



Alaska - Healthcare Connect Fund



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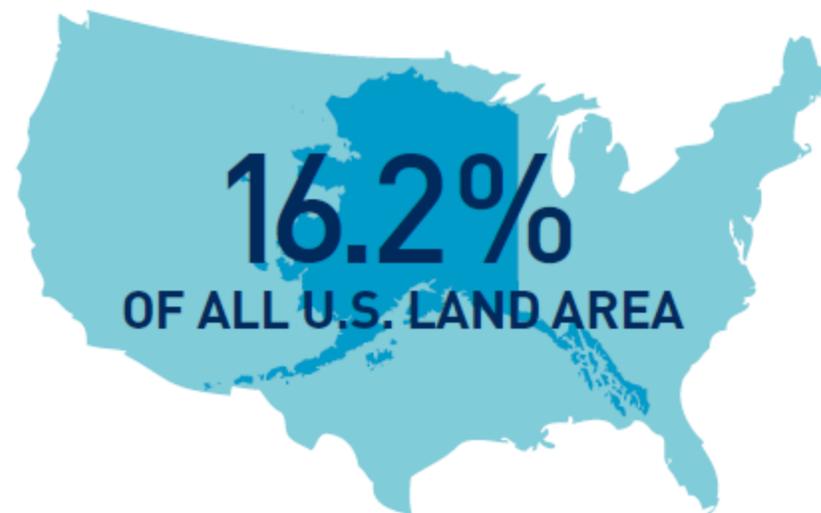
Alaska Healthcare Economics and Barriers

ALASKA IS DIFFERENT - GEOGRAPHIC DIVERSITY

Enormous spaces, sparsely populated

Geographically Vast

- 570,640 square miles of land represents 16.2% of all U.S. land area.
- 6,640 miles of coastline, more than 50% of the entire U.S.
- The state of Alaska is the largest state in the USA - more than twice as large as the next largest, Texas.
- Not only is Mt. McKinley the highest mountain in North America, but Alaska has 15 other peaks higher than any in the continental U.S.



A Dispersed People

- 2012 population of 731,449, less than 0.25% of the United States total population.
- Lowest population density of all states in the USA with 1.2 residents per square mile. The next closest is Wyoming with 5.85. The U.S. average is 87.4.



Alaska is a large state in many regards and small in many other ways.

Everything Costs More In Alaska

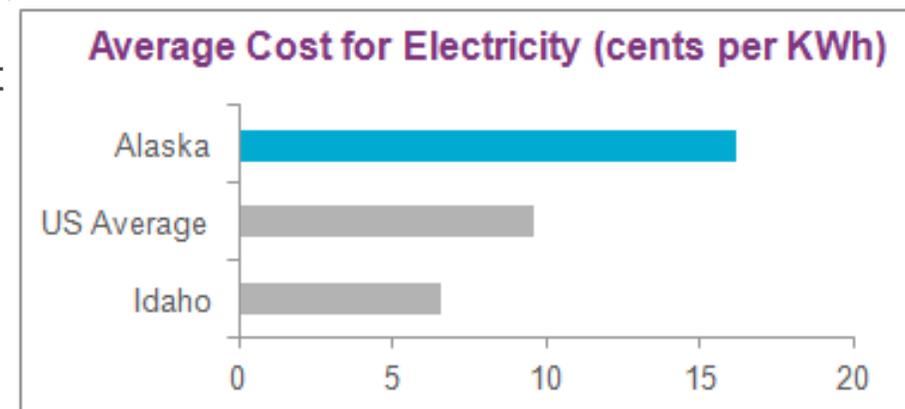
Transportation Challenges within the State

- Juneau is the only state capital not accessible by the road system.
- There are more than 139 communities in Alaska that are isolated from the public road system.
- Transporting people/patients is often limited to weather conditions
- Accessing some bush locations is limited to boat or float plane only



Cost of living is high and varies dramatically

- Energy costs are 40-50%+ higher than the national average, 125%+ higher than the least expensive state, Idaho.
- Energy costs in several rural communities can be 9 times national average



