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WOMEN'S HEALTH GUIDLINE
HEADACHE IN PREGNANCY
MANAGEMENT GUIDELINE

MCH CCBG Approval Date:

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HEADACHE IN PREGNANCY
MANAGEMENT GUIDELINES

1.) MIGRAINE

Background

Headache is very common in pregnant women. In addition, migraine prevalence is increased in women and can be related to times of hormonal changes including pregnancy and breastfeeding.

Headache can be a condition by itself, or it can be a symptom of another pathologic process.

Primary headache conditions include:

- Migraine headache, tension-type headache, cluster headache

Secondary headache conditions include but are not limited to:

- Preeclampsia, tumor, stroke, thrombosis, medication withdrawal, dehydration, medication side effect, trauma/injury, infection, inflammation.

Given the frequency of migraine headaches and the importance of excluding secondary headache conditions this guideline will focus on that.

Migraine frequency usually decreases early in pregnancy. Migraines improve during the first trimester in approximately one-half of pregnant women, and during the third trimester in up to 87% of women. Only 3-7% of women have new onset migraine during pregnancy, and this is usually during the first trimester.

Migraine episodes recur after delivery. Breastfeeding women have a lower migraine recurrence rate for the first 6 months after delivery.

Diagnosis

There is no specific confirmatory test to diagnosis migraine headaches. The most important task is to differentiate if a headache is primary or secondary.

The evaluation should start with a detailed history including the following: Age of onset, family history, severity, frequency, duration, location of pain, pain character, associated symptoms especially nausea/vomiting or photo/phonophobia, presence of aura and describe, aggravating and alleviating factors, triggers, and medications used to treat the headache / frequency (include over the counter).

<u>Aura with migraine</u>:
(Headache classification Committee of the International Headache Society)

Reversible visual symptoms
Reversible sensory symptoms
Reversible speech disturbance
Develop gradually
Aura lasts 5-60 minutes
Headache begins during aura or starts within 60 minutes of aura onset

Symptoms cannot be attributed to another disorder.
New onset severe headaches in pregnancy may be a cause for concern. Warning signs associated with secondary headache in pregnancy include: hypertension, altered mental status, fever, seizures, abnormal neurologic exam.

Preeclampsia evaluation should be part of the diagnostic work-up in appropriate patients.

Neuroimaging should be considered in selected cases, as well as consultation with Neurology and/or Maternal Fetal Medicine consultants in appropriate patients.

Management Guidelines

A. Management of primary headaches- Refractory Migraine Headache in pregnancy

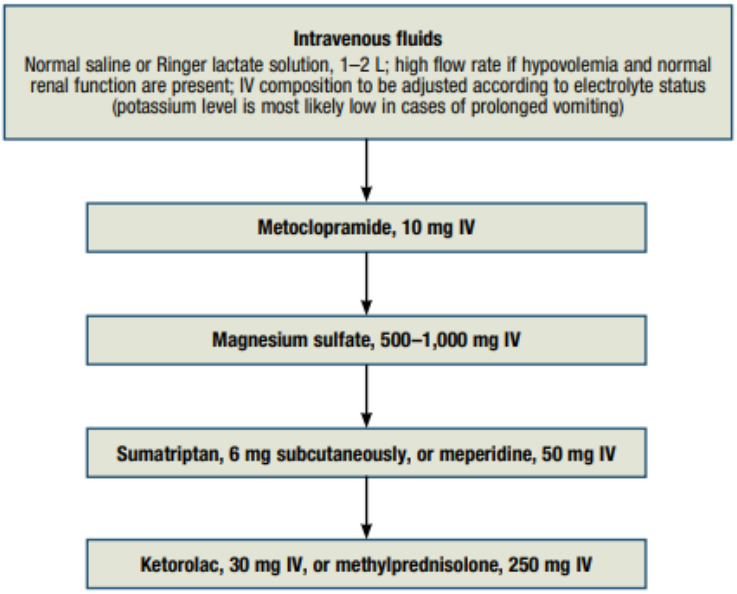

Figure 1. Emergency department management of refractory migraine in the pregnant or breastfeeding patient. Medications may be given in sequence after intravenous fluids have been started, with enough time (eg, 10 minutes) between drugs to evaluate response and possible adverse effects. Other dopamine antagonists, such as prochlorperazine, droperidol, or chlorpromazine, may be used. Meperidine usually is administered at 1–1.5 mg/kg. However, body mass index calculations in the pregnant patient should not be used because of unknown contribution of the fetus. Other narcotics are preferable in the emergency department setting in nonpregnant patients. Abbreviation: IV, intravenously. (This figure is used with permission from the publisher. Lucas S, Rawner E. Approach to the pregnant or lactating patients with headache in the emergency department. In: Orr SL, Friedman BW and Dodick DW, editors. Emergency headache: diagnosis and management. United Kingdom: Cambridge University Press; 2017. p. 125–40.) ⇦

B. Medication considerations

Most drug use is off label. Treatment of refractory migraine should include conversation regarding potential risks and adverse effects.

