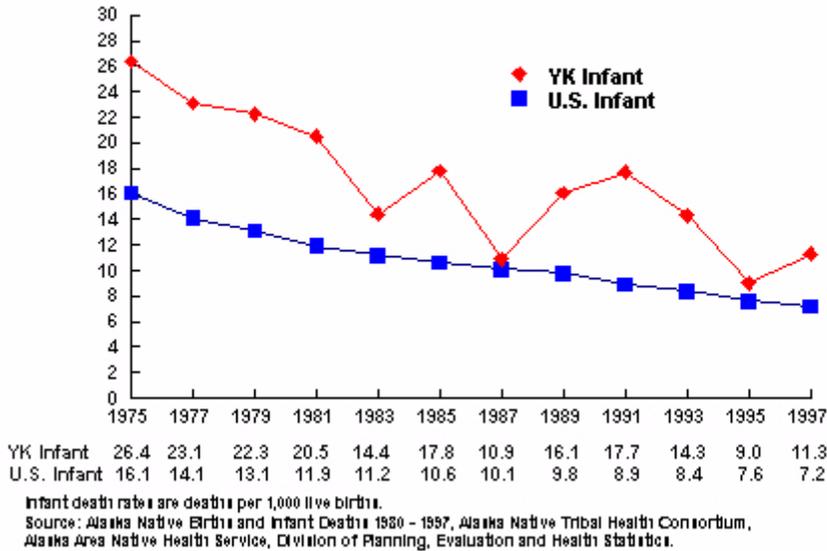


Source: *Alaska Native Mortality Update: 1999-2003*, Alaska Native Epidemiology Center, Office of Alaska Native Health Research, Division of Community Health Services, Alaska Native Tribal Health Consortium.



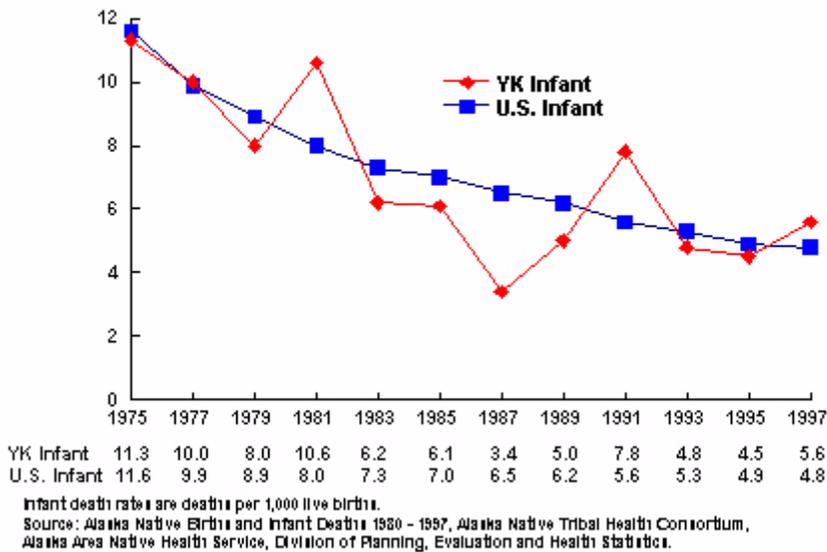
**Infant Mortality Rates.** Infant mortality is the number of infant deaths per 1,000 live births.

Graph 10.9  
**Infant Mortality Rates**  
**Yukon Kuskokwim Delta Service Area vs U.S.**  
**1975 - 1997**



**Neonatal Mortality Rates.** The neonatal period is defined as less than 28 days of age.

Graph 10.10  
**Neonatal Mortality Rates**  
**Yukon Kuskokwim Delta Service Area vs U.S.**  
**1975 - 1997**



