ALASKA LEGISLATURE COMMITTEE FILES 1985-1986 8672

3214.87 HHESS HB 379 - HB 412

RECORDS CERTIFICATION

I, the undersigned, an employee of the State of Alaska, do hereby certify that the microfilm images on this microform are accurate reproductions of the original records of the State of Alaska as accumulated during the regular course of business, and that it is the established policy and practice of this State to microfilm its records and to dispose of the original records after microfilm reproductions have been made.

James O. Smith
Signature of Camera Operator

7/25/89
Date

02-519 (REV 8/78)

HB

3779

COMMITTEE REPORT

HOUSE

4/25

(7)

FURTHER: FINANCE

4/16/85

Date: 24 April 85

The Committee on HEALTH, EDUCATION AND SOCIAL SERVICES has had HB 379

"An Act making a special appropriation to the Department of Health and Social Services for a study of the effects of carbon monoxide poisoning; and providing for an effective date."

under consideration and recommends:

[ ] do pass [ ] do not pass

[ ] do pass with attached amendments(s)

[W] replace with CS for HB 379 (HSS) [ ] same title [ ] new title

and recommends do pass

[ ] AND attaches a "Letter of Intent" [ ] New Fiscal Note

[ ] Zero Fiscal Note Attached

[ ] reports it back without recommendation

[ ] referred to the _____ Committee

MEMBERS SIGNING DO PASS	MEMBERS HAVING OTHER RECOMMENDATIONS:
Koponen	Koponen
Gruenberg Max L. Gruenberg	
Hurley	
Taylor Virgil Taylor	
Thompson Derrell C. Thompson	
Hanley Wayne Hanley	

Max L. Gruenberg
CHAIRMAN

Co Chair

DRAFT
4/4/85

Preliminary FY 86 Budget - Aircraft Carbon Monoxide Study

Line 100 Personnel Costs

A.	1 Medical Officer (project coordinator) Base 5744.00 mo. + benefits at 25% = 7175.00 mo. x 12 mo.	86,100.00
B.	1 Part Time Clerk Typist	13,000.00
	Total Line 100	$ 99,100.00

(Salaries based on current salary schedule in effect on 6/30/85)

Line 200 Travel and Per Diem

Airfare to Testing Sites

Fairbanks	2 trips, 2 people, 3 days each	888.00
Bethel	2 trips, 2 people, 2 days each	1,072.00
Nome/Kotz	2 trips, 2 people, 5 days each	1,704.00
Barrow	2 trips, 2 people, 2 days each	2,400.00
Valdez	2 trips, 2 people, 2 days each	800.00
Juneau, Sitka, Petersburg, Wrangell	2 trips, 2 people, 6 days each	2,800.00

Per Diem Total

80 days @ 85.00 per day + $500.00 misc.	7,300.00
Total Line 200	$ 16,964.00

Line 300 Contractual

Blood Testing (3,000 tests @ 10.00 per test)	30,000.00
Telephone ($500.00 per mo. x 12 months)	6,250.00
Printing Costs (Brochures, pamphlets, letters, etc.)	5,000.00
Shipping for supplies + postage	3,000.00
Advertising (radio, newspaper)	10,000.00
Nurse	25,000.00
Data Programmer/Analyst	50,000.00
Total Line 300	$129,250.00

Line 400 Commodities

Supplies	
$3.00 per test for supplies x 3,000 patients, x 1 test	$ 9,000.00
Office Supplies	2,000.00
TOTAL LINE 400	11,000.00

Line 500 Equipment

2 C-02 Ecologizers for testing levels	10,000.00
1 IL 282 Coaximeters	15,000.00
TOTAL LINE 500	25,000.00

TOTAL ESTIMATED COST--ALL LINES -FY 86	$	281,314.00

POSITION PAPER/Department of Health & Social Services

POSITION PAPER

HOUSE BILL NO. 379

For "An Act making a special appropriation to the Department of Health and Social Services for a study of the effects of carbon monoxide and providing for an effective date".

This bill provides for an indepth study of the effects of carbon monoxide on people. Initially, the target group will be airplane pilots and their passengers. A limited initial study has demonstrated there is a potential problem. When the occupants of 55 different aircraft were examined it was found 12.7% (7) of the aircraft had exposed the passengers to increased levels of carbon monoxide.

This study hopes to look into the relationships of elevated carboxyhemoglobin levels and stress demands on judgment, rapid neuromuscular activity, and sensory orientation and coordination as exacerbated by altitude.

Funding for this project does not appear in the Governor's budget.

Recommended by: Robert I. Fraser

Robert I. Fraser, M.D.
Director
Division of Public Health

Date: 4/23/85

Approved by: John R. Pugh

John R. Pugh
Commissioner
Department of Health and
Social Services

Date: 4/24/85

'Operation Vampire' is a success, CO testing offers help stopping accidents

The K.I.S.S. -- "Keep It Safe Service" -- is a regular column appearing in Air Alaska.

April 1985
Air Alaska
"The Northern Aviators News"

The Vampire Report

Well, we asked for it, and we got it - thanks to your help, "Operation Vampire" was a great success - once we moved down to where we could catch you at the fuel pumps! (Thanks to Mike Spernak and Ramona Ardaiz for permission to clutter up their lobbies and bug their customers - we had only a few gripes about having to pay in blood!)

Just in case you've been in Hawaii for the last couple months, I'll explain. Operation Vampire is the name the 99s and the Airmen gave to a project on which we agreed to help out. The State Epidemiologist, Dr. John Middaugh, of the Division of Public Health, had been studying the effects of carbon monoxide in several areas of concern, among them aircraft accidents. He wanted to do an analysis of the blood of a reasonably large sample of pilots who had just flown. Would we help?

So we set it up for the weekend of March 2 and 3, planning to use the ACC Aviation Complex ramp for the heavy load of volunteers lured in by all the publicity - and by concern for their safety. The MRI ATIS reminded incoming pilots of the location of the testing site.

However, we really did have to go snag pilots coming in to refuel. Surprisingly, we only had two people - one pilot and one passenger - turn us down cold. No way no needle no how. But the sample was large enough, and after all, this was supposed to be a volunteer project.

The final report, titled "Carbon Monoxide in Pilots and Passengers in General Aviation," is dated March 21, 1985. A total of 55 aircraft were tested, and 95 pilots and passengers. We got two blood samples from most volunteers, as a control. Another important control, albeit serendipitous, was that we had several aircraft in which only one person is a smoker, though none actually smoked during flight. The nonsmokers showed a much lower level of carbon monoxide in their blood than smokers.

It is important that the limitations of the study be noted. For instance, it would have been ideal to have a blood sample of each volunteer before as well as after the flight, to measure the change (if any) precisely. However, there are limits - we probably wouldn't have had any volunteers at all! Dr. Middaugh did get a short questionnaire from each volunteer - how long the flight, smoker/non, etc., for use in working up the statistics.

The equipment used to measure the carbon monoxide levels (carboxyhemoglobin levels, actually, or COHb for short) was borrowed from a lower 48 lab, and laboratory testing was done at Humana Hospital. It was interesting to Dr. Middaugh that the baseline (the average COHb level of people who had no significant exposure to carbon monoxide - sorta like background radiation) of the study was 1.5 percent or half the generally accepted figure for normal.

Until now, the testing equipment could only say "3 percent or less," since it couldn't accurately measure less - so 3 percent was accepted as normal. Doesn't appear to be, however, with improving technology

See KISS PAGE 14

able to measure much lower levels.

To quote from the report:

"... of the 95 individuals we tested, 9 were smokers, 86 were non-smokers. Excluding the smokers, 9 individuals whose carboxyhemoglobin levels exceeded 2.5 percent COHb were identified from 7 different aircraft. (Figure 2)

The number and type of aircraft flown by the individuals we tested are listed in Table 1. The pilot of one aircraft (PA-28) was tested twice. The 7 aircraft in which non-smoking pilots or passengers had elevated carboxyhemoglobin levels are listed in Table 2, along with the duration of the flight and the actual levels of carboxyhemoglobin among the occupants. None of the 9 smokers with elevated COHb levels had another identifiable source of CO exposure.

"The carboxyhemoglobin levels of the pilots were plotted against the duration of their flight (Figure). An elevated carboxyhemoglobin level of 3.2 percent was discovered in an individual who flew only 40 minutes. Among non-smokers, the three highest carboxyhemoglobin levels (4.2, 4.5 and 6.5 percent) were in pilots who had longer flights of 2-3 hours.

"Smokers had carboxyhemoglobin levels considerably higher than non-smokers. In six aircraft, other non-smokers in the aircraft had normal COHb levels. One pilot who was a smoker had a low COHb level (0.8 percent). No one smoked during his flight.

"Two pilots who were smokers flew alone; their COHb levels (4.0 percent, 4.3 percent) were lower than the COHb levels of the five other smokers who shared aircraft with non-smokers who had normal COHb levels.

"The pilots of the 7 suspect aircraft were notified of their results by telephone and were advised to have their aircraft checked by a qualified mechanic. One pilot discovered that his exhaust manifold was improperly attached, causing exhaust leaks at the gaskets. This individual's plane had major mechanical work 80 hours prior to his being tested. The pilot also used a carbon monoxide detecting disc that had turned positive during his 40-minute flight from Wasilla to Anchorage."

Let's take a closer look at the graphs. Figure 2 is a raw plot-COHb of pilots only, against time of exposure. The circled dots represent smokers, the naked dots non-smokers. First, note that most samples fall between 1 percent and 2 percent, no matter how long the flight.

The pilot represented by the dot I've marked *, at 1.5 percent after 5 hours, can be sure his airplane has no CO problems. But take a look at ** - 6.5 percent is getting up there. What about + and ++ and +++.

Granted that they are all smokers, those are still higher levels than other smokers on the graph. How can one be sure that it's cigarette smoke and not the airplane producing the high COHb level?

That's where Figure 1 comes in. It includes pilots and passengers. Note that the plot is now COHb level against aircraft. The arrows at the bottom of the graph indicate problem aircraft. The straight vertical lines between dots simply tie together the people in one aircraft. Now it becomes a tad clearer, since several of the smokers were flying with non-smokers, with normal levels.

There's more to it than that, of course, but if you study the graphs you can get the indication of some of the information available in even a small statistical sample.

It was not surprising that elevated COHb levels were found, but that it was found in a high percentage of aircraft tested. 7 out of 55 - 12.7 percent - is a large percentage. (Elsewhere in this issue, look for an article about what the 99s and the Airmen are trying to do about it).

So why is the epidemiologist from the Division of Public Health interested in carbon monoxide in pilots? So why not? (I'm glad someone is!) Epidemiology is more than the study of outbreaks of tuberculosis and hepatitis. The recent study of those ubiquitous killers and maimers, the three-wheelers, was initiated by the same epidemiologist, Dr. John Middaugh.

Whether from disease or accident, any high number of deaths or injuries in similar circumstances can rightly be classified as epidemic. Since disease and "accidents" can, in most cases, be prevented, epidemiology looks for the causes, whether a virus or manufacturing defect, and most likely recommends preventive measures. It is for other agencies, whether through prevention or enforcement, to act on the information. First, however, the information must be there.

So far, there hasn't been a lot of work on carbon monoxide as a problem at lower than lethal levels in pilots or motorists. FAA & NTSB statistics shed some light on fatal accidents, but not many pilots get a blood test for COHb level after a ground-loop or a hard landing. What Dr. Middaugh is looking at opens up a whole bagful of questions.

How many "pilot-error" accidents are caused by pilots in whom elevated COHb levels lead to impaired judgment, impaired sensory orientation, impaired coordination?

How much is too much? As noted for years "normal" has been considered to be 3 percent COHb. "Normal" in Dr. Middaugh's study looks like 1.5 percent. If the "normal" is found to be lower than previously recognized, does that also mean that scientists need to revise their thinking about the level at which "impaired" may start?

The effect of carbon monoxide depends on several factors, among them ones physical condition. In a person with a physical problem which impairs circulation, even a very low dose of CO can kill. A pilot with undetected heart disease could die from a 3.0 percent COHb, if the circulation in the heart muscle is sufficiently impaired that small amount of CO triggers a heart attack. A very common cause of impaired circulation, of course, is simply age. Again, how much is too much for whom?

In pilots, altitude's contribution to the problem is extremely important. Carbon monoxide is such a potent poison because

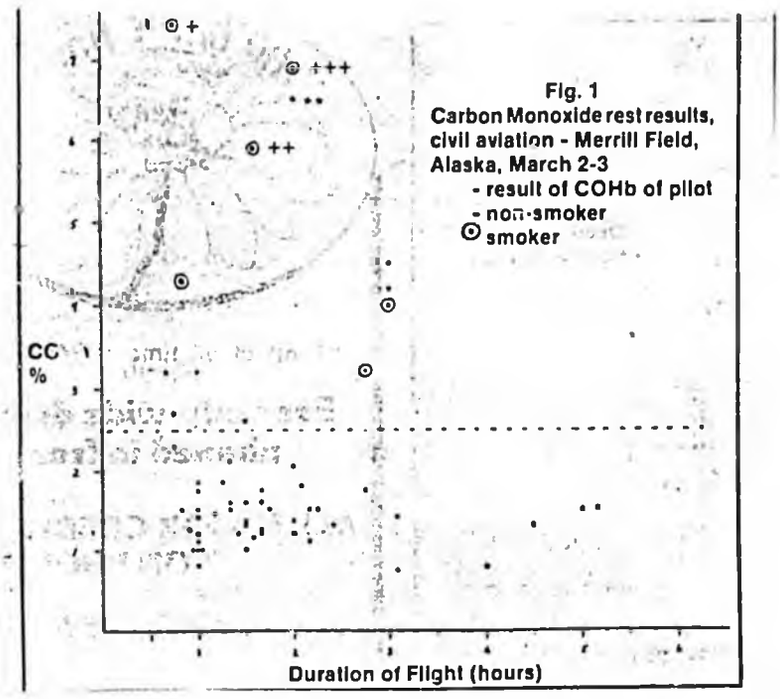

Fig. 1
Carbon Monoxide rest results, civil aviation - Merrill Field, Alaska, March 2-3
+ - result of COHb of pilot
- non-smoker
⊙ smoker

• K.I.S.S. - COHb study results

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of the way it works in your body. We all know that we need oxygen to breathe, that our lungs take the oxygen from the air and get it into the bloodstream. The kicker with carbon monoxide is that it is 200 TIMES MORE ABLE to latch onto your hemoglobin (which is the oxygen carrier) than oxygen.

At higher altitudes the amount of oxygen available is less. If CO is present in even small amounts, it has an even easier job of latching on to your hemoglobin. At altitude, what COHb level will impair a pilot's ability? By how much? How much impairment can lead to disaster?