NSAIDS should be avoided in the first trimester and after 32 wks. Narcotics can lead to neonatal withdrawal depending on frequency of use. Ergots are contraindicated.

Pregnant and breast-feeding women are at higher risk of developing rebound headache from medication overuse.

Table 4. Urgent Treatment of Acute Migraine in Pregnancy ⇦

Drug	Dosage	Percentage of Patients Who Reported Total Pain Relief*	Percentage of Patients Who Reported Partial Pain Relief†	Pregnancy Category‡	Adverse Effects
High Efficacy					
Chlorpromazine	2.5–12.5 mg IV	53	65	C	Sedation and akathisia, dystonia, prolonged QT interval, hypotension, and dizziness
Droperidol	0.625–2.5 mg IV	40	82	C	
Metoclopromide	10 mg IV	41	70	B	
Prochlorperazine	5–10 mg IV	53	77	C	
Moderate Efficacy					
Ketorolac	30 mg IV	Total pain relief at 2 hours was not a reported end-point result, but partial pain relief was reported.	60	C, but D in the third trimester	Upset stomach, nausea, dizziness, oligohydramnios, and premature closure of the ductus arteriosus
Magnesium	1,000 mg IV	36	43	B	Upset stomach, nausea, and diarrhea
Meperidine	50 mg IV	30	58	C	Drowsiness, weakness, dizziness, constipation, itching, urinary retention, and respiratory depression
Sumatriptan	6 mg subcutaneously	35	78	C	Chest tightness, weakness, dizziness, drowsiness, and feeling hot or cold
Low Efficacy					
Dexamethasone	4–12 mg IV	Not specifically studied for recurrence prevention, but patients who received this medication tended not to return after study discharge; thus, it may prevent headache recurrence after discharge.		C	Insomnia, bruising, sweating, headache, dizziness, nausea, weight gain, confusion, and increased thirst
Methylprednisolone	250 mg IV			C	

*Data from Kelley NE, Tepper DE. Rescue therapy for acute migraine, part 3: opioids, NSAIDs, steroids, and post-discharge medications. Headache 2012;52:467–82. These values are from weighted averages of the percentages of patients who reported no pain with medications that were studied in two or more randomized trials with the medication used as a single agent.

†Data from Kelley NE, Tepper DE. Rescue therapy for acute migraine, part 3: opioids, NSAIDs, steroids, and post-discharge medications. Headache 2012;52:467–82. These values are from weighted averages of the percentages of patients who reported pain relief with medications that were studied in two or more randomized trials with the medication used as a single agent.

‡In 2014, the U.S. Food and Drug Administration published *Content and Format of Labeling for Human Prescription Drug and Biological Products; Requirements for Pregnancy and Lactation Labeling*, also referred to as "Pregnancy and Lactation Labeling Rule" or PLLR. The new labeling system replaces the 1979 letter category system (ie, pregnancy categories A, B, C, D, and X) and provides the prescriber with relevant safety information for critical decision making when treating pregnant or lactating women. The Pregnancy and Lactation Labeling Rule mandates that, for all drugs and biologic agents submitted for approval after June 30, 2015, manufacturers include a complete statement of the known risks based on available data in the medication package insert. If animal and human data are available, they should be presented. Labeling for prescription drugs approved on or after June 30, 2001, will be phased gradually. The Pregnancy and Lactation Labeling Final Rule is available at https://www.fda.gov/drugs/labeling/pregnancy-and-lactation-labeling-drugs-final-rule.

Abbreviation: IV, intravenously.