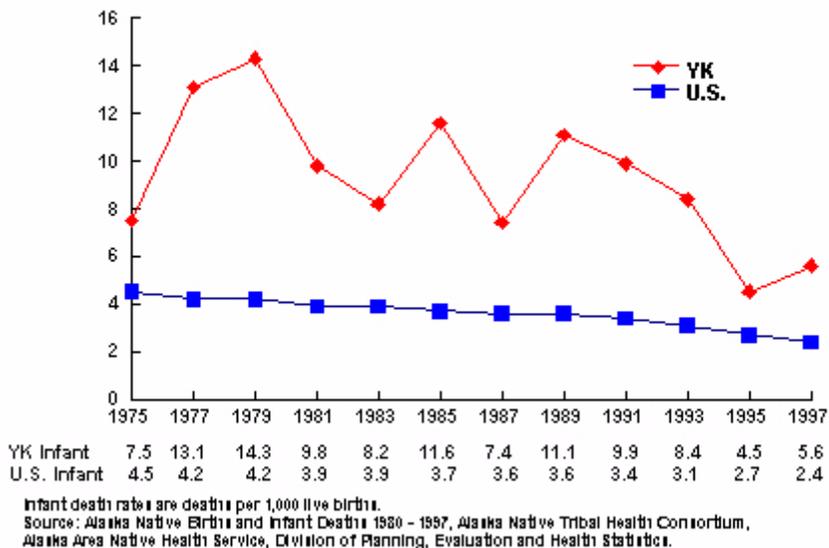


# Yukon-Kuskokwim Delta Service Area

**Postneonatal Mortality Rates.** The postneonatal period is defined as 28 to 365 days of age.

Graph 10.11

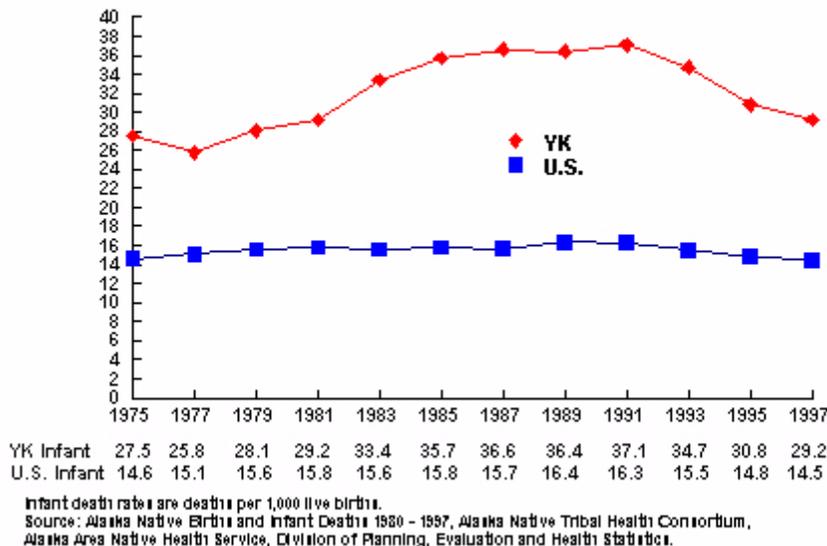
## Postneonatal Mortality Rates Yukon Kuskokwim Delta Service Area vs U.S. 1975 - 1997



**Birth Rates.** The 1997 infant birth rate for the Yukon-Kuskokwim Delta Service Area, at 29.2 per 1,000 Native population, is more than twice that of the U.S. rate.

Graph 10.12

## Birth Rates Yukon Kuskokwim Delta Service Area vs U.S. 1975 - 1997





## DISCHARGE WORKLOAD

Table 10.6  
**Yukon Kuskokwim Delta Service Area**  
**Leading Causes of Discharges: FY 2001 - FY 2004**

	FY 2001	FY 2002	FY 2003	FY 2004
Deliveries (Childbirth)	325	223	289	246
Pneumonia	274	193	264	212
Bronchitis, Emphysema	149	105	115	136
Infected Skin & Abrasions	221	161	132	117
Accidents & Injuries	98	75	106	88
Complications of Pregnancy	111	115	109	82
Alcohol Abuse	24	19	14	51
Psychoses	12	5	17	45
Neuroses & Personality Disorders	18	21	26	41
Urinary Tract Diseases	46	42	54	41
Nutritional & Metabolic Disorders	58	37	52	37

Source: Indian Health Service Inpatient/Outpatient Reporting System, Direct Inpatient Report 2C.