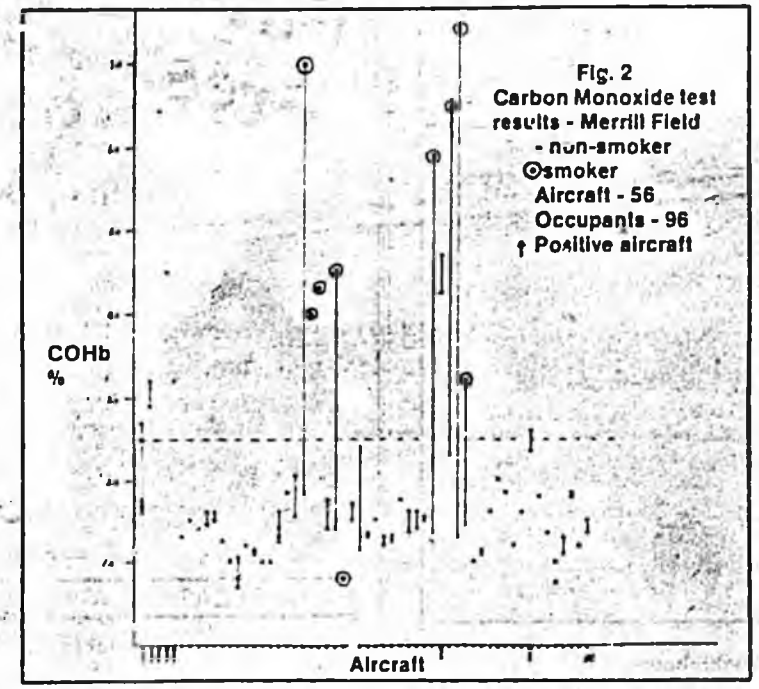

Fig. 2
Carbon Monoxide test results - Merrill Field
- non-smoker
⊙smoker
Aircraft - 56
Occupants - 96
† Positive aircraft

How do we find out for sure where the problems lie? The little carbon monoxide detector dots aren't useful at low levels. It takes a pretty sophisticated gadget to give good readings of CO levels in airplanes, and it's way too big to carry in one's flight case. Testing on the ground is not entirely satisfactory, since airflow can lessen as well as increase CO levels in the cockpit, depending on the problem and on the type of plane.

Then again, someone may find out that this wheel has already been invented. There may be some small, highly sophisticated gadget that costs almost no money, which any pilot could afford. Somehow, though, I think that if such existed it would be for sale in Sporty's catalog.

The ideal situation would be to set up a testing program available to pilots anytime. Buy the same smart analyzer borrowed for this test, set it up at

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• K.I.S.S. - 'clear danger'

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Humana (close to Merrill) and for a reasonable fee test anyone who's just been flying and would like to check her/his COHb level.

But before getting carried away with that, more study is needed. I know - in Alaska we seem to study things to death. But this isn't the fourteenth rehash of whether we need the Susitna Dam. From Dr. Middaugh's initial test, it appears that there is a clear and present danger. However, with a statistical sample as small as 55 airplanes, one can extrapolate only so far. It would be reasonable to run the same type of test again, with a few tighter controls, possibly in several locations around the state.

The FAA has been very cooperative all along, in supplying information to Dr. Middaugh from their accident records. In a meeting March 29, the FAA, in the persons of Frank Cunningham, Jack Hepler, MD, Paul Stuecke, and others, was briefed on the report. The initial reaction was that they appreciated the briefing and encouraged continuation of the study, according to Stuecke, the Public Affairs officer.

Copies of the report, by the way, are available from Dr. Middaugh at the Department of Health & Social Services, Division of Public Health, Epidemiology Office, 3601 C Street, Suite 540, Pouch 6333, Anchorage AK 99502, 561-4406.

I hope, if the funding is available from the legislature, that pilots will be willing to go along with further testing. This study showed us a lot, but there is a lot more to be learned. One so-far-untapped source of information is from pilots who have had problems with carbon monoxide and have lived to tell about it.

Have you ever been affected by carbon monoxide in an airplane? Will you tell us about it?

I've agreed to help Dr. Middaugh gather this information. What we need to know is in the questionnaire on this page. You can help by cutting it out and returning it to me, with as many extra sheets as you need to tell your story. Just one request - if your handwriting is anything like mine (unreadable even to me) please print if you don't type. If you think there's anything on the coupon you don't want to answer, for whatever reason, just print NOYB (none of your business) rather than leaving the space blank. If you want to print NOYB in the space for your name and address, do so, but we'd really prefer to be able to get back to you later for more information. We do promise that any identifying information is strictly confidential.

Thanks for your help. We'll keep you posted.

Remember! Check 121.5 on landing, that ELT you pick up could be your own!

Study detects potential poisoning

Kent Lee Woodman is the Executive Vice President of the Alaska Airmen's Association and the Vice Chairman and Commissioner on the Municipal Airports Aviation Advisory Commission. He has been a Contributing Editor each issue of Air Alaska *since its inception 48 months ago. He is available at Box 2386 SRA, Anchorage 99516, or 345-1356 prior to 9 p.m.*

COMMENTS

by: kent lee woodman

CONTRIBUTING EDITOR

Potential Pilot Poisoning Discovered

One of my favorite "old philosopher" sayings is one attributed to the ancient Chinese: "CRISIS is dangerous opportunity."

If that be true, then an extremely dangerous opportunity surfaced at Merrill Field and in Humana Hospital's lab three weeks ago. Preliminary results of a special sampling of pilots' and passengers' blood revealed possible data which may ultimately lead to a positive correction program to save lives and aircraft!

It all started when the State's Department of Health & Social Services Epidemiologist, Dr. John Middaugh began to study the effects of carbon monoxide on humans operating motor vehicles. Contrary to popular conception, an "epidemic" is not always bubonic plague or a new strain of flu.

As a matter of fact, if half the carpenters in the state began to smash their thumbs with hammers, we have an epidemic of sorts, the causes of which could be studied and diagnosed by an epidemiologist.

Dr. Middaugh's staff was studying the carboxyhemoglobin (the level of carbon monoxide in the blood) levels in the blood of people who were operating automobiles and trucks in Anchorage. He noted that very little such study had been done anywhere.

During the preliminary data investigation, the staff had identified several fatal crashes that were documented as *caused* by carbon monoxide poisoning.

Dr. Middaugh began to wonder what the effect of lower levels of carbon monoxide in the blood of pilots might be. Traditionally, the blood of pilots and passengers is not tested for LOW LEVELS of CO unless there is reason to suspect it is a contributing factor in an accident ... and then it's generally a popular conception that it's the lethal levels that do the job.

He hypothesized a pilot could develop the first levels of "poisoning" driving to the aircraft in Anchorage's atmosphere. If he or she smoked, the level is higher. Then into the aircraft and up to altitude where the effects are more pronounced.

Enter a small leak in the heater system, or a manifold or a cylinder head leak with vapors coming through the firewall, and you may have the stage set for a level of CO poisoning which could blur vision, delay critical decisions, fumble critical maneuvers ... even trigger a heart attack where it would not normally be anticipated.

Result: "PILOT ERROR." Because CO poisoning did not, in itself kill or render the pilot unconscious, it may have never been tested for/recognized.

Not a pilot himself, Dr. Middaugh enlisted the aid of the experts — first the Alaska 99s, that famous international women's flying organization, then the Alaska Airmen's Association, the largest organization of its type in Alaska.

He asked how to obtain samples; how to enlist the aid and support of the pilots, and we jointly put together a program which tested 96 pilots and passengers on 55 aircraft in a single weekend.

Ten days later the results began to come in and be analyzed. To our wondering horror, the levels we found PRECISELY SUPPORTED THE ADMITTEDLY WEAK HYPOTHESIS WHICH STARTED THE PROGRAM!

In fact, eight aircraft had problems sufficient for immediate person-to-person notification of the pilots! One pilot was scheduled for a flight to Nome the next day, and his notice lead to the discovery and repair of a manifold leak, and is considered a positive "SAVE" by the group!

By itself it *proves* nothing, but it hints at a real breakthrough. Leaky heaters can be repaired. CO poisoning can be tested for and the culprits can be dealt with ... we could save a bunch of people with a relatively simple, relatively inexpensive program.

Dangerous opportunity: Dr. Middaugh's office has not the funds to complete this testing. He does not have the funds to hire a physician epidemiologist to fill an *existing* vacancy, nor to purchase the special machine he borrowed from the states for last month's exercise, nor to publish his findings, conduct additional tests etc, etc.

In short, we've pried open a secret box, gotten a glimpse of something awesome and have had it snap shut again without a prybar! What to do? Get him some money and let's finish discovering what we can discover about this highly important finding.

See COMMENTS, Page 19

When briefed on the results and potential of the program, both the 99s and Airmen held emergency meetings and developed resolutions and press releases. The Airmen are sending a representative to Juneau with a draft bill to appropriate $275,000 to the State Epidemiologist's office for precise application to the completion of this study. (Subject to locating a total of about $600 to fly the delegate down and back.)

It's serious, exciting business. When one thinks of the money and effort spent each year conducting safety seminars and accident investigations, let alone the losses to life, happiness and aircraft hulls, $275,000 as the lead-in to a prevention program stuns the senses for the bargain it is.

To think, all this time we may have had "pilot error" accidents repeating, that were contributed to by a critical delay in a decision, a movement or action stemming from lower level pilot's blood CO poisoning.

We're talking about levels below the threshold of the little audible signal devices you can install in an aircraft; below the levels tested for by the little "blue dots" stuck to panels.

In short, no one even knows that they were poisoned or that these negative factions were bidding for their body's and mind's control.

Certainly the eight folks contacted from our study had no idea. Certainly my wife, who was in one of the aircraft, had no idea.

We need to look into that box. We need a $275,000 prybar, and then we need the groups which have done so much to date to seek additional protection for the flying public, to keep up the good work and get the results and a correction program out ASAP!

UPDATE: Since the above column was written last week, I have journeyed to Juneau as a representative of the Alaska Airmen's Association and the 99s, and to a lesser extent the Alaskan Aviation Safety Foundation, to attempt to have a bill introduced in both houses to fund the $275,000 required to complete the testing.

I visited with many senators and representatives and with several departments which will have input, including the Governor's Office, to assure that the measure will not be vetoed on its merits.

I was very encouraged. First, I was impressed with the number of legislators who had already heard of the program on the radio or through press items I had generated the week prior to my departure. Second, I was impressed with how quickly many of the Legislators came to grips with my explanation, and identified with the program.

I spent two very full days talking about the study, giving out copies of Dr. Middaugh's report, the proposed bill and it's budget. Half way through the second day, two breakthroughs came which changed the approach somewhat.

Just prior to the breakthrough I had 10 Representatives and eight Senators ready to cosponsor the measure in their respective houses. When I visited Rep. Niilo Koponen, (D-Fairbanks), he immediately understood the implications and took the bill to be drafted as a committee bill from his House of Health, Education and Social Services (HESS) Committee.

This at once resolved a difficulty I had previously planning to have Rep. Steve Rieger (R-Anchorage), prime sponsor of the bill. The difficulty was simply that Steve is in the minority in the House, though his being on the Finance Committee and being a pilot made him an obvious choice.

On the Senate side, Sen. Rick Halford was the key. Rick is a well known pilot and general aviation operator and he sits on the Senate Finance Committee. Not only is he involved in civil aviation, but in his background as a multi-engine flight engineer in the Air Guard, he has been to all the aviation physiology courses that the USAF offers.

He determined to include the small item as a line item in the Senate budget.

Now I no longer needed a separate Senate bill, but I elected to keep the House bill running to keep a focus and to be certain that if it fell out of the budget, that it would be back for reconsideration in the second session without having to start from scratch.

I visited with the Governor's Office, the Department of Health and Social Services and the Department of Labor's office of occupational safety. I also briefed the special assistant to the Insurance Commissioner because of the potential impact on aircraft insurance rates and accidents.

The big stumbling block is the BUDGET. While I was there, both houses were receiving bad news about the price of a barrel of oil on the International market and the adverse affect on the State's budget. They were cutting, cutting, cutting, and there I was with a good plan to spend, spend, spend.

My only response was that this study could save lives, and that if I waited until they called me and said they had surplus money, I'd die in retirement with no program. Such a study and opportunity comes when it comes, and it is financed when it is financed. Stay tuned; we're not done with this one yet!

• K.I.S.S. - COHb in tests reached dangerous levels

Continued from Page 13

able to measure much lower levels.

To quote from the report:

"... of the 95 individuals we tested, 9 were smokers, 86 were non-smokers. Excluding the smokers, 9 individuals whose carboxyhemoglobin levels exceeded 2.5 percent COHb were identified from 7 different aircraft. (Figure 2)

"The number and type of aircraft flown by the individuals we tested are listed in Table 1. The pilot of one aircraft (PA-28) was tested twice. The 7 aircraft in which non-smoking pilots or passengers had elevated carboxyhemoglobin levels are listed in Table 2, along with the duration of the flight and the actual levels of carboxyhemoglobin among the occupants. None of the 9 smokers with elevated COHb levels had another identifiable source of CO exposure.

"The carboxyhemoglobin levels of the 56 pilots were plotted against the duration of their flight (Figure 1). An elevated carboxyhemoglobin level of 3.2 percent was discovered in an individual who flew only 40 minutes. Among non-smokers, the three highest carboxyhemoglobin levels (4.2, 4.5 and 6.5 percent) were in pilots who had longer flights of 2-3 hours.

"Smokers had carboxyhemoglobin levels considerably higher than non-smokers. In six aircraft, other non-smokers in the aircraft had normal COHb levels. One pilot who was a smoker had a low COHb level (0.8 percent). No one smoked during his flight.

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Let's take a closer look at the graphs. Figure 2 is a raw plot-COHb of pilots only, against time of exposure. The circled dots represent smokers, the naked dots non-smokers. First, note that most samples fall between 1 percent and 2 percent, no matter how long the flight.

The pilot represented by the dot I've marked *, at 1.5 percent after 5 hours, can be sure his airplane has no CO problems. But take a look at ** - 6.5 percent is getting up there. What about + and ++ and +++. Granted that they are all smokers, those are still higher levels than other smokers on the graph. How can one be sure

See KISS, Page 15

'Operation Vampire' is a success, CO testing offers help stopping accidents

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The Vampire Report

Well, we asked for it, and we got it - thanks to your help. "Operation Vampire" was a great success - once we moved down to where we could catch you at the fuel pumps! (Thanks to Mike Spernak and Ramona Ardaiz for permission to clutter up their lobbies and bug their customers - we had only a few gripes about having to pay in blood!)

Just in case you've been in Hawaii for the last couple months, I'll explain. Operation Vampire is the name the 99s and the Airmen gave to a project on which we agreed to help out. The State Epidemiologist, Dr. John Middaugh, of the Division of Public Health, had been studying the effects of carbon monoxide in several areas of concern, among them aircraft accidents. He wanted to do an analysis of the blood of a reasonably large sample of pilots who had just flown. Would we help?

So we set it up for the weekend of the Fly-In Convention," is dated March 21, 1985. A total of 55 aircraft were tested, and 95 pilots and passengers. We got two blood samples from most volunteers, as a control. Another important control, albeit serendipitous, was that we had several aircraft in which only one person is a smoker, though none actually smoked during flight. The nonsmokers showed a much lower level of carbon monoxide in their blood than smokers.

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The equipment used to measure the carbon monoxide lev-

ANECDOTAL CARBON MONOXIDE QUESTIONNAIRE

MAIL TO: CLAIRE DRENOWATZ
C/O ALASKA 99s
P O BOX 4-1962
ANCHORAGE, AK 99509

YOUR NAME_____
ADDRESS_____
CITY,ZIP_____
PHONE_____

DATE OF INCIDENT_____ TYPE AIRCRAFT_____
TIME OF DAY_____ TEMPERATURE_____ YEAR AIRCRAFT_____
DURATION OF FLIGHT _____ TYPE ENGINE_____
ALTITUDE OF FLIGHT_____ TYPE HEATER_____
PURPOSE OF FLIGHT_____ WAS ANNUAL CURRENT?_____
CONDITIONS OF FLIGHT - VFR?____ IFR?_____ AIRFRAME HOURS (AT THE TIME)_____
OTHER (TURBULENCE, ETC)_____ ENGINE HOURS - TOTAL_____ SMOH___
PILOT AGE_____ YEARS FLYING___
GOING FROM_____ TO_____ CERTIFICATES HELD_____
PILOT HEALTH_____ TOTAL HOURS_____ IFR HOURS_____
DID YOU SMELL EXHAUST?_____

WHAT WERE YOUR PHYSICAL SYMPTOMS?_____

WHEN DID YOU REALIZE YOUR PROBLEM WAS CARBON MONOXIDE?_____

DID YOU SEE A DOCTOR OR OTHER HEALTH PROFESSIONAL? WHAT WAS HER/HIS REPORT?