C. Management of primary -headaches- Migraine in breastfeeding patient

Table 5. Urgent Treatment of Acute Migraine in a Breastfeeding Patient

Medication	Dosage	Maternal Protein Binding (%)	American Academy of Pediatrics Rating*	Hale's Lactation Risk†	Cautions
High Efficacy					
Chlorpromazine	2.5–12.5 mg IV	95	May be of concern	L3	None through breast-feeding, but infants should be observed for possible sedation and hypotension
Droperidol	0.625–2.5 mg IV	Greater than 90	Not reviewed‡	L3	
Metoclopramide	10 mg IV	30	May be of concern	L2	
Prochlorperazine	5–10 mg IV	90	Caution with use	L3	
Moderate Efficacy					
Ketorolac	30 mg IV	99	Compatible	L2	None through breast-feeding
Magnesium	1,000 mg IV	0	Compatible	L1	None through breast-feeding
Meperidine	50 mg IV	65–80	Compatible	L2 (L3 in early postpartum period)	Sedation, poor latching, and neurodevelopmental delay
Sumatriptan	6 mg subcutaneously	14–21	Compatible	L3	None
Low Efficacy					
Dexamethasone	4–12 mg IV	70–77	Not reviewed	L3	Infant growth and development may be affected with long-term maternal use
Methylprednisolone	250 mg IV	77	Compatible	L2	

*The American Academy of Pediatrics rates medications by compatibility with breastfeeding. The 5-point rating scale rates drugs as follows:

1. Contraindicated
2. Requires temporary cessation of breastfeeding
3. Effects unknown but may be of concern
4. Medications that have been associated with significant effects on some infants and should be used with caution
5. Usually compatible

Data from Sachs HC. The transfer of drugs and therapeutics into human breast milk: an update on selected topics. Committee On Drugs. Pediatrics 2013;132: e796–809.

†Hale's Lactation Risk Categories include the following:

L1 Safest
L2 Safer
L3 Moderately safe
L4 Possibly hazardous
L5 Contraindicated

These categories are based on clinical observation of potential adverse effects of drugs on infants of breastfeeding women using the drug or are based on controlled studies demonstrating a possible risk or significant and documented risk. Data from Hale TW. Hale's medications and mothers' milk: a manual of lactational pharmacology. 18th ed. New York (NY): Springer; 2019 *and* U.S. National Library of Medicine. TOXNET databases. Available at: https://toxnet.nlm.nih.gov/. Retrieved April 18, 2019.

‡Unlikely to adversely affect an infant older than 2 months after single use or short-term use by the breastfeeding woman.

Spigset O. Anaesthetic agents and excretion in breast milk. Acta Anaesthesiol Scand 1994;38:94–103.

Bonhomme V, Brichant JF, Wuilmart M, Dewandre P, Hans P. Droperidol reduces nausea after caesarean section but alters the neurological status of the breastfed infants [abstract]. Anesthesiology 2002;96:A1044.

D. Migraine prevention during pregnancy

Valporic acid and topiramate are considered teratogens and should not be used for migraine prevention during pregnancy.

Options include:
Riboflavin 200mg BID PO, may discolor urine (Not in ANMC formulary)
Magnesium oxide 200mg up to qid, or 400mg BID, may cause diarrhea

Other preventative medications may be discussed with Pharmacy, Neurology, and Maternal Fetal Medicine consultants.

Non-pharmacological treatment:
-A headache diary can help identify triggers to avoid.
-Common triggers include fluctuations in caffeine, poor sleep, stress, chocolate, dehydration, artificial sweeteners.
-Exercise can reduce migraine burden.
-Mindfulness, cognitive-behavioral therapy can help reduce stress and promote wellness.

Referrals to Complementary Medicine and Traditional healing can be offered. (See Appendix 1)

2.) Other common headache etiologies

Pain is the most common symptom experienced during migraine, but other signs and symptoms usually accompany pain. The pain may begin as ill-defined and diffuse but may become localized. Pain is unilateral in 60% of patients and often is accompanied by muscle tightness or tenderness in the neck area. The character of migraine pain is throbbing, pounding, or pulsating in approximately 80% of patients, and pain is moderate to severe in 70% of patients at any given time in the headache episode. Different pain rating scales have been used, most commonly a 1–10 scale; sometimes only differentiation between mild-to-moderate or moderate-to-severe pain is documented.