Alaska is Urban, Rural and Bush

- Alaska has Urban, Rural and Bush locations
- Central Anchorage, Fairbanks, and Juneau are our "urban" markets
- Rural communities are non-urban but typically connected by a road or other infrastructure, such as fiber optic cable
 - Examples: Kenai, Delta Junction, Sitka and Kodiak
- Bush is defined as geographically and infrastructure isolated from the rest of Alaska and the world – spread out over more than 1,000 miles
 - Most of these communities cannot be accessed by road
 - Most of these communities are off the power grid
 - Most of these communities have satellite, or possibly microwave communications links
 - Bush community populations range from less than 50 to about 1,000
- All of the locations in the Alaska Rural Veterans Telehealth Project are Bush

Sample 50 Bush communities in Alaska

Community	Population	Accessibility	Backhaul Type	Community	Population	Accessibility	Backhaul Type
Chignik Lake	69	Air	Satellite	Ivanoff Bay	30	Air, Water	Satellite
Hughes	78	Air	Satellite	Old Harbor	208	Air, Water	Satellite
Huslia	299	Air	Satellite	Ouzinkie	178	Air, Water	Satellite
Kaltag	205	Air	Satellite	Pedro Bay	47	Air, Water	Satellite
Port Heiden (Meshik)	101	Air	Satellite	Perryville	130	Air, Water	Satellite
Nikolski	16	Air	Satellite	Pilot Point	88	Air, Water	Satellite
Nulato	275	Air	Satellite	St. George	97	Air, Water	Satellite
Port Graham	171	Air	Satellite	St. Paul	479	Air, Water	Satellite
Port Alsworth	156	Air	Satellite	Thorne Bay	496	Float Plane	Microwave
Karluk	37	Air, Float Plane	Satellite	Point Baker	14	Float Plane	Microwave
Northway	76	Air, Road	Microwave	Alcan Border	24	Road	Satellite
Gustavus	460	Air, Water	Microwave	Kokhanok	179	Air, Water	Satellite
Hoonah	753	Air, Water	Microwave	Koyukuk	97	Air, Water	Satellite
Kake	579	Air, Water	Microwave	Larsen Bay	89	Air, Water	Satellite
Kasaan	66	Air, Water	Microwave	Nelson Lagoon	45	Air, Water	Satellite
Klawock	813	Air, Water	Microwave	Nondalton	164	Air, Water	Satellite
Seldovia	243	Air, Water	Microwave	Angoon	466	Water, Float Plane	Microwave
Yakutat	656	Air, Water	Microwave	Coffman Cove	170	Water, Float Plane	Microwave
Akhiok	82	Air, Water	Satellite	Elfin Cove	18	Water, Float Plane	Microwave
Atka	58	Air, Water	Satellite	Halibut Cove	77	Water, Float Plane	Microwave
Chignik	102	Air, Water	Satellite	Pelican	83	Water, Float Plane	Microwave
Chignik Lagoon	77	Air, Water	Satellite	Port Protection	53	Water, Float Plane	Microwave
Egegik	113	Air, Water	Satellite	Tenakee Springs	145	Water, Float Plane	Microwave
English Bay (Nanwalek)	276	Air, Water	Satellite	Akutan	1,040	Water, Float Plane	Satellite
False Pass	37	Air, Water	Satellite	Port Alexander	62	Water, Float Plane	Satellite

17 communities on terrestrial microwave networks, 33 on satellite

Alaska Healthcare Economics and Barriers

BARRIERS DELIVERING TELEMEDICINE

Cost of Transport

Average Satellite Costs

- **Average minimum for 1Mbps**
 - About \$2,600 for dedicated symmetrical bandwidth
 - About \$3,900 for a single T1 or 1.5 Mbps
 - Cost can fluctuate based on rural location and current availability
- **Average minimum cost for FCC minimum recommended bandwidth to a rural clinic**
 - 10Mbps x \$2,600 = \$26,000 per month
 - Best case as service is typically sold as T1's only
 - This is for a dedicated connection
 - Non-shared bandwidth
 - Symmetrical bandwidth (same up load and download speeds and capacity)
 - Only dedicated connections can truly support demands of healthcare applications
- GCI's RUS-funded fiber/microwave Terra SW service is several times more expensive than satellite service

Rural