HOW LONG DID THE EFFECTS LAST ONCE YOU WERE ON THE GROUND? WHAT WERE THEY?

WHAT WAS WRONG WITH THE AIRPLANE?

NARRATIVE - TELL ME WHAT HAPPENED, ADD ANYTHING WE DIDN'T ASK ABOVE.

end of March 2 and 3, planning to use the ACC Aviation Complex ramp for the heavy load of volunteers lured in by all the publicity - and by concern for their safety. The MRI ATIS reminded incoming pilots of the location of the testing site.

However, we really did have to go snag pilots coming in to refuel. Surprisingly, we only had two people - one pilot and one passenger - turn us down cold. No way no needle no how. But the sample was large enough, and after all, this was supposed to be a volunteer project.

The final report, titled "Carbon Monoxide in Pilots and Passengers in General Avia-

elsi(carboxyhemoglobin levels, actually, or COHb for short) was borrowed from a lower 48 lab, and laboratory testing was done at Humana Hospital. It was interesting to Dr. Middaugh that the baseline (the average COHb level of people who had no significant exposure to carbon monoxide - sorta like background radiation) of the study was 1.5 percent or half the generally accepted figure for normal.

Until now, the testing equipment could only say "3 percent or less," since it couldn't accurately measure less - so 3 percent was accepted as normal. Doesn't appear to be, however, with improving technology

See KISS PAGE 14

• K.I.S.S. on CO levels

Continued from Page 14

that it's cigarette smoke and not the airplane producing the high COHb level?

That's where Figure 1 comes in. It includes pilots and passengers. Note that the plot is now COHb level against aircraft. The arrows at the bottom of the graph indicate problem aircraft. The straight vertical lines between dots simply tie together the people in one aircraft. Now it becomes a tad clearer, since several of the smokers were flying with nonsmokers, with normal levels.

There's more to it than that, of course, but if you study the graphs you can get the indication of some of the information available in even a small statistical sample.

It was not surprising that elevated COHb levels were found, but that it was found in a high percentage of aircraft tested. 7 out of 55 - 12.7 percent - is a large percentage. (Elsewhere in this issue, look for an article about what the 99s and the Airmen are trying to do about it).

So why is the epidemiologist from the Division of Public Health interested in carbon monoxide in pilots? So why not? (I'm glad someone is!) Epidemiology is more than the study of outbreaks of tuberculosis and hepatitis. The recent study of those ubiquitous killers and maimers, the three-wheelers, was initiated by the same epidemiologist, Dr. John Middaugh.

Whether from disease or acci-

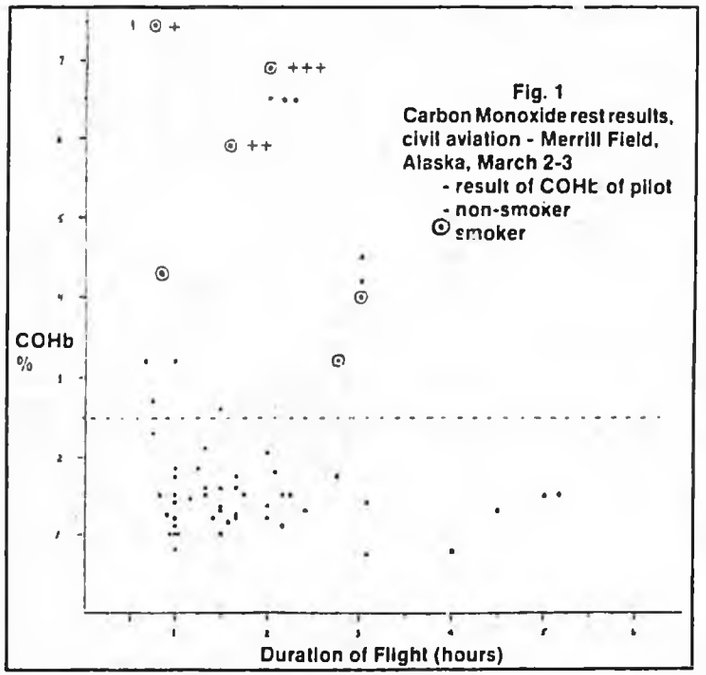


Fig. 1
Carbon Monoxide rest results, civil aviation - Merrill Field, Alaska, March 2-3
- result of COHb of pilot
- non-smoker
⊙ smoker

common cause of impaired circulation, of course, is simply age. Again, how much is too much for whom?

In pilots, altitude's contribution to the problem is extremely important. Carbon monoxide is such a potent poison because

See KISS, Page 16

circumstances can rightly be classified as epidemic. Since disease and "accidents" can, in most cases, be prevented, epidemiology looks for the causes, whether a virus or manufacturing defect, and most likely recommends preventive measures. It is for other agencies, whether through prevention or enforcement, to act on the information. First, however, the information must be there.

So far, there hasn't been a lot of work on carbon monoxide as a problem at lower than lethal levels in pilots or motorists. FAA & NTSB statistics shed some light on fatal accidents, but not many pilots get a blood test for COHb level after a ground-loop or a hard landing. What Dr. Middaugh is looking at opens up a whole bagful of questions.

How many "pilot-error" accidents are caused by pilots in whom elevated COHb levels lead to impaired judgment, impaired sensory orientation, impaired coordination?

How much is too much? As noted for years "normal" has been considered to be 3 percent COHb. "Normal" in Dr. Middaugh's study looks like 1.5 percent. If the "normal" is found to be lower than previously recognized, does that also mean that scientists need to revise their thinking about the level at which "impaired" may start?

The effect of carbon monoxide depends on several factors, among them ones physical condition. In a person with a physical problem which impairs circulation, even a very low dose of CO can kill. A pilot with undetected heart disease could die from a 3.0 percent COHb, if the circulation in the heart muscle is sufficiently impaired that small amount of CO triggers a heart attack. A very

• K.I.S.S. - COHb study results

Continued from Page 15

of the way it works in your body. We all know that we need oxygen to breathe, that our lungs take the oxygen from the air and get it into the bloodstream. The kicker with carbon monoxide is that it is 200 TIMES MORE ABLE to latch onto your hemoglobin (which is the oxygen carrier) than oxygen.

At higher altitudes the amount of oxygen available is less. If CO is present in even small amounts, it has an even easier job of latching on to your hemoglobin. At altitude, what COHb level will impair a pilot's ability? By how much? How much impairment can lead to disaster?

How do we find out for sure where the problems lie? The little carbon monoxide detector dots aren't useful at low levels. It takes a pretty sophisticated gadget to give good readings of CO levels in airplanes, and it's way too big to carry in one's flight case. Testing on the ground is not entirely satisfactory, since airflow can lessen as well as increase CO levels in the cockpit, depending on the problem and on the type of plane.

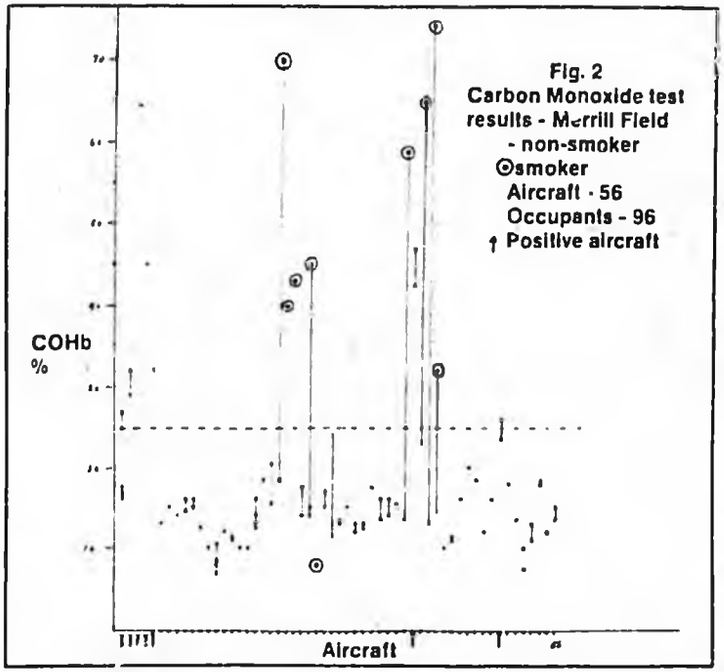


Fig. 2
Carbon Monoxide test results - Merrill Field
- non-smoker
⊙smoker
Aircraft - 56
Occupants - 96
↑ Positive aircraft

Then again, someone may find out that this wheel has already been invented. There may be some small, highly sophisticated gadget that costs almost no money, which any pilot could afford. Somehow, though, I think that if such existed it would be for sale in Sporty's catalog.

The ideal situation would be to set up a testing program available to pilots anytime. Buy the same smart analyzer borrowed for this test, set it up at

See KISS, Page 17

• K.I.S.S. - 'clear danger'

Continued from Page 16

Humana (close to Merrill) and for a reasonable fee test anyone who's just been flying and would like to check her/his COHb level.

But before getting carried away with that, more study is needed. I know - in Alaska we seem to study things to death. But this isn't the fourteenth rehash of whether we need the Susitna Dam. From Dr. Middaugh's initial test, it appears that there is a clear and present danger. However, with a statistical sample as small as 55 airplanes, one can extrapolate only so far. It would be reasonable to run the same type of test again, with a few tighter controls, possibly in several locations around the state.

The FAA has been very cooperative all along, in supplying information to Dr. Middaugh from their accident records. In a meeting March 29, the FAA, in the persons of Frank Cunningham Jack Hepler, MD, Paul Stuecke, and others, was briefed on the report. The initial reaction was that they appreciated the briefing and encouraged continuation of the study, according to Stuecke, the Public Affairs officer.

Copies of the report, by the way, are available from Dr. Middaugh at the Department of Health & Social Services, Division of Public Health, Epidemiology Office, 3601 C Street, Suite 540, Pouch 6333, Anchorage AK 99502, 561-4406.

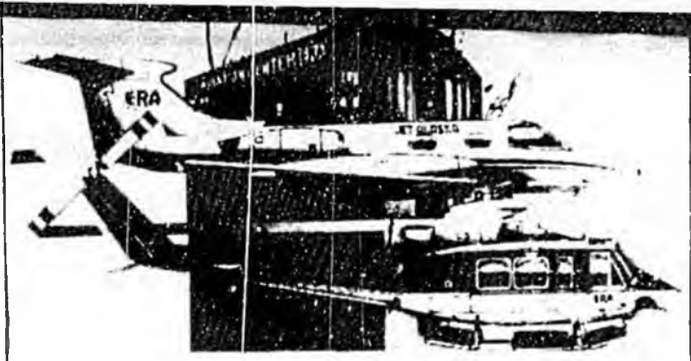
I hope, if the funding is available from the legislature, that pilots will be willing to go along with further testing. This study showed us a lot, but there is a lot more to be learned. One so-far-untapped source of information is from pilots who have had problems with carbon monoxide and have lived to tell about it.

Have you ever been affected by carbon monoxide in an airplane? Will you tell us about it?

I've agreed to help Dr. Middaugh gather this information. What we need to know is in the questionnaire on this page. You can help by cutting it out and returning it to me, with as many extra sheets as you need to tell your story. Just one request - if your handwriting is anything like mine (unreadable even to me) please print if you don't type. If you think there's anything on the coupon you don't want to answer, for whatever reason, just print NOYB (none of your business) rather than leaving the space blank. If you want to print NOYB in the space for your name and address, do so, but we'd really prefer to be able to get back to you later for more information. We do promise that any identifying information is strictly confidential.

Thanks for your help. We'll keep you posted.

Remember! Check 121.5 on landing, that ELT you pick up could be your own!



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Study detects potential poisoning

Kent Lee Woodman is the Executive Vice President of the Alaska Airmen's Association and the Vice Chairman and Commissioner on the Municipal Airports Aviation Advisory Commission. He has been a Contributing Editor each issue of Air Alaska *since its inception 48 months ago. He is available at Box 2386 SRA, Anchorage 99516, or 345-1356 prior to 9 p.m.*

COMMENTS

by: kent lee woodman

CONTRIBUTING EDITOR

Potential Pilot Poisoning Discovered

One of my favorite "old philosopher" sayings is one attributed to the ancient Chinese: "CRISIS is dangerous opportunity."

If that be true, then an extremely dangerous opportunity surfaced at Merrill Field and in Humana Hospital's lab three weeks ago. Preliminary results of a special sampling of pilots' and passengers' blood revealed possible data which may ultimately lead to a positive correction program to save lives and aircraft!

It all started when the State's Department of Health & Social Services Epidemiologist, Dr. John Middaugh began to study the effects of carbon monoxide on humans operating motor vehicles. Contrary to popular conception, an "epidemic" is not always bubonic plague or a new strain of flu.

As a matter of fact, if half the carpenters in the state began to smash their thumbs with hammers, we have an epidemic of sorts, the causes of which could be studied and diagnosed by an epidemiologist.

Dr. Middaugh's staff was *caused* by carbon monoxide poisoning.

Dr. Middaugh began to wonder what the effect of lower levels of carbon monoxide in the blood of pilots might be. Traditionally, the blood of pilots and passengers is not tested for LOW LEVELS of CO unless there is reason to suspect it is a contributing factor in an accident ... and then it's generally a popular conception that it's the lethal levels that do the job.

He hypothesized a pilot could develop the first levels of "poisoning" driving to the aircraft in Anchorage's atmosphere. If he or she smoked, the level is higher. Then into the aircraft and up to altitude where the effects are more pronounced.

Enter a small leak in the heater system, or a manifold or a cylinder head leak with vapors coming through the firewall, and you may have the stage set for a level of CO poisoning which could blur vision, delay critical decisions, fumble critical maneuvers ... even trigger a heart attack where it would not normally be anticipated.

Result: "PILOT ERROR." Because CO poisoning did not, in itself kill or render the pilot unconscious, it may have never been tested for/recognized.

Now a pilot himself, Dr. Middaugh enlisted the aid of the experts — first the Alaska 99s,

See COMMENTS, Page 19

studying the carboxyhemoglobin (the level of carbon monoxide in the blood) levels in the blood of people who were operating automobiles and trucks in Anchorage. He noted that very little such study had been done anywhere.

During the preliminary data investigation, the staff had identified several fatal crashes that were documented as

• Kent's Comments

Continued from Page 18

that famous international women's flying organization, then the Alaska Airmen's Association, the largest organization of its type in Alaska.

He asked how to obtain samples; how to enlist the aid and support of the pilots, and we jointly put together a program which tested 96 pilots and passengers on 55 aircraft in a single weekend.

Ten days later the results began to come in and be analyzed. To our wondering horror, the levels we found PRECISELY SUPPORTED THE ADMITTEDLY WEAK HYPOTHESIS WHICH STARTED THE PROGRAM!