In almost 80% of patients, physical activity may worsen migraine so severely that these patients prefer to lie still. This is called a sensitization phenomenon and may be explained to patients as a magnified perception of sensations. This is also seen with light and sound sensitivity (photophobia is reported in 66% of patients, and phonophobia in 49% of patients). Gastrointestinal symptoms are also common in patients with migraine, with nausea reported in 36% and vomiting in 18%. Rarely, diarrhea is reported. These symptoms vary not only between patients but also between headache episodes in each patient. Most patients with migraine experience two to four episodes per month, and almost one-half of patients report headache lasting at least 24 hours. A simplified definition of migraine versus tension-type headache is found in Table 1

Table 1. Migraine Versus Tension-Type Headache

	Migraine	Tension-Type Headache
Duration	Usually lasts 4–72 hours	Usually lasts 30 minutes to 7 days
Pain intensity	Moderate-to-severe	Mild-to-moderate, low-impact
Location	Often unilateral (60%)	Usually bilateral
Pain quality	Throbbing, pounding, pulsatile, and exacerbated by routine physical activity	Tight, squeezing, vice-like, and not exacerbated by movement
Associated conditions	Nausea, vomiting, or both; also, photophobia and phonophobia	Not associated with nausea or vomiting; photophobia or phonophobia occurs rarely

Data from The international classification of headache disorders, 3rd edition (beta version). Headache Classification Committee of the International Headache Society. Cephalalgia 2013;33:629–808.

Warning Signs
Although a patient may have a long history of migraine or other primary headache, atypical features of a headache may warrant diagnostic studies or consultation with a specialist. For a “worst headache of my life,” an urgent care visit may be warranted.

Daily headache associated with obesity, the use of daily “cyclines” (tetracycline, doxycycline), or ingestion of high doses of vitamin A may point to idiopathic intracranial hypertension. These and other warning signs should be carefully examined. A variation of the useful “SNOOP” mnemonic for identifying warning signs is shown in Box 5.

Box 5.

Identification of Warning Signs and Symptoms from Patient’s History and Physical Examination

- **S**ystemic symptoms (fever or weight loss) or secondary risk factors (cancer or immunosuppression)
- **N**eurologic symptoms or signs
- **O**nset—abrupt (thunderclap; peaking at less than 1 minute)
- **O**lder age (40–50 years; perimenopause may be an extenuating circumstance)
- **P**rogressive headache or change in usual history
- **P**ostural headache
- **P**recipitated by Valsalva maneuver, exertion, cough, or sexual activity
- **P**ulsatile tinnitus, diplopia, and transient visual changes (pseudotumor)
- **P**regnancy

Tension-Type Headache

Tension-type headache is the most common form of primary headache encountered in population-based studies, but as a milder headache compared with others, usually it does not result in medical consultation. Typically, the pain is described as holocephalic or bilateral; pressure, squeezing or vice-like; and mild-to-moderate in severity Table 1. Duration of these headache episodes can be 30 minutes to 7 days. Chronic tension-type headache (lasting longer than 15 days per month) may be bothersome and concerning. Secondary causes, such as medication overuse headache, dental problems, cervical dysfunction, or comorbid conditions (depression and anxiety), should be evaluated, but some preventive medications may be used to treat chronic tension-type headache. The tricyclic antidepressants have been found to be effective.

Cluster Headache

Cluster headache is one of the few types of headache that are more common in men than in women. The terminology is derived from the fact that it tends to occur in a series, usually at similar times of the year. Approximately 85% of patients have episodic cluster headache with an episode lasting from weeks to months and a remission lasting from months to years. The remaining proportion of patients have chronic cluster headache lasting a month or longer within a year with no remission.

This is a quadrant headache, retro-orbital, unilateral, and severe. The pain is described as boring, stabbing, or burning, and attacks last 15 minutes to 3 hours. Ipsilateral parasympathetic activation is associated with cluster headache and may consist of conjunctival injection or tearing, nasal congestion or rhinorrhea, miosis or ptosis, eyelid edema, or forehead sweating. Usually, attacks are associated with circadian periodicity, and they tend to occur at the same time of day or night, with variable frequency from daily to several times a day.

These headache episodes may be difficult to manage and are best managed by headache specialists. Acute commonly includes injectable medication, high-flow oxygen, or both.

Preventive therapy usually involves multiple agents and includes calcium channel blockers and anti-epileptic drugs.

Abuse and Headache

The close relationship that a woman may develop with her obstetrician–gynecologist may facilitate discussion regarding abuse. Lifetime prevalence of abuse is approximately 25% in the general population as well as in a headache clinic specialty population. Physical, sexual, or psychologic abuse varies between 13% and 27% in various childhood studies, and many population-based studies show a role of abuse in the subsequent development of migraine, especially chronic

migraine. A patient should be questioned about a history of abuse and age of onset because this may be important in the choice of management strategies. A woman's perception of trauma or abuse may be more important than the event itself, and mental health intervention may be beneficial in management. Resilience to a traumatic experience is complex and an area of considerable research. The headache episodes associated with abuse may be difficult to treat, and this may be a strong reason for referral.

Resources For Patients

American Headache Society. Resources: infographics from the American Headache Society. Available at: https://americanheadachesociety.org/resources/infographics/. (Accessed 8/30/21)

National Headache Foundation. Resources. Available at: https://headaches.org/resources/. (Accessed 8/30/21)

Referrals to Complementary Medicine and Traditional healing can be offered. (See Appendix 1)

References:

American College of Obstetricians. Clinical Updates in Women's Health Care: Migraine and Other Headache Disorders, Volume XVIII, Number 4, July 2019 (Accessed 9/10/23)

Revell K, Morrish P. Headaches in pregnancy. The Obstetrician & Gynaecologist. Volume16, Issue 3, July 2014, 179-184 http://dx.doi.org/10.1111/tog.12101 (Accessed 9/10/23)

Headaches in over 12s: diagnosis and management (NICE), Clinical guideline [CG150] Published: 19 September 2012 Last updated: 12 May 2021 https://www.nice.org.uk/guidance/cg150 (Accessed 9/10/23)

Other
Society guideline links: Migraine and other primary headache disorders, UpToDate https://www.uptodate.com/contents/society-guideline-links-migraine-and-other-primary-headache-disorders?search=headache%20in%20pregnancy&topicRef=4797&source=see_link (Accessed 9/10/23)

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Complementary Medicine Clinic – Referral and Scheduling Guideline

Summary

The Anchorage Native Complementary Medicine Clinic (CMC) is located on the third floor of the Mt. Marathon Building at 4201 Tudor Centre Drive and can be reached at (907) 729-4320.

CMC works in partnership with the Primary Care Departments and accepts referrals for eligible Customer-Owners (COs) who live in the Anchorage Service Unit (ASU) and Villages– see Appendix.

Anchorage Native Primary Care Clinics (ANPCC) are located at 4320 Diplomacy Drive and can be reached at:

- Anchorage Native Primary Care Clinic (907) 729-3300
- Obstetrics and Gynecology (OB/GYN) (907) 729-3100
- Pediatrics (907) 729-1000
- Anchorage Service Community Clinics (see Appendices)

Valley Native Primary Care Clinic (VNPCC) is located at 1001 Knik Goose Bay Road and can be reached at (907) 631-7800.

Services

Complementary Medicine provides the following services:

Chiropractic

- Treatment for musculoskeletal conditions of twelve (12) months or less
- New injury to a chronic area with a clear traumatic mechanism of injury will be treated to pre-existing injury status.

Clinical Massage Therapy

- This is an adjunct service to chiropractic care and is not a direct referral modality.

Acupuncture

- All referrals must be for conditions with duration of twelve (12) months or less.
- See guidelines for direct referrals to acupuncture. For other conditions acupuncture is an adjunct to chiropractic care.

Access

Complementary Medicine provides the following access:

- Chiropractic and Acupuncture evaluation within 5 days of referral.
- Clinical Massage Therapy is referral by a Chiropractic provider only.
- Pregnant non-beneficiaries may be seen in CMC if they meet the ANMC eligibility guidelines.
- All customer-owners are scheduled for an initial evaluation examination with a Chiropractic Provider except for direct referrals to Acupuncture.

Referral and Scheduling Guidelines

- The customer-owner will be called within 24 hours of the referral by the CMC front desk staff a minimum of 2 times to initiate a scheduled appointment after a referral is received.
- If the customer owner does not schedule and keep appointment within 30 days of referral date a new referral is required.
- Customer-owners will be offered an appointment based on availability and the customer-owner preference.

Appointment Lengths

	New Visit (NV)	Follow up visit (FV)

Chiropractic	45 min. 45 min. for complex referrals	15 min. 30 min. for C-O's with complex conditions determined by provider
Acupuncture	45 minutes	45 minutes
Massage Therapist	45 min. appt. with 30 min. hands on treatment	

Guidelines for Chiropractic referrals

- All referrals must be of musculoskeletal nature of twelve (12) months or less including:
  - Spine/rib/extremity pain
  - Sprains/strains
  - Radicular pain
  - Headaches
- Injuries associated with fracture will not be seen for 10 weeks following date of injury.