In fact, eight aircraft had problems sufficient for immediate person-to-person notification of the pilots! One pilot was scheduled for a flight to Nome the next day, and his notice lead to the discovery and repair of a manifold leak, and is considered a positive "SAVE" by the group!

By itself it *proves* nothing, but it hints at a real breakthrough. Leaky heaters can be repaired. CO poisoning can be tested for and the culprits can be dealt with ... we could save a bunch of people with a relatively simple, relatively inexpensive program.

Dangerous opportunity: Dr. Middaugh's office has not the funds to complete this testing. He does not have the funds to hire a physician epidemiologist to fill an *existing* vacancy, nor to purchase the special machine he borrowed from the states for last month's exercise, nor was in one of the aircraft, had no idea.

We need to look into that box. We need a $275,000 prybar, and then we need the groups which have done so much to date to seek additional protection for the flying public, to keep up the good work and get the results and a correction program out ASAP!

UPDATE: Since the above column was written last week, I have journeyed to Juneau as a representative of the Alaska Airmen's Association and the 99s, and to a lesser extent the Alaskan Aviation Safety Foundation, to attempt to have a bill introduced in both houses to fund the $275,000 required to complete the testing.

I visited with many senators and representatives and with several departments which will have input, including the Governor's Office, to assure that the measure will not be vetoed on its merits.

I was very encouraged. First, I was impressed with the number of legislators who had already heard of the program on the radio or through press items I had generated the week prior to my departure. Second, I was impressed with how quickly many of the Legislators came to grips with my explanation, and identified with the program.

I spent two very full days talking about the study, giving out copies of Dr. Middaugh's report, the proposed bill and it's budget. Half way through the second day, two breakthroughs came which changed the approach somewhat.

Just prior to the breakthrough I had 10 Representatives and eight Senators ready to cosponsor the measure in their respective houses. When I visited Rep. Niilo Koponen, (D-Fairbanks), he immediately understood the implications and took the bill to be drafted as a committee bill from his House of Health, Education and Social

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to publish his findings, conduct additional tests etc, etc.

In short, we've pried open a secret box, gotten a glimpse of something awesome and have had it snap shut again without a prybar! What to do? Get him some money and let's finish discovering what we can discover about this highly important finding.

When briefed on the results and potential of the program, both the 99s and Airmen held emergency meetings and developed resolutions and press releases. The Airmen are sending a representative to Juneau with a draft bill to appropriate $275,000 to the State Epidemiologist's office for precise application to the completion of this study. (Subject to locating a total of about $600 to fly the delegate down and back.)

It's serious, exciting business. When one thinks of the money and effort spent each year conducting safety seminars and accident investigations, let alone the losses to life, happiness and aircraft hulls, $275,000 as the lead-in to a prevention program stuns the senses for the bargain it is.

To think, all this time we may have had "pilot error" accidents repeating, that were contributed to by a critical delay in a decision, a movement or action stemming from lower level pilot's blood CO poisoning.

We're talking about levels below the threshold of the little audible signal devices you can install in an aircraft; below the levels tested for by the little "blue dots" stuck to panels.

In short, no one even knows that they were poisoned or that these negative factions were bidding for their body's and mind's control.

Certainly the eight folks contacted from our study had no idea. Certainly my wife, who

Port-A-Port certificates are issued

By KENT LEE WOODMAN

There were times that it seemed it would never happen, and the principals certainly know now what a general contractor does to earn his keep, but certificates of occupancy have been issued, the sublease has been approved and the Mobile Aircraft Shelters at Merrill Field went on the market officially last month, and an open house was also held.

On these pages the past 5 months, details of excavation, utilities, fabrication and other history unfolded, together with photos of the various stages of development of the 28-unit complex.

There were engineering and design changes to make to facilitate an insulated unit and provide the 40 pound snow loading, unique excavation and installation challenges relating to putting power and phone lines to each unit, and there were some delays associated with the unseasonable quantities of freezing rain.

Through it all, however, the now familiar profiles fell into place and it began to look like the development that the principals had envisioned initially. Because of some factory technicalities, the facility at Merrill currently houses 19 of the 28, with the last nine units scheduled for early spring completion.

The sublease is required because it's Municipal property. The certificate of occupancy is required from the Municipality because they treat the units as "buildings" for their bookkeeping records, (though they are equipment for tax purposes). Factory certificates of origin complete the package and a new owner or renter has the required documents to approach his or her lender.

Home Savings & Loan has agreed to make financing available for the structures, and is thoroughly familiar with the development.

Kim Lilly, owner and founder of Port-A-Port in California, visited Anchorage for the first time, to view the completed units and kick off the marketing phase.

The units are insulated to allow heating with portable heaters (when incidental maintenance is required) in order to prevent sweating of the solid steel building. An arctic lighting package comes standard and there are several options including a winch for the heavier singles and twins, an alarm package and a special device which allows one to call the hangar and turn on the aircraft electric engine heaters prior to flight.

There are units available currently, both for sale and for long and short term lease. The development has an almost "condo" flavor to it, with monthly fee covering liability insurance, external maintenance, snow removal and the actual tie-down fee itself. Published rules bound to the sublease assure investors that the area will remain the clean, safe, quality development it is today.

Why would a pilot want a Port-A-Port? Here are some of the reasons that have surfaced to date:

- Secure area with no theft of avionics, gas, survival gear, ELT, etc.
- Clean area with no mud, no dirt, no grit; so the finish stays clean and bright, plexiglass lasts longer.
- Safe from winds up to 100 mph.
- Safe pre-heat capability with electricity in each unit.
- No snow removal from the aircraft; no snow removal from the tie-down spot or taxiway in front and no wing covers frozen to the paint.

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• Kent's Comments

Continued from Page 19

Services (HESS) Committee.

This at once resolved a difficulty I had previously planning to have Rep. Steve Rieger (R-Anchorage), prime sponsor of the bill. The difficulty was simply that Steve is in the minority in the House, though his being on the Finance Com-

ed to keep the House bill running to keep a focus and to be certain that if it fell out of the budget, that it would be back for reconsideration in the second session without having to start from scratch.

I visited with the Governor's Office, the Department of Health and Social Services and the Department of Labor's office of occupational safety I

me and said they had surplus money, I'd die in retirement with no program. Such a study and opportunity comes when it comes, and it is financed when it is financed. Stay tuned; we're not done with this one yet!

mittee and being a pilot made him an obvious choice.

On the Senate side, Sen. Rick Halford was the key. Rick is a well known pilot and general aviation operator and he sits on the Senate Finance Committee. Not only is he involved in civil aviation, but in his background as a multi-engine flight engineer in the Air Guard, he has been to all the aviation physiology courses that the USAF offers.

He determined to include the small item as a line item in the Senate budget.

Now I no longer needed a separate Senate bill, but I elect-

also briefed the special assistant to the Insurance Commissioner because of the potential impact on aircraft insurance rates and accidents.

The big stumbling block is the BUDGET. While I was there, both houses were receiving bad news about the price of a barrel of oil on the International market and the adverse affect on the State's budget. They were cutting, cutting, cutting, and there I was with a good plan to spend, spend, spend.

My only response was that this study could save lives, and that if I waited until they called

Please send TELEX to Max Gruenberg and Niilo Kopenen, co-chairmen of House Hess Committee

WHEREAS, the population of Alaska has almost doubled since 1975, while the State has employed only one medical epidemiologist, and

WHEREAS, serious and pressing problems that require urgent medical epidemiologic investigation face Alaskan's today, such as carbon monoxide among pilots and passengers in general aviation, carbon monoxide among motor vehicle operators in Anchorage and Fairbanks, serious pollution of creeks and streams in Anchorage, high rates of injuries from 3-wheeler all-terain vehicles, and high rates of morbidity and fatalities from voluntary and involuntary injuries, particularly related to suicide, traffic accidents, and aircraft accidents;

RESOLVE, that the Alaska State Medical Association supports efforts to fill urgently a second state medical epidemiologist position in the Epidemiology Office, Division of Public Health.

Send carbon copies to all other members of Senate and House.

Position from:

The Executive Council
Alaska State Medical Association
4107 Laurel Street
Anchorage, AK 99508
Phone (907) 562-2662

ALASKA AIRMEN'S ASSN., INC.
ACC Aviation Complex
2811 Merrill Field Dr. Anchorage, Alaska 99501
(907) 272-1251

Carbon Monoxide Poisoning of Pilots!

Thank you very much for the opportunity to chat with you and/or your staff to discuss the recently discovered problem of Carbon Monoxide poisoning in aircraft several weeks ago.

When I came to Juneau, it was my intent to have duplicate Senate and House bills introduced, to fund the State epidemiologist for the continuation of the study. Everyone I spoke to was positive on the subject, once they understood it. I was very pleased at how many legislators and staff people took the time to read my material prior to interview, and who developed a sincere concern for the subject after our discussions.

STATUS: As it turned out, my strategy took a somewhat different turn: On the House side, Representative Niilo Koponen immediately recognized the health and public safety ramifications and agreed to have the House HESS Committee introduce the measure as a committee bill. On the Senate side, Senator Rick Halford offered to include the funding as a line item in the Senate budget package.

That would appear to be all that is required. We recognize that funding is limited. Were we to wait for someone in Juneau to call and tell us there is enough money, we'd retire waiting. As urgent requirements are discovered, they need to be introduced, and not put on hold artificially. Then the measures must take their licks in the broad picture. If it is not funded, then we'll all have to look at what was purchased or built and live with the needless death potential in our own ways.

*Between our visit and now, some important things have happened: The **ALASKA STATE MEDICAL ASSOCIATION** has endorsed the program and the funding effort. So has the **ANCHORAGE MEDICAL SOCIETY**. So has the NTSB chief in Anchorage; JAMES MICHELANGELO has been briefed and is in support. So is the FAA Regional Director FRANK CUNNINGHAM. The USAF Flight Surgeon's office is supportive and has forwarded the report to the Pentagon and to the Air Force Academy. **THIS IS EXTREMELY CRITICAL AND THIS IS THE CRITICAL WEEK.***

Thank you once again for your concern, interest and time. We especially thank Rep Koponen and Sen Halford for your singular contribution to flying and public safety!

FOR THE PRESIDENT

KENT LEE WOODMAN
Executive Vice President

See reverse for growing list of interested and participating persons: ⇨⇨

encl: copy of current issue of AIR ALASKA

Alaska State Representatives

Katie Hurley, Max Gruenberg, Johne Binkley
Niilo Koponen, John Fuller, Robin Taylor
Steven Rieger, Drue Pearce

Alaska State Senators

Mitch Abood, Edna DeVries, Bettye Fahrenkamp
Paul Fischer, Rick Halford, Joe Josephson
Tim Kelly, Arliss Sturgulewski

Other Agencies

Governor's Office: Ms MARSHA A HUBBARD

State Department of Labor: Dr ANNETTE S THORN, Occupational Health

State Department of Health & Social Services: Commissioner JOHN K PUGH

State Insurance Director: Atten: Mr DON KOCH

Alaska Region, FAA: Director FRANKLIN CUNNINGHAM

Alaska Region, NTSB: JAMES MICHELANGELO

Alaska State Medical Association: Ms MARTHA MacDERMAID

Anchorage Medical Society: Ms MARTHA MacDERMAID

FAA Regional Flight Surgeon: Dr JOHN HEPPLER

Center for Disease Control: Atlanta, Georgia

State Epidemiologist: Dr JOHN MIDDAUGH

Alaska Airmen's Association, Inc: President JACK FISHER

Alaska 99s: Chair GINNY HYATT

Alaskan Aviation Safety Foundation: President TOM WARDLIEGH

Alaska Air Carriers Association, Inc: President STEVE WILBUR

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HB


412

HOUSE
COMMITTEE REPORT

(7)

Date referred: 1/22/86

FURTHER REFERRALS: JUDICIARY

DATE: February 3 1986

The HEALTH, EDUCATION AND SOCIAL SERVICES Committee has considered SSHB 412

"An Act relating to the chronically mentally ill."

and recommends:

[ ] do pass

[ ] do not pass

[ ] do pass with attached amendment(s)

[✓] no recommendation

[✓] replace with CSSHB 412 [✓] same title

[ ] new title

and recommends do pass

[ ] further referral to the Finance Committee

and attaches: [ ] letter of intent
[✓] first fiscal note
[ ] new fiscal note
[✓] first fiscal note

SIGNING DO PASS:

Nita Rogers
Mike Dunleavy
Katie Hurley
Robert F. Taylor
Dave W. Donley

SIGNING OTHER RECOMMENDATIONS:

Bob Wright no rec
Bruce Kelley - No-Rec

Nita Rogers co-chairman
Chairman
Co-Chair Mike Dunleavy

Original sponsor: M.M.Miller and Clocksin

IN THE HOUSE

BY THE HEALTH, EDUCATION AND SOCIAL SERVICES COMMITTEE

CS FOR SPONSOR SUBSTITUTE FOR HOUSE BILL NO. 412 (HESS)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating t the chronically mentally ill."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 47.30 is amended by adding new sections to read:

Sec. 47.30.545. TREATMENT OF THE CHRONICALLY MENTALLY ILL. The department shall provide for community based and locally or regionally coordinated care and treatment of the chronically mentally ill.

Sec. 47.30.547. COMMUNITY SUPPORT SERVICES FOR THE CHRONICALLY MENTALLY ILL. Communities that provide eligible mental health services for the chronically mentally ill may receive funds from the department for the following program elements:

(1) a short-term residential treatment program for individuals experiencing an acute episode or a situational crisis requiring temporary removal from their home environment;

(2) a long-term residential treatment program with a full day treatment component for persons who require intensive support;

(3) a transitional residential treatment program designed fo persons who are able to take part in programs in the general community, but who without continued support would be at risk of returning to a hospital;

(4) a semi-supervised, independent, but structured living arrangement for persons who without some support and structure would be at risk of returning to the hospital;

(5) a day treatment program capable of providing services for clients whose residential needs are being met but who require

additional or extended treatment services;

(6) supported work and vocational training programs that provide opportunities for clients to experience the benefits of meaningful and productive work experiences with graduated levels of skill and energy required;

(7) socialization centers designed to serve a broad range of clients, as well as persons living in the community in general.

Sec. 47.30.548. STANDARDS FOR COMMUNITY SUPPORT SERVICES FOR THE CHRONICALLY MENTALLY ILL. Communities providing mental health services shall meet and maintain the following treatment standards:

(1) facilities shall consist of small residential or day treatment centers, in as close to a normal home or non-institutional environment as possible without sacrificing client safety or care;

(2) staffing patterns shall reflect the cultural, linguistic, and other social characteristics of the community, and shall incorporate multidisciplinary professional staff to meet client diagnostic and treatment needs;

(3) programs shall be designed to encourage self-sufficient and independent functioning through prevocational and vocational training;

(4) programs shall promote client participation in planning, operating, and evaluating daily treatment and rehabilitation;

(5) programs shall be designed to coordinate with the social service system as a whole and in particular shall be designed to include the following three elements:

(A) emergency or crisis care in an emergency center or at home by an emergency response team;

(B) an acute hospital for evaluation, diagnosis, treatment and referral for persons who are in need of acute care;

and

(C) a case management system in which the case manager serves as a coordinator of the various elements of the system and as an advocate for the clients in the system; all case managers shall be under direct supervision of a psychiatrist, psychologist, or a mental health clinician with a master's degree;

(6) programs shall contain standards for staff training, including training in community outreach services and orientation in cross-cultural issues.

* Sec. 2. AS 47.30.550 is amended by adding a new subsection to read:

(b) Notwithstanding (a) of this section, the department shall purchase 100 percent of the eligible costs of services provided for the chronically mentally ill, subject to the availability of state funds to the department for implementing AS 47.30.520 - 47.30.620.

* Sec. 3. AS 47.30.570 is amended to read:

Sec. 47.30.570. ELIGIBLE COSTS; MAINTENANCE OF LOCAL EFFORT. The department shall adopt regulations specifying the types of services and program costs eligible for state participation. These regulations shall include

(1) a provision excluding capital expenditures as eligible costs; [AND]

(2) a requirement that the community entity contractor or applicant agrees as a condition of contract approval that it will not supplant existing local fund support of community mental health services with funds received under AS 47.30.520 - 47.30.620 and that it will continue local funding support of community mental health services, in any year in which it contracts with the department, at a level that is at least equal to the local funding support in the previous year;

(3) a provision that costs of services provided to the chronically mentally ill under AS 47.30.550(b) that are paid by insurance, indemnity, or other third-party may not be included as eligible costs.

Ford
2/3/86

Original sponsor: M.M.Miller and Clocksin

IN THE HOUSE

BY THE HEALTH, EDUCATION AND SOCIAL SERVICES COMMITTEE

CS FOR HOUSE BILL NO. 412 (HESS)

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: "An Act relating to the chronically mentally ill."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

* Section 1. AS 47.30 is amended by adding new sections to read:

Sec. 47.30.545. TREATMENT OF THE CHRONICALLY MENTALLY ILL. The department shall provide for community based and locally or regionally coordinated care and treatment of the chronically mentally ill.

Sec. 47.30.547. COMMUNITY SUPPORT SERVICES FOR THE CHRONICALLY MENTALLY ILL. Communities that provide eligible mental health services for the chronically mentally ill may receive funds from the department for the following program elements:

(1) a short-term residential treatment program for individuals experiencing an acute episode or a situational crisis requiring temporary removal from their home environment;

(2) a long-term residential treatment program with a full day treatment component for persons who require intensive support;

(3) a transitional residential treatment program designed for persons who are able to take part in programs in the general community, but who without continued support would be at risk of returning to a hospital;

(4) a semi-supervised, independent, but structured living arrangement for persons who without some support and structure would be at risk of returning to the hospital;

(5) a day treatment program capable of providing services for clients whose residential needs are being met but who require

additional or extended treatment services;

(6) supported work and vocational training programs that provide opportunities for clients to experience the benefits of meaningful and productive work experiences with graduated levels of skill and energy required;

(7) socialization centers designed to serve a broad range of clients, as well as persons living in the community in general.

Sec. 47.30.548. STANDARDS FOR COMMUNITY SUPPORT SERVICES FOR THE CHRONICALLY MENTALLY ILL. Communities providing mental health services shall meet and maintain the following treatment standards:

(1) facilities shall consist of small residential or day treatment centers, in as close to a normal home or non-institutional environment as possible without sacrificing client safety or care;

(2) staffing patterns shall reflect the cultural, linguistic, and other social characteristics of the community, and shall incorporate multidisciplinary professional staff to meet client diagnostic and treatment needs;

(3) programs shall be designed to encourage self-sufficient and independent functioning through prevocational and vocational training;

(4) programs shall promote client participation in planning, operating, and evaluating daily treatment and rehabilitation;

(5) programs shall be designed to coordinate with the social service system as a whole and in particular shall be designed to include the following three elements:

(A) emergency or crisis care in an emergency center or at home by an emergency response team;

(B) an acute hospital for evaluation, diagnosis,

treatment and referral for persons who are in need of acute care; and

(C) a case management system in which the case manager serves as a coordinator of the various elements of the system and as an advocate for the clients in the system; all case managers shall be under direct supervision of a psychiatrist, psychologist, or a mental health clinician with a master's degree;

(6) programs shall contain standards for staff training, including training in community outreach services and orientation in cross-cultural issues.

* Sec. 2. AS 47.30.550 is amended by adding a new subsection to read:

(b) Notwithstanding (a) of this section, the department shall purchase 100 percent of the eligible costs of services provided for the chronically mentally ill, subject to the availability of state funds to the department for implementing AS 47.30.520 - 47.30.620.

STATE OF ALASKA 1986 LEGISLATIVE SESSION
FISCAL NOTE

Revision Date : _____

REQUEST

Bill/Resolution No. : CS HB 412
Title : An act relating to the chronically mentally ill

Sponsor : Mike Miller & Don Clocksin
Requestor : _____
Date of Request : _____

FISCAL DETAIL

Agency Affected : Div. of Mental Health & DD
BRU : Community Mental Health Grants
Institutions and Administration

Components : Community Mental Health Grants
Mental Health Administration

EXPENDITURES/REVENUES : (Thousands of Dollars)

OPERATING	FY 86	FY 87	FY 88	FY 89	FY 90	FY 91
PERSONAL SERVICES		319.7	331.5	343.8	356.5	369.7
TRAVEL		39.2	40.7	42.2	43.7	45.3
CONTRACTUAL		4.8	5.0	5.2	5.4	5.6
SUPPLIES		1.3	1.4	1.5	1.6	1.7
EQUIPMENT						
LAND & STRUCTURES						
GRANTS, CLAIMS		9,635.0	9,991.4	10,361.0	10,744.4	11,141.9
MISCELLANEOUS						
TOTAL OPERATING		10,000.0	10,370.0	10,753.7	11,151.6	11,564.2
CAPITAL		Ø	Ø	Ø	Ø	Ø
REVENUE		Ø	Ø	Ø	Ø	Ø

FUNDING : (Thousands of Dollars)

GENERAL FUND		10,000.0	10,370.0	10,753.7	11,151.6	11,564.2
FEDERAL FUNDS						
OTHER						
TOTAL		10,000.0	10,370.0	10,753.7	11,151.6	11,564.2

POSITIONS :

FULL-TIME		5	5	5	5	5
PART-TIME		(2)				
TEMPORARY						

ANALYSIS : Attach a separate page if necessary

See Attachments

Prepared by : Thomas R. Burton — Phone : 465-3370
Division : Mental Health & MR — Date : 2/13/86

Approved by Commissioner : John R. Cox — Date : 2/13/86
Agency : _____

Distribution (by Agency preparing fiscal note) :
- Legislative Finance
- Legislative Sponsor
- Requestor
- Office of Management and Budget
- Impacted Agency(ies)

10/25/85

CSHB 412

INTRODUCTION

The following discussion describes the Division's program proposal for the implementation of CSHB 412. The proposal calls for an augmentation of existing services as well as an expansion of new services to meet 50% of the potential need of the Chronically Mentally Ill (CMI) statewide at a cost of $10,000,000.

Currently, 1394 chronically mentally ill persons are actively being served through the community mental health system on a statewide basis. This figure (1394) represents approximately 30% of the universe of persons at risk (5,500) and in need of services. Unfortunately, for the 1394 clients being served, the delivery system is still inadequate, piecemeal, fragmented, inaccessible and unavailable in some places, and lacks comprehensiveness. Therefore, the first level of priority is that of bringing the current system up to a basic level of services that will guarantee to every client a basic level of care to assure the maintenance of a minimum standard of protection, health and safety as well as a minimum standard of decency and dignity.

In addition, another 1300 clients would be identified from existing waiting lists and brought into the service delivery system. The basic level of services would also be available for these new clients. Thus the system would now be serving approximately 2700 clients or approximately 50% of the total population at risk.

After basic needs have been met, the service system would be expanded to provide differentiated services to meet the specific needs of clients based on diagnosed functional levels. Although the system would not be able to meet every need of a given client, a comprehensive range of services would be available to assure not only the maintenance of one's functional level, but to improve it, and perhaps achieve additional goals toward self-help and independence.

Naturally, to implement a new system, an administrative structure must be in place. Because an administrative system is already in place, our request for personnel, travel, supplies and equipment will be modest. Currently, two half-time regional administrators exist in Fairbanks and Juneau. These positions should be made fulltime.

These two positions will provide program monitoring, technical assistance, consultation and represents the Division's presence in the Northern and Southeast regions of the State.

For Anchorage and the Southcentral Region, 2 fulltime facility surveyors and one Regional Administrator are recommended. These surveyors would work out of the Anchorage Regional Office and provide coverage for Anchorage and the Southcentral, South Western and Western Regions of the State. The two regional administrators in Juneau will be taken to fulltime to assist in pre set-up of programs in those respective areas, and an additional position will be needed in Fairbanks to serve the Interior, Northern and North Western Regions of the State.

Personnel and Admin. Costs Within the
Mental Health Administration Component

1.	Juneau (Southeast Region)		
	a) M.H. Clinician IV part-time to fulltime		R-23L
	01 salary and benefits	43.7	
	02 travel	4.6	
		48.3	48.3
2.	Fairbanks (Northern Region)		
	a) M.H. Clinician IV part-time to fulltime		R-23L
	01 salary and benefits	50.2	
	02 travel	4.6	
		54.8	54.8
	b) Health facilities surveyor 1-FTE		R-18A
	01 salary and benefits	56.3	
	02 travel	8.0	
	03 contractual	.6	
	04 supplies	.1	
		65.0	65.0
3.	Anchorage (Southcentral Region)		
	a) Mental Health Clinician IV FTE		R-23A
	01 salary and benefits	67.8	
	02 travel	8.0	
	03 contractual	3.0	
	04 supplies	1.0	
		79.8	79.8
	b) health facilities surveyors 2-FTE		R-18A
	01 salary and benefits	101.7	
	02 travel	14.0	
	03 contractual	1.2	
	04 supplies	.2	
		117.1	117.1
	Total Administrative cost		365.0

PROGRAM ASSUMPTIONS

1. Every community mental health center would be given funds for a minimum service package for the chronically mentally ill. The minimum service package includes residential care and case management. A full time case manager will be available for 15 or more clients at a cost of $36,000 per year, including benefits.

2. Residential care includes a variety of options such as transitional living center, supervised apartment living, group homes, and adult foster care. The cost will vary according to the choice of residential facility. Residential care is basic to one's well being and sense of worth and dignity.

3. Programs will experience a COLA of 3.7% annually.

4. Programs are not comprehensively funded, but they do meet basic needs as well as significant improvements toward client independence. Optimum funding for this population would approximate $19,000,000 instead of the $10,000,000 being recommended.

5. Not all services will be available in all communities; consequently, a client may have to travel to another site to receive all the services he/she may need.

6. In Southeast Alaska $465,083.00 is for designated beds to be purchased in Juneau and Sitka. These will complement the designated beds available at Fairbanks for the Northern region and at Anchorage for the South Central area. This allows involuntary hospital care to be delivered in local facilities.

7. The data for this fiscal note came from the "Boston Study" a computerized data-based Statewide needs assessment of the CMI population in Alaska. Data and costs are available for the entire population in need or any portion thereof.

8. This program addresses approximately 50% of the population in need of services.

Services For The CMI Population

The services for the chronically mentally ill are divided into five major categories:

CM: Case management which is the key to community support for the chronically mentally ill.

RES: Residential services which include: Inpatient Hospitalization board and care, adult family care, halfway house, supervised apartments, and crisis/respite beds.

TX: Treatment services which include: crisis, day treatment, out-patient psychotherapy, and medication management.

RHB: Rehabilitation services which include: Training in daily living skills, socialization, pre-vocational and vocational training, and sheltered workshop experience.

SUP: Support services which include: case management, support to the client's family, legal, recreation, and transportation.

CSHB 412

Increment for Services for the Chronically Mentally Ill

Mental Health Center	Clients Currently Served	50% of Clients At-Risk	Description of Increment	Cost
Aleut/Prib	6	24	CM, RES, TX	38,520
Anchorage	625	1,245	CM, RES, RHB, SUP, TX	4,298,568
Aniak	3	7	CM, RES, TX	27,720
Barrow	19	40	CM, RES, TX	127,091
Bethel	92	78	CM, RES, RHB, SUP, TX	615,388
Copper Cnt.	2	10	CM, TX	18,000
Cordove	5	13	CM, RES, TX	27,720
Craig	6	13	CM, RES, TX	27,720
Dillingham	30	34	CM, RES, RHB, SUP, TX	200,670
Fairbanks	135	361	CM, RES, RHB, SUP, TX	0*
Ft. Yukon	0	7	CM	18,000
Galena	13	12	CM, RES, TX	56,520
Haines	3	10	CM, TX	18,000
Homer	28	47	CM, RES, RHB, SUP, TX	187,292
Juneau	34	159	CM, RES, RHB, SUP, TX	646,775**
Kenai	17	147	CM, RES, RHB, SUP, TX	491,164
Ketchikan	32	106	CM, RES, RHB, SUP, TX	354,517
Kodiak	58	67	CM, RES, RHB, SUP, TX	387,972
Kotz	7	33	CM, RES, TX	100,724
McGrath	9	7	CM, RES, TX	45,720
Nome	74	49	CM, RES, RHB, SUP, TX	494,986
Seward	53	49	CM, RES, TX	100,335
Sitka	30	42	CM, RES, TX	550,753**
Tanana	7	6	CM, RES, TX	27,720
Tok	16	10	CM, RES, TX	57,520
Valdez	5	18	CM, RES, TX	27,720
Wasilla	85	205	CM, RES, RHB, SUP, TX	688,967
Administration				364,928
TOTAL*	1,394	2,799		10,000,000

*A comprehensive array of services for the chronically mentally ill in the Fairbanks area is currently funded through the Division of Mental Health and Developmental Disabilities base budget.
**Funds for Juneau and Sitka for designated beds are included.

Detail of Major Categories of Service and Cost follow

CSHB 412

Detail of Major Categories of Service and Cost

Case Management Services (CM)

Costs: 1 Manager/15 clients @ 36,000 Per Year

1. Case Management services :
   a. Screening and evaluation of potential clients to determine the client's eligibility for services, and provide a fixed point of entry into the services of the community support unit;
   b. Individualized Treatment Plans for each client accepted for services. The plan includes the client's history; an assessment of the client's personal strengths and weaknesses; and a plan of action to meet the client's basic life needs and enhance or maintain the client's level of functioning.
   c. Assistance in applying for aid for which the client is entitled. Staff will routinely help clients secure resources such as Social Security, general assistance, vocational rehabilitation, and housing subsidies.
   d. Assume the leadership role in coordinating services with other agencies and resources. Resources other than agencies include: landlords, employers and volunteers.
   e. Emotional support and counseling to clients throughout the provision of all other services listed; and
   f. Assure that clients are informed about the 24-hour per day services that are available through the community mental health program and are trained in their use.

2. Outreach services to include:
   a. Contact with psychiatric hospital to identify appropriate clients and to offer services to potential clients. With the cooperation of the hospitals, staff will participate in hospital discharge planning, and
   b. Contacts at the client's residence and other community settings to help the client engage in treatment.

3. Medication management to include: Coordination with the client's physician to assure that the client's medication needs are met. Program staff will routinely observe and collect observations on the client's behavior and provide ongoing feedback to the client's physician.

4. Daily structure and support to include:
   a. The provision or arranging for skill training. Skill training will as needed include, but not be limited to, household skills, money management, personal hygiene, and self-management of medications; and
   b. Socialization activities for clients. These activities will be provided in formal settings where clients can develop communication skills and friendships.

5. Vocational skill development to include:
   a. Referral of clients to vocational rehabilitation services, and working with those services to develop individual programs to meet the special needs of each client.
   b. Outreach contact to clients who are working in community settings. Staff will provide back-up support to clients and their employers.

6. Residential resource development to include:
   a. Assisting clients to find an appropriate (e.g., safe, sanitary) living situation.
   b. Providing independent living skill training (cooking, hygiene, etc.) in the client's residence.
   c. The program may use program funds to pay for rent deposits and basic housing needs when no other funds are available. These funds may be considered as loans to clients and mechanisms will be established to accept reimbursement from clients.

7. Throughout the provision of community support services, staff will observe and help secure the client's rights to confidentiality and treatment with human dignity.

TREATMENT SERVICES (TX)

1. Crisis/Emergency: These services include immediate, face-to-face 24-hour per day clinical care with the ability to admit clients to all service components of the local mental health system. Call back response to telephone emergencies must be within 15 minutes.	$ 60/hr.
2. Day Treatment: The treatment services which are provided include more than conventional out-patient treatment but less than 24-hour per day care. Treatment services are delivered for a minimum of two hours per day through a structured program which is related to the client's treatment plan.	$ 15/hr.
3. Out-patient psychotherapy: Theraputic services provided on an individual or group basis according to the client's formal, written treatment plan.	$ 90/hr.
4. Medication Management: The evaluation and monitoring of medications by a physician. Also the dispensing of medication by nursing staff.	$130/hr.

REHABILITATION SERVICES (RHB)

1. ADL/Socialization: A planned treatment program which focuses on self care, community survival, and social interactions.	$ 15/hr.
2. Pre-vocational Training: A treatment program which focuses on the skills and behaviors necessary to begin vocational training or work experiences.	$ 15/hr.
3. Sheltered Workshop: A vocational training program that provides clients with valid work experiences. The work is performed at less than competitive skill and productivity levels.	$ 15/hr.

4. Vocational Training: A training program in which the goal for all participants is the achievement of competitive employment. The program provides clients with support and specific skill training.	$ 15/hr.

SUPPORT SERVICES (SUP)

1. Case management: The case manager is aware of the client's needs and resources and provides advocacy, resource management, personal support, and treatment coordination.	$ 40/hr.
2. Support to Family: The support provided to family members and significant other by mental health system personnel.	$ 65/hr.
3. Legal: Services provided by legal or mental health professionals during the commitment process. Also included are other legal services required by clients.	$100/hr.
4. Recreation: The activities involved in the constructive use of leisure time.	$ 15/hr.
5. Transportation: The transportation services which are used by a client. These may include services supported by the Department or any other transportation system.	$ 5/hr.

MEMORANDUM

TO: House HESS Committee Members

FROM: Lisa McLaren, Aide to HESS Committee

DATE: February 3, 1986

RE: HB 412

The Committee Substitute for HB 412 (HESS) is a copy of the Department of Health and Social Services draft legislation put into the form of HESS committee substitute at the sponsor's request.

The draft CSHB 412 (HESS) is substantially the same as SSHB 412 with the exception of some sectional rearrangement and language.

Changes

Line 11 - 16. The language [The department may enter into a contract with an eligible community entity under which the department purchases community mental health services for the chronically mentally ill from the entity if the local community plan also provides for meeting and maintaining the following treatment standards:] has been deleted from the SSHB 412.

The treatment standards (page 1, lines 17 - 29 and page 2, lines 1 - 8 of the SSHB 412) have been put into a separate section - Standards for Community Services for the Chronically Mentally Ill in (Sec. 47.30.548 page 2, lines 8 - 29 and page 3, lines 1 - 10 of CSHB 412 HESS).

Within that section, language is identical except (3) from the sponsor substitute is broken into two parts (into (3) and (4) of the committee substitute). (5) of the committee substitute requires 3 rather than 2 required elements:

The committee substitute requires:

(A) emergency or crisis care in an emergency center or at home by an emergency response team;

and

(B) an acute hospital for evaluation, diagnosis, treatment and referral for persons who are in need of acute care; and

versus the sponsor substitute which requires:

(A) an acute hospital or a crisis unit for evaluation, diagnosis, and disposition planning for persons in psychiatric crisis; and

(C) from the committee substitute states "a case management system in which the case manager serves as a coordinator of the various elements of the system and as an advocate for the clients in the system; all case managers shall be under direct supervision of a psychiatric, psychologist, or a mental health clinician with a master's degree" is identical to (B) of the sponsor substitute.

Sec. 47.30.547 Community Support Services for the Chronically Mental Ill is identical in the sponsor substitute and the committee substitute with the exception of (6) where the language "supported work and vocational training programs" has been substituted for "sheltered workshops".

Finally, Sec. 2 is identical in the committee substitute to the sponsor substitute version.

Concerns Not Addressed:

Sec. 2 - Concerns raised by Rep. Koponen and others that levels of cost need to be defined - that existing language doesn't specify how the 100% funding will be prorated or otherwise managed when less than that amount is available. Also, doesn't expressly require seeking 3rd party reimbursement when available.

Sharon Lobaugh requested that:

1) a definition of chronically mentally ill be included - suggested the one in the regulations

2) that maintenance of effort clause.

3) that there be incentive to collect 3rd party payments.

Does new language meet Sherry Aldrich, Director of Vocational Services, REACH, request for "sheltered employment and day treatment programs"? - No.

Dr. Schrader suggested maintenance of effort clause also include "case management".

POSITION PAPER/Department of Health & Social Services

SPONSOR SUBSTITUTE FOR
HOUSE BILL 412

INTRODUCTION

Services for the chronically mentally ill population in Alaska continue to be plagued by inadequate or no programs, lack of funds for community services, continuing service fragmentation, and lack of workers to implement programs. Because of its small population, severe weather, and relatively young history, Alaska has not yet joined the rest of the nation in the severe problem of the homeless chronically mentally ill. Alaska can be grateful that it has been given a head start to plan for a situation which is inevitable.

Who are the chronically mentally ill in Alaska? By definition, a chronically mentally ill (CMI) person is one who has been officially diagnosed as having major psychiatric disorder with a documented history of chronicity and persistence, and which impairs the individual's occupational, family, social, and personal living skills. Frequently, the individual's behavior and/or circumstances are such that intervention by the State is warranted. Applying national mental health data which states that five percent of the population suffers from one or more mental disorders, Alaskan's population in need of services would be approximately 25,000. Currently about 10,000 persons are being seen in the Alaska Mental Health system - 1,200 at Alaska Psychiatric Institute (API), and 8,800 through the community mental health system.

The prevalence rate for the specific category under which the CMI falls is about one percent of the total population, or 25 percent of all mental disorders. This would suggest that there are approximately 5,000 persons in Alaska in the category of CMI.

CMI Study

During FY 86, the Division of Mental Health and Developmental Disabilities (DMHDD) compiled a scientific study (the Boston Study) of the numbers and functional categories of CMI who were receiving services within the mental health system during a specific period of the fiscal year. This study indicated that there were 1,356 CMI persons actively receiving services through the Division. The conclusion is inescapable - only about one third of the CMI population is being served, and the services offered are far from adequate as the study indicated.

Function Levels	Numbers	Percent
1. Dangerous	69	5
2. Unable to function due to symptoms	95	7
3. Lacks activity of daily living skills	160	12
4. Lacks community living skills	197	15
5. Needs role support	403	30
6. Seeks treatment	364	26
7. Mental health system independent	68	5
	1356	100

The Boston Study of CMI identified the above seven functional levels among the CMI population, and designed service packages for individual clients at each functional level. Costs were also developed for each service package. To estimate the effectiveness of each service package, a set of outcome measures from the database was developed and assigned to each package. The current DMHDD budget for the planning population was also estimated. The goal of the study was to apply a computer model to these data in order to find affordable service strategies for the Division.

Services Components

The following list shows the services components available within the system and the approximate cost for a unit of services. Services are categorized into four components; namely, residential, treatment, rehabilitative, and support. The most expensive unit of care is delivered through the inpatient system at API at a cost of $209.00 per day. The least expensive is transportation at $1.00 per day.

Services Component	Unit	Unit Cost
Residential Services		
Inpatient/API	days	$209
Independent Living	days	0
Street	days	0
Board and Care	days	33
Nursing Home	days	0
Adult Fam. Care Home	days	70
Supervised Apartment	days	30
Crisis/Respite	days	139
Treatment Services		
Crisis/Emergency	hrs	$ 60
Day Treatment	days	15
Geriatric Day Treatment	days	15
Outpatient Psychotherapy	days	90
Medication Management	hrs	130
Medical/Dental Treatment	hrs	100
Rehabilitation Services		
Activities of Daily Living/ Socialization	hrs	$ 15
Prevocational Training	hrs	15
Sheltered Workshop	hrs	15
Vocational Training	hrs	15
Support Services		
Case Management	hrs	$ 40
Support to Families	hrs	65
Legal	hrs	100
Recreation	hrs	3
Transportation	hrs	1

From the above list of client services, service packages for each functional level were developed to reflect service comprehensiveness and intensity; basic, adaptive, promotive. A fourth level was identified to reflect services currently being offered by the mental health system. A mixture of components is involved.

Basic Services Package Options

Basic service packages include the services needed to assure the health and safety of clients and communities. Basic services can include room, board, physical health care, and psychoactive medications.

Adaptive Service Package Options

Adaptive service packages include basic services and services designed to adjust or adapt clients to the current level of functioning. Adaptive services are primarily the traditional psychotherapies; milieu, individual, group, etc.

Promotive Service Package Options

Promotive service packages include services specifically designed to improve the client's level of functioning. Promotive service packages can include basic and adaptive services, but focus on areas such as activities of daily living and vocational training.

Given this model, a service package may be developed for any client with an identifiable cost. If new funds were allocated to the Division, new clients and their level of funding would be identified and service packages developed at the basic, adaptive improved level.

Budgetary Considerations

Several affordable strategies that would improve system benefit-cost were suggested. These strategies call for enriched service packages for clients at the lower levels of functioning. The goal is to improve overall client progress, reduce the need and dependency on inpatient beds (API), promote community-residential living, and increase the number of clients becoming independent of the mental health system.

Currently, the mental health system (API and community mental health centers) is operated at a cost of approximately $22981.6. It is estimated that these resources serve the CMI by providing one or more of the above four service components at a base cost of $11685.8.

Data from the Boston Study suggests that approximately a 15 percent increase over current funding ($1752.9) is needed to bring the current service package level up to the basic level. Once this level has been achieved, additional increments of 9 percent would be needed to achieve each the adaptive and promotive levels. This means that approximately

POSITION PAPER/Department of Health & Social Services

$4,280.7 is needed to service the existing clients (1,356) at the level which will maximize their goal of system independence.

It should be noted that a 4,280.7 increment addresses only the adequacy of funding for the current system, and does not address the issue of new admissions into the system. With 1,356 clients, the Division is only serving 27 percent of the potential population of 5,000 CMI. The immediate goal is to service a minimum of 50 percent of the eligible population.

	Increments Needed: Adequate Funding Current System	
I.	(a) 15 percent above current level (15% of $11685.8)	$1752.9
	(b) 9% for Adaptive Services (9% of 13438.7)	1209.5
	(c) 9% for Promotive Services (9% of 14648.2)	1318.3
	Total of Increment #1	4280.7
II	New Admissions	
	Current system cost for 1,356 clients	11685.8
	Basic/Adaptive/Promotive Levels of care	4280.7
	Total Cost of new and current services	15966.5
	1356 clients represent 27% of potential population of 5,000	
	If 27% of need costs	15966.5
	100% of need will cost	59135.2
	and 50% of need will cost	29567.6
	Less cost for 27% already served	(15966.5)
	#2 increment cost to fully serve 50% of population eligible	$13601.1

The Department recognizes the need for increased services for the CMI, and supports HB 412. This bill mandates continuum of services for the CMI population. The ultimate goal of the bill is to help the CMI to reach their capacity to function as independently as possible within their local communities.

The Department does recommend some changes to HB 412:

Section one, page one, line 11, add statewide before the word coordinated;

Section one, line 12-16, eliminate this sentence;

Section one, page one, line 17, to page two, line nine, should be designated sec. 47.30.545, standards for Community Support Services for the Chronically Mentally Ill and follow Sec. 47.30.547 Community Support Services for the Chronically Mentally Ill.

Section one, page one, line 21, the word sexual does not seem appropriate and should be eliminated;

Section one, page one, line 26, this is a new concept and should be separated from number (3);

POSITION PAPER/Department of Health & Social Services

Section one, page two, line one, the element of emergency or crisis care should be added as (A);

Section one, page two, line 9, orientation in cross-cultural issues should be added;

In addition to these changes, the Department would suggest a full discussion on the issue of not requiring matching funds from the programs for these particular services (section two, page three, line seven) and on the overall issue of the projected fiscal impact.

RECOMMENDED BY: Thomas R. Brown for

Mel Henry, Director
Division of Mental Health
and Developmental
Disabilities

DATE: 1/27/86

APPROVED BY: John R. Pugh

John R. Pugh, Commissioner
Department of Health and
Social Services

DATE: 1/27/86

IN THE HOUSE BY M.M. MILLER AND CLOCKSIN

SPONSOR SUBSTITUTE FOR HOUSE BILL NO. 412

IN THE LEGISLATURE OF THE STATE OF ALASKA

FOURTEENTH LEGISLATURE - SECOND SESSION

A BILL

For an Act entitled: " An Act relating to the chronically mentally ill."

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF ALASKA:

*Section 1. AS47.30 is amended by adding new sections to read:

Sec. 47.30.545. TREATMENT OF THE CHRONICALLY MENTALLY ILL. The department shall provide for community-based and locally, regionally, and statewide coordinated care and treatment of the chronically mentally ill.

Section 47.30.547 COMMUNITY-BASED SERVICES FOR THE CHRONICALLY MENTALLY ILL. Communities that provide eligible mental health services for the chronically mentally ill may receive funds from the department for the following program elements:

(1) a short-term residential treatment program for individuals experiencing an acute episode or a situational crisis requiring temporary removal from their home environment;

(2) a long-term residential treatment program with a full day treatment component for persons who require intensive support;

(3) a transitional residential treatment program designed for persons who are able to take part in programs in the general community, but who without continued support would be at risk of returning to a hospital;

(4) a semi-supervised, independent, but structured living arrangement for persons who without some support and structure would be at risk of returning to the hospital;

(5) a day treatment program capable of providing services for clients whose residential needs are being met but who requiring additional or extended treatment services;

(6) supported work and vocational training programs that provide opportunities for clients to experience the benefits of meaningful and productive work experiences with graduated levels of skill and energy required;

(7)socialization centers designed to serve a broad range of clients, as well as persons living in the community in general.

Sec. 47.30.548 STANDARDS FOR COMMUNITY SUPPORT SERVICES FOR THE CHRONICALLY MENTALLY ILL

(1) facilities shall consist of small residential or day treatment centers, in as close to a normal home or non-institutional environment as possible without sacrificing client safety or care;

(2) staffing patterns shall reflect the cultural, linguistic, ethnic, and other social characteristics of the community, and shall incorporate multidisciplinary professional staff to meet client diagnostic and treatment needs;

(3) programs shall be designed to encourage self-sufficient and independent functioning through prevocational and vocational training;

(4) programs shall promote client participation in planning, operating, and evaluating daily treatment and rehabilitation.

(5) programs shall be designed to coordinate with the social service system as a whole and in particular shall be designed to include the following three elements; (A) Emergency or crisis care in an emergency center or at home by an emergency response team; and (B) an acute hospital for the evaluation, disagnosis, treatment and referral for persons who are in need of acute care; (C) a case management system in which the case manager serves as a coordinator of the various service elements of the system and as an advocate for the clients in the system; all case managers shall be under direct supervision of a psychiatrist, psychologist, or a mental health clinician with a master's degree;

(6) prorams shall contain standards for staff training, including training in community outreach services and orientation in cross-cultural issues.

*sec. 2. AS 47.30.550 is amended by adding a new subsection to read:

(b) Notwithstanding (a) of this section, the department shall purchase 100 percent of the eligible costs of services provided for

the chronically mentally ill, subject to the availability of the state funds to the department for implementing AS 47.30.520 - 47.30.620.

THE ALASKA
ALLIANCE FOR THE MENTALLY ILL

"An affiliate of the National Alliance for the Mentally Ill"

TESTIMONY: January 27
HOUSE HEALTH AND SOCIAL SERVICES COMMITTEE
REGARDING: H.B. 412 AN ACT RELATING TO CHRONICALLY MENTALLY ILL
PRESENTED BY: Sharron Lobaugh AAMI Vice President

The Alaska Alliance for the Mentally Ill strongly endorses this legislation.

While there has been some growth in programs for this population, the majority of communities lack a comprehensive system which we believe is necessary to reduce recidivism and provide opportunities for these persons to lead a reasonably normal life in their communities.

This bill will provide the department with the legislative structure to implement a COMMUNITY SUPPORT SYSTEM on a State level. Federal funds have been allocated for a number of years encouraging this type of approach and some state funds are already being used for this purpose. Last year 800,000 of the allotment for Community Mental Health Centers was designated for community support programs. The bulk of the programs however, operated by community mental health centers are providing a more general outpatient service dealing with mental health clients who are experiencing problems of a less disabling nature and whose prognosis with intervention does indeed yield more immediate results (problems like family crisis, youth and adolescent problems, divorce, life changes and other emotional problems)

The chronically mentally ill are persons suffering from major mental illness such as schizophrenia, manic depression, major depression and other long term conditions which significantly affect their ability to function in daily life. Many of those persons who are without a support system wind up in API on a regular "revolving door" basis. A recent report from the division demonstrates that the length of stay has now been reduced to about two weeks and that the average readmission rate is five times for each new admission

Research has shown that with appropriate community programs providing housing, case management, day treatment, vocational and social opportunities, this revolving door syndrom breaks and the length of time out of the hospital increases.

A good indicator of this is demonstrated by the Transitional Living Center in Anchorage (see attachment pages 18-20 of TLC two year summary); which indicates a 56% decrease in rehospitilization and a 68% decrease in the number of hospital days for those who have been in the TLC program. The primary rehabilitative effort of the Transitional Living Center is the preparation of clients for independent living.

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Fairbanks, AK 99707

Gateway Alliance
Box 787
Ward Cove, AK 99928

Juneau Alliance
Box 211247
Auk Bay, AK 99821

Kenai Peninsula
Box 301
Soldotna, AK 99669

Anchorage Alliance
P.O. Box 4-2542
Anchorage, AK 99509

There are no other progams similar to this in other parts of the state where patients can upon dismissal receive a structured living arrangement with a treatment program. There are a few other programs however that are good beginnings:

Ketchikan, has developed a community support program with several components and seems to have the most comprehensive program thus far. It was started by Wes Terwilliger with Federal CSP monies as a dissemination program from Oregon models. Ketchikan has intensive active case management (they actually do outreach to assist clients to come for programs and treatment), they have a fully developed day treatment program with a range of activities such as cooking, financial management, leisure skills, health and recreation activities and social programs. They also maintain two apartment complexes with four males and four females occupying an independent living unit.

New programs have been approved for the Northern Region in Fairbanks which are the beginnings of needed housing, vocational, group homes, children and adolescent diagnosis and treatment facilities and day treatment components. Enclosed for your examination are portions of the RFP issued in December which describes the type of programs which are being initiated.

Perhaps we need to clarify then, with so many new programs being started, do we need this legislation?

Because up to now, the programs for the chronically mentally ill have received less than top priority in the community mental health centers. We certainly do not intend to erode the need for these centers expecially in rural areas where there must be responses to all kinds of problems. It is our concern that seperate monies and seperate programs be targeted for these ~~programs~~ clients for a number of reasons:

-it will allow CMHC's and other local service providers to submit proposals for programs which are not in direct competition to CMHC's other programs

-it will allow for full funding (there is a 25% match now required for CMHC grants which encourages them to seek clients who are most likely to pay)

-it will encourage service providers to design a comprehensive care system for this population

-it will decrease the responsibility of large centers such as Anchorage day treatment program to provide services for persons from other communities (currently they have 30% of the clients from other communities)

-it will provide the administrative structure for

determining the kinds of programs which are appropriate for this population and provide the department direction

-MOST IMPORTANTLY it will allow families the chance to have their loved ones cared for appropriately near their own homes and provide an opportunity for a quality of meaningful life for those suffering from mental illness.

We do have some specific recommendations on this bill:

We would like to see a definition of chronically mentally ill included. The one used in the present standards distributed to you by the department is an appropriate definition. We recommend that the DSM classifications remain as regulation however, because there is a high probability that as the state of the art progresses, there will be further refinement of each type of mental illness.

Additionaly we would recommend a "maintenance of effort" clause so that programs will not be reduced as a result of this legislation or funds will not be supplanted.

Finally, we recommend adding a section clarifying line 8 on page 3 which either encourages service providers to seek third party payments or provides some incentive to do so in the application process. While many persons cannot afford treatment, many are covered by insurances and programs which can collect from disability coverage or insurances should be encouraged to do so.

CONTRACT #064857

BETWEEN

STATE OF ALASKA

DEPARTMENT OF HEALTH AND SOCIAL SERVICES

DIVISION OF MENTAL HEALTH AND DEVELOPMENTAL DISABILITIES

AND

ANCHORAGE COMMUNITY MENTAL HEALTH SERVICES, INC.

THE TRANSITIONAL LIVING CENTER

A TWO YEAR SUMMARY

REPORT PERIOD

12/08/82 to 12/31/84

SOUTHCENTRAL COUNSELING CENTER
(206) 563-1000 4020 Folker Street Anchorage, Alaska 99508

The Respite Program has had a substantial impact upon the use of hospital beds by the clients served. The average length of stay at API has been reported to be 33 days, therefore that would be the best guess at the likely duration of a predicted hospitalization. The hospitalization risk data in Figure 17 indicate that 50 or more of the 78 Respite admissions would have led to hospitalization if not for the program. All of the Risk Level 5 (3 people),80-90% of the Level 4 (24 people) and 75% of the Level 3 (24 people) would probably have been in the hospital within days. Based upon these assumptions, Figure 20 indicates the probable impact of the program upon hospital use.

Fig. 20. RESPITE IMPACT UPON HOSPITALIZATION

PROBABLE HOSP.'S	DAYS	ACTUAL HOSP.'S	DAYS	SAVED HOSP.'S	DAYS
@48-50	1584	8	264	@40	1320

Days = # hospitalizations x 33 days
For comparison, all hospitalizations assumed to be 33 days

Figure 20 shows a probable savings of 1320 days of hospital care. That number represents 3.62 years of continuous stay in a hospital for one person.

The collective data indicate that the Respite Program is very successful in helping the clients it serves. Ninety percent of the clients returned to community living, and at least 1320 days of hospitalization were saved. The impact of the program would be greater if it could become looked upon as a viable resource and if it would be more heavily utilized by the mental health system.

2. Rehabilitation Program Effectiveness - The purpose of the Rehabilitation Program is to prevent the repeated hospitalization of the chronically mentally ill through increasing community adjustment skills and helping the clients establish semi-independent or independent living situations with good follow-up care. The following data indicate the extent to which the program met this goal.

A. Hospitalization:
The broad impact upon hospitalization was measured through the comparison of the number of hospitalizations and the days of hospital care for equal time periods before and after the exposure to the program. For each client, the time period was based upon the time since he or she had been discharged from the program. Figure 21 depicts the impact upon hospital care for those clients discharged from the program at least

six months.

Fig. 21. REHAB. PROGRAM IMPACT UPON HOSPITALIZATION

TIME OUT OF TLC	NO. OF CLIENTS	NO. OF PRE-TLC HOSP.'S	HOSP. DAYS	NO. OF POST TLC HOSP.'S	HOSP. DAYS
1 1/2-2 YEARS	11	30	2072	8	313
1-1 1/2 YEARS	29	38	1890	19	795
1/2-1 YEAR	31	31	2026	17	783
TOTAL	71	99	5988	44	1891

FIG. 21. (CONTINUED)

TIME OUT OF TLC	CHANGE IN NO. OF HOSP.'S	PERCENT	CHANGE IN HOSP DAYS	PERCENT
1 1/2-2 YEARS	-22	-73%	-1759	-85%
1-1 1/2 YEARS	-19	-50%	-1095	-58%
1/2-1 YEAR	-14	-45%	-1243	-61%
TOTAL	-55	-56%	-4097	-68%

Data were not included for clients out of the Transitional Living Center from 0-1/2 year, as that data would be biased heavily in favor of the program. Since most clients come to the Rehabilitation Program from a hospital, there would be at least one pre-TLC admission for nearly all clients during the measurement period. Using longer time frames provides more realistic information.

Figure 21 shows a very substantial decrease in the number of hospitalizations and in the number of hospital days from the pre-TLC to the post-TLC period. The greatest change was seen with those clients out of the Transitional Living Center the greatest amount of time. This finding has been seen in other studies of programs for the chronically mentally ill (eg. a

recent report in the December, 1984, issue of Hospital and Community Psychiatry). The data suggest that programs must continue for a period of several years before the real impact becomes evident. The 73% decrease in hospitalizations and the 85% decrease in hospital days in the 1 1/2-2 year group is a phenomenal change and is exceeded by few, if any, programs in the country. The overall decreases of 56% in admissions and 68% in hospital days are probably very competitive, but few standards of comparison exist. The 56% decrease in number of hospitalizations is statistically significant beyond the .001 confidence level, as is the 68% decrease in hospital days. This means that a change that large would occur by chance one time in a thousand. Using these clients as their own control group, the change was very significant from the pre-TLC to the post-TLC periods.

The data indicate that the average length of a hospital stay declined. Calculation of the average length of hospital stay shows a mean of 60.49 days in the pre-TLC period and 42.98 in the post-TLC period. The overall decrease of 4097 hospital days represents 11.23 years of continuous hospitalization for one client, a rather significant savings.

Comparison of the success of the Rehabilitation Program with similar programs is possible when considering the percent of clients hospitalized after residence in the program, as data from these programs is expressed in those terms. Figure 22 compares the rate of rehospitalization of Transitional Living Center clients with Fountain House clients and with a control group of clients discharged from hospital care and not in a residential program. Fountain House is the oldest program in the country offering psych-social rehabilitation services to the chronically mentally ill, and is considered to be the model program.

Fig. 22. PERCENT OF CLIENTS REHOSPITALIZED

TIME	FOUNTAIN HOUSE	TLC	CONTROLS
6 MO.	16	17.86	37
2 YR.	38	39.44	60
5 YR.	53	N/A	70

(Control data reported by Fountain House)

Figure 22 indicates that the Transitional Living Center has produced results almost identical to that of the best program in the country for the first two years. The TLC has not been in operation long enough for a five-year comparison. The TLC has clearly had a very significant impact upon hospital stay.

Transitional Living Center 2nd yr report

B. Rehabilitation:

The decrease in hospitalization seen in the previous section is the result of three forces interacting to assist clients in community adjustment. First, the treatment at the Alaska Psychiatric Institute and other hospitals provides the basic stabilization necessary to begin the process of adjustment. Second, the Transitional Living Center provides residential psycho-social rehabilitation training to further the process of stabilization and add specific community adjustment skills and self-management skills. Third, the follow-up services of the Aftercare Unit of the Southcentral Counceling Center, and other providers, offer continuing care to clients leaving the program. The Aftercare Unit provides day treatment, therapy, outreach, case-management, psychiatric services, and other services necessary to enable on-going community adjustment. The relative position of the Transitional Living Center in the changes seen is that of a rehabilitative bridge between good hospital care and quality outpatient follow-up care. The credit for the success belongs to the total system, with each element playing its part.

The primary rehabilitative effort of the Transitional Living Center is the preparation of clients for independent living. In addition to the impact upon hospitalization, the transfer of clients to independent living is a predominant measure of program success. Figure 23 depicts the movement of clients between housing types. The Pre-TLC housing represents the most usual housing occupied by the client for a year prior to entering the program. The Post-TLC housing represents the placement at termination from the program. The Follow-up housing was the housing occupied as of December 31, 1984.

Fig. 23. CHANGE IN RESIDENTIAL STATUS

HOUSING TYPE	PRE-TLC (NO./%)	POST-TLC (NO./%)	FOLLOW-UP (NO./%)
NO HOUSING, ON STREET	11 / 10.89%	13 / 12.87%	3 / 2.97%
HOSPITAL, INSTITUTION	4 / 3.96%	8 / 7.92%	5 / 4.95%
BOARD & CARE, FOSTER CARE	9 / 8.91%	11 / 10.89%	14 / 13.86%
WITH FAMILY, DEPENDENT	48 / 47.52%	24 / 23.76%	14 / 13.86%
HALF-WAY HOUSE	0 / 0%	0 / 0%	2 / 1.98%
SEMI-IND. (TRANS. APT.)	0 / 0%	3 / 2.97%	2 / 1.98%
INDEPENDENT LIVING	28 / 27.72%	41 / 40.59%	33 / 32.67%
UNKNOWN (N=101)	1 / .99%	1 / .99%	28 / 27.72%

Nine of the 110 Rehabilitation Program clients were still in residence at the end of the evaluation period on 12/31/84. Figure 23 indicates that 48 of the 101 clients who terminated were living with their families for most of the year prior to entering the Transitional Living Center. Nine clients lived in board and care facilities, four had spent most of the year in an institution, and 11 were living on the streets. A total of 72 were living dependently or were homeless. Twenty-eight were living independently, but were considered to be in need of rehabilitative services. Pre-TLC data was missing for one client.

Upon leaving the program, 44 clients entered independent or semi-independent housing. Fifty-six clients entered some form of dependent housing or were homeless. Data was missing for one client. At follow-up, 35 clients were known to be living independently, 38 were living in a dependent situation, and 28 had dropped from sight.

A 1975 survey of 26 half-way houses indicated that a median of 64% of clients were placed in independent living upon exit from the programs, and 33% were still living independently at follow-up periods ranging from 90 days to 4 years. The TLC data indicates 44% at termination and 35% at follow-up. The Data suggests that the Transitional Living Center is able to place fewer clients into independent living than many of the programs surveyed, but provides training that tends to keep the the clients placed more stable in the community. The TLC showed an approximately 20% decrease in clients living in an independent or semi-independent setting, from termination to follow-up, while the programs surveyed showed a 50% decrease.

The 44% placement into independent or semi-independent living is less than most of the programs surveyed, although that is a rate that exceeds some of the programs. The placement rate is in part a function of the youth of the program, in part due to lack of housing alternatives, and in part due to the particular characteristics of the client population.

Analysis of the clients indicated that upon intake:

98% were unemployed;
84% lacked the money to meet even basic needs;
57% were experiencing moderate to severe psychotic symptoms;
67% were not consistent with self-medication or were resistive unless supervised;
77% attended treatment sporadically or were resistive;
15% had the stability of SSI and Medicaide.

The clients tended to be unmotivated, with 66% showing some degree of non-compliance with the program. Sixty-one percent left program against medical advice or were expelled due

to major rule violations, particularly substance abuse.

Upon termination from the program, analysis indicated:

65% were unemployed;
63% still lacked the money to meet most needs;
37% were still experiencing moderate to severe symptoms;
66% were still having problems with medication;
72% were still sporadic with treatment;
there was no significant increase in SSI recipients.

Those clients that were among the 33% that became employed, the 2% that maintained employment from intake, and the 15% on SSI made up the majority of the clients that had established independent or semi-independent living. A few female clients also went to live with boyfriends or husbands as contributing family members. The critical factor determining independence appears to be money. Lack of income blocked more clients from achieving the goal of independence.

The 56% reduction in hospitalizations, the 68% reduction in hospital days, the 44% placement in independent living, and 33% employment rate indicate a significant degree of success for a program so new. In time, the program should develope to the point that these data are even better.

3. Phase II Program Effectiveness - The Phase II Program has been the least effective sub - program of the Transitional Living Center. The primary success was the demonstration that transitional apartments and a congregate facility could be established, that landlords would lease to a program involved with the chronically mentally, and that community support, in the form of donations, could be obtained. Financial problems led to the demise of the facilities, after serving 14 clients for 1644 resident days. Four clients graduated from them to independent living, and the rest were removed due to the closure of the facilities or due to management problems. At the end of the report period, two clients received 48 days of service in apartment beds rented directly from the landlord by the clients. Additional funding to cover operating costs would allow this program to succeed.

PROGRAM COSTS VS. COST SAVINGS

The Transitional Living Center has operated for twenty-five months at a total cost of $1,212,060, including planning, development and start-up costs. The funds expended, by source were:

State Contribution:	$892,698.00
Center & United Way:	$319,362.00
Total:	$1,212,060.00

From December 8, 1982, through December 31, 1984, the Transitional Living Center provided 11,257 resident days of service. The cost per resident day is as follows:

Cost to the State:	$79.30
Additional cost to Center:	$28.37
Total:	$107.67

The cost per resident day is based upon an overall occupancy rate of 63.74%. At 100% occupancy,the total cost would be $68.63, with the State contribution at $50.55. While 100% occupancy is fantasy, any increase from the rate achieved will significantly lower the cost per resident day.

While this money was being spent, the Respite Program prevented 40 hospitalizations at the Alaska Psychiatric Institute. The cost at the API is at or above $300 per patient day, and an average stay is 33 days. The savings to the State was $396,000 (40 hosp's X 33 days X $300). In addition, the Rehabilitation Program helped to reduce hospitalization by 4097 days. The additional savings to the State was $1,229,100 (4097 days X $300). The total savings were $1,625,100. If the cost of eight hospitalizations not prevented by the Respite Program ($79,200) is subtracted from the savings as a "fine", the savings still amount to $1,545,900. The total State contribution to the Transitional Living Center has been $892,698, as noted above. Subtracting the contributuion from the savings leaves a net savings of $653,202, representing more than a year of State expenditure for the program.

Based upon the previous data and the information in this section, the Transitional Living Center has shown itself to be both clinically effective and cost-effective.

PROBLEMS ENCOUNTERED

The primary problem encountered by the Transitional Living Center program has been the uncertain future of the program. Funding has been shaky from the early stages of the operation, and the program has suffered from the situation. Referral sources were not sure that the program would survive, and had stopped referring to it on several occasions. Nearly constant community education efforts were needed to inform these agencies the the program was operating and accepting referrals.

Staff morale was very low at times due to the constant threat of program closure. The program had several periods of high staff turnover, causing chaos in the program and effecting treatment of clients. Only one staff member, the supervisor, has remained from the original staff starting the program. Seven of the ten staff had worked eight months or less as of December 31, 1984. Client morale was also effected by the funding uncertainty. Many of the clients left the program for a more secure setting, as they were fearful of losing their place to stay. On several occasions, case

(3) assessment of community and client reaction to services, which may include questionnaires, surveys, or board reports; and

(4) the center's evaluation of the degree of achievement of the annual plan. (Eff. 9/1/82, Reg. 83)

Authority: AS 47.30.530

7 AAC 71.125. QUALITY ASSURANCE. (a) A center must have systematic procedures for the review of the quality of care and the use of services and facilities.

(b) There must be a written description of current quality assurance procedures that is reviewed and revised annually.

(c) At least two utilization reviews must be completed each year as described in 7 AAC 7.155(g). (Eff. 9/1/82, Reg. 83)

Authority: AS 47.30.530

7 AAC 71.130. PLAN OF SERVICES. A center must have a written plan of services which

(1) the center staff reviews annually and revises as necessary to reflect changing community needs;

(2) includes the center's annual goals, the steps and resources necessary to implement the goals;

(3) includes a review of compliance with or reasons for exceptions to relevant regional and state planning documents; and

(4) includes a five-year plan for development and delivery of mental health services to the service area. (Eff. 9/1/82, Reg. 83)

Authority: AS 47.30.530
AS 47.30.540

7 AAC 71.135. TYPES OF SERVICES AND POPULATIONS TO BE SERVED. (a) A center must serve, to the extent that mental health services are not available to them from other providers, the following populations in prioritized order:

(1) acutely disturbed persons;

(2) chronically, severely disturbed persons;

(3) children and adolescents;

(4) other persons or agencies requiring direct mental health intervention; and

(5) other persons or agencies requiring non-direct mental health services such as consultation or education.

(b) A center must provide the following services to the above listed populations in prioritized order:

(1) evaluation services, including

(A) diagnosis using the DSM-III classification; and

(B) evaluations for persons being considered for involuntary commitment under AS 47.30.700 – 47.30.915; this service is to include both court-ordered screening investigations and evaluations for commitment, if the necessary facilities and personnel are available; and

(2) treatment services, both voluntary and involuntary, which emphasize a brief therapy and crisis intervention model, including

(A) 24-hour inpatient psychiatric treatment for both voluntary and involuntary patients as close to the patient's home as possible; for involuntary patients, this service must include a written cooperative agreement with the Alaska Psychiatric Institute or other state-designated inpatient psychiatric facility; and

(B) outpatient care, including

(i) 24-hour direct emergency services for crisis intervention;

(ii) individual counseling/psychotherapy;

(iii) group counseling/psychotherapy;

(iv) case management and supportive care for chronic patients;

(v) referral services to other agencies; and

EXECUTIVE SUMMARY

Submitted for Juneau Needs Assessment by Dr. Gary Anders
University of Alaska Juneau

A Needs Assessment is a exercise in information collection and analysis that contributes to an accurate understanding of complex, interrelated issues. The objective of this needs study is to provide information on the service needs of the local population of chronically mentally ill in Juneau.

The National Institute of Mental Health (NIMH) estimates that about 15% of the total adult population needs mental health services at any given time, and that the more severe mental disorders such as schizophrenia and schizophreniform disorders are to be found in about 1% of the general population. If Juneau is comparable to the national averages (and there are strong reasons to believe that the local incidence of mental illness is higher) the number of Juneau residents with schizophrenia would be about 260. Altogether about 10.6% of the over age 15 population or approximately 2,724 people in Juneau are estimated to have major mental disorders.

Given the difficulty of establishing precise quantitative estimates, this needs assessement should be looked upon as a preliminary effort until the data allow utilizing new more rigorous techniques to estimate the number mentally ill at different functional levels within a given population.

Based upon an extensive research effort which included statistical analysis of existing data, and interviews with over 55 key people in the community mental health service delivery system, the study found that there were a number of serious defficiencies in the quality and availability of mental health services for Juneau residents.

Among the most pressing of these are the need for an alternative to institutionalization at the Alaska Psychiatric Institute (API) in Anchorage, and the creation of day treatment, psychosocial and housing programs.

As the research report discusses, one of the most significant problems with the current situation is the lack of a sufficiently high level of funding to support even a minimal level of needed services for the chronically mentally ill. Because of the limited amount of existing resources, funding and services are typically directed towards higher functioning cases or patients with appropriate medical insurance.

A comprehensive range of services with special provisions of adaptability and flexibility is needed to meet the needs of local residents. These services include housing, in-patient care, after care, socialization programs, vocational and living skills training, recreational opportunities, respite care, a place to triage patients referred by the medical community, and emergency crisis assistance. Acute care is needed on a 24 hour basis.

These services should be designed to provide crisis intervention and emergency psychiciatric services to faciliate in-take of crisis cases thereby overcome extensive delays. Similarly a prevention program where people can go for emergency counseling was identified as necessary.

Due to the shortage of beds at the state facility in Anchorage there has been a dramatic increase in patient turnover in recent years. Juneau and Southeast area residents have been seriously affected by this trend. Because API is already overtaxed and considering the distance and cost in transporting patients to Anchorage, local residents would be better served by a local in-patient psychiatric unit.

A primary question that policy-makers must consider with regard to such a project is the cost of the faciity and its potential utilization. While the data do not allow making precise estimates it is possible to make a very rough estimate of need. On the basis of the number of psychiatric admissions to Bartlett hospital and the number of involuntary committments from Juneau, an inpatient facility with between 6 and 8 beds would be needed.

The construction and operation of a local in-patient unit capable of serving community needs would result in a significant cost savings over the existing centralized treatment approach. In most instances a patient in crisis could be stablized without a costly committment procedure and the accompaning transportation cost. Family members could help play a more important role in the overall treament program. There would be a lower rate of recidivism. Personal and family dislocations would also be minimized through local treatment. Moreover, these services would provide interventions which would reduce the demand for acute care services.

Based upon the responses of numerous key informants and an evaluation of the local Juneau/Douglas Community Mental Health Clinic, the report stongly recommends that a major effort be directed at developing a broader range of services for the chronically mentally ill. We endorse the continuum of care model suggested by Dr. Leona Bachrach, a leading writer in the area of mental health policy and one of the consultants for this study. In addition to other components

such a model would emphasize an integrated program of services including housing and a sheltered workshop.

Through such a program residents would have an opportunity to participate in structured vocational activities designed to give them an opportunity to earn an income and develop job skills while social activities complement their improved participation in community activities under supervision. This living situation should provide only the minimal necessary supervision to participants who are able to engage in social and vocational activities.

EXCERPTS FROM THE FAIRBANKS FACILITY REQUEST FOR PROPOSAL

December 1985

Provided by the Alaska Alliance for the Mentally Ill

effective, services must form a continuum in the true sense of the word. To reach that goal, not only must components be added to the system, but also existing and proposed components should be closely linked to ensure ease of access for clients. Furthermore, personnel must be acquired to act as "case managers" who will facilitate individualized program planning for every client.

In defining the service needs for the chronically mentally ill, the Subcommittee adopted several guiding principles. These principles include emphasis on: 1) community-based rather than centralized/institutional care; 2) maintenance of the highest achievable level of independent living for each client; 3) programming which assures the maximum adaptive level of functioning for each client; 4) procedures which allow an individual to move through the service continuum as his/her needs change; 5) opportunities to engage in meaningful daily activities; 6) easy access to services; and 7) tailoring of services to account for varying regional and cultural needs. The philosophy of normalization underlies all planning done to date.

Other guiding principles include: involvement of the client and family in treatment planning; strong emphasis on case management; the need for attention to aftercare and service follow-up and regular involvement educating the family and in some cases other members of the client's community about the client's illness and appropriate means to aid in their treatment.

The Subcommittee has identified a range of services necessary to meet the needs of chronically mentally ill adults in the northern region. At this time, available funds are insufficient to address all the needs. Therefore, the State, with direction from the Resource Committee for SB 520, has selected the following components for development in FY 1986 and FY 1987:

A. Supervised Apartments (Client Capacity -- 16).

B. Group Home with Crisis Beds (Client Capacity -- five beds in the group home section, with two additional beds reserved for short-term crisis situations).

C. Multi-purpose Center (Client Capacity -- 30 per day or 50 per week).

D. Vocational Education Workshop (Client Capacity -- 15 per day on site).

Each of these components is elaborated under Part III, Se tion 3-3 below.

2-2. DEFINITION OF CLIENT POPULATION

Respondents must confine their services to the chronically mentally ill. A "chronically mentally ill person" is someone who is eighteen years of age or older and who satisfies two or more of the following criteria:

A. Is diagnosed as having a schizophrenic, major affective, or paranoid disorder (DSM-III diagnosis of 295.1, 295.2, 295.3, 295.4, 295.6, 295.7, 295.9, 296.2, 296.3, 296.4, 296.5, 296.6, 297.1, or 297.3) or another severe mental disorder, with a documented history of persistent psychotic symptoms other than those caused by substance abuse.

B. Has impaired role functioning in at least one of the following:

1. Social role -- an inability to function independently in the role of worker, student, or homemaker.

2. Daily living skills -- an inability to engage independently in personal care (e.g., grooming, personal hygiene, etc.) or community living activities (e.g., handling personal finances, using community resources, performing household chores, etc.).

3. Social acceptability -- an inability to exhibit appropriate social behavior, which results in demand for intervention by the mental health and/or judicial system.

C. Is a danger to self or others.

Clients will include persons who show sporadic improvement as well as those who experience occasional outbreaks of severe pathology. Many clients will vary from day to day and month to month in their service requirements. Therefore, programs should be designed flexibly to ensure tailoring of services to changing individual needs.

2-3. CLIENT APPROPRIATE SERVICES

Due to the range of different cultural, ethnic, age, gender and other distinctions in the population to be served, services proposed should be sensitive and appropriate to the maximum extent possible to the individual client needs. These include but are not limited to: treatment, setting, staff, activities and food.

2-4. WORK TO BE PERFORMED

Work to be performed consists of tactical program planning, start-up, and implementation of the four service components of supervised apartments, group home, multi-purpose center, and vocational education workshop. A great deal of the effort in the first six months (January 1, 1986 - June 30, 1986) is expected to be of an organizational nature, including precise program design, hiring of staff, and formalizing policies and procedures. However, grantee(s) are expected to provide direct services in each component. Respondents whose proposals demonstrate ability to bring direct services on line quickly will have an advantage during proposal evaluation

Articles of Incorporation

Bylaws

Board of Directors Roster

Organization Charts (for the existing organization, each proposed component, and the "new" organization following the award of a grant.

Accountants Report/Audit Report from most recent fiscal year or other audit period
Position Descriptions and Resumes of Key Personnel

Agency Budget (overall) (if different from the proposed budget)

Personnel Policies

Business Licenses

Proof of public Non-Profit Status.

Documentation of Community Support and Interagency Coordination . (This section shall contain signed memoranda of agreement with key organizations to assure non-duplication of services and continuity of care for clients. Letters of support are also helpful but less essential.)

Names and Addresses of References (if the respondent is an individual or has never before provided services within the State of Alaska)

3-3. GUIDELINES FOR THE TECHNICAL PORTION OF PROPOSALS

The following material describes the State's perspective on each component of services addressed under this RFP. Services and hours proposed and numbers of clients to be served are minimums. Respondents are encouraged to expand services and hours of operation based on their resources.

A. Supervised Apartments Component

Supervised apartments will provide residential services for chronically mentally ill adults who need minimal support. Residents will share an apartment with up to three other chronically mentally ill adults in a family-like setting. The living arrangements shall encourage social interaction and provide minimal supervision geared toward helping residents function in as normal a capacity as possible within the community. The program shall emphasize living