Guidelines for direct Acupuncture referrals

- All direct referrals must be for conditions listed below with duration of twelve (12) months or less.
  - Bell's Palsy
  - Herpes Zoster
  - Sinusitis
  - Temporal mandibular joint pain
  - Abdominal pain
    - After allopathic treatments have been explored
  - Cancer related side effects
    - Pain, fatigue, nausea, vomiting, emotional distress, neuropathy, hot flashes, constipation, xerostomia, or xerophthalmia
  - Hyperemesis in pregnancy
  - Carpal Tunnel
  - Headache in pregnancy
  - Post-partum conditions
    - Fatigue, pelvic pain, or insufficient lactation
  - Dysmenorrhea
  - Amenorrhea
  - Menopause Symptoms
    - Hot flashes or vaginal dryness

Contraindications

Chiropractic Contraindications

- Customer-owners with parasitic skin infections will not be accepted until cleared by their Primary Care Provider (PCP).
- Syrinx: No adjustments in area of syrinx.
- Spinal cord stimulator: No adjusting in region of stimulator.
- Stroke: No cervical spine adjustments.
- Carotid stenosis: No cervical spine adjustments.
- Prolotherapy: No adjusting the treated region for 6 weeks
- Instability: No adjusting in area of instability
- Surgical hardware: No adjusting in region of surgical hardware.
- Fusion: No adjusting in region of fusion.
- Fracture: No adjusting in area related to the fracture for 10 weeks.
- Aneurysm:
    - No cervical adjusting for cervical and head aneurysms.
    - No lumbar adjusting for abdominal aneurysms >5cm.
- Active Metastasis/Bone Malignancy: No adjusting in area.
- Chiari Malformation
- Acute infection: Such as osteomyelitis, septic discitis, and tuberculosis of the spine.

Acupuncture Contraindications

- Bleeding disorders.

Communication Process

- All initial consults will be entered via Electronic Health Record (EHR) outlining findings and recommendations for care to include: treatment plan, treatment rendered, and anticipated follow-up.

- A discharge, discontinued and declination treatment letter will be sent via EHR to the referring primary care provider to inform them of the customer-owner status.

- The referring provider will notify the customer-owner of the declination status if declined for care.

Metrics and Review

- Quality review of referrals and this guideline will occur on an on–going basis. Metrics to include:
    - Time from referral to the initial evaluation.
    - Customer Service Survey
    - 3rd next available <= 5 days
    - Training and education needs can be requested by any departments.
    - Communication processes
    - DNKA rate

Anchorage Service Unit:

Anchorage Bowl

Anchorage	Birchwood	Big Lake
Butte	Chugiak	Chickaloon
Elmendorf Air Force Base	Eagle River	Eklutna
Ft. Richardson	Girdwood	Houston
Indian	Knik	Lazy Mountain
Meadow Lake	Palmer	Sutton
Wasilla	Willow	

ASU Villages

Adak	Akutan	Alexander
Anchor Point	Atka	Beluga
Cantwell	Chenega Bay	Chickaloon
Chistochina	Chitina	Clam Gulch
Cold Bay	Cooper Landing	Copper Center
Cordova	False Pass	Fritz Creek
Gakona	Glennallen	Grouse Creek
Gulkana	Halibut Cove	Happy Valley
Homer	Hope	Igiugig
Iliamna	Kachemak	Kalifornsky
Kasilof	Kenai	Kenny Lake
King Cove	Kokhanok	Lime Village
McCarthy	McGrath	Medfra
Mendeltna	Mentasta Lake	Moose Pass
Nanwalek	Nelson Lagoon	Newhalen
Nikiski	Nikolaevsk	Nikolai
Nikolski	Nilavena	Ninilchik
Nondalton	Pedro Bay	Port Alsworth
Port Graham	Portage	Salamatof
Sand Point	Seldovia	Seward
Slana	Soldotna	St. George
St. Paul	Sterling	Sutton
Takotna	Talkeetna (Sunshine Clinic)	Tansia
Tatitlek	Tazlina	Telida
Trapper Creek	Tyonek	Unalaska/Dutch Harbor
Valdez	Whittier	

SCF Managed Clinics

Brother Francis	Covenant House	SCF Detox (aka Ernie Turner Center)
Quyana House (QHouse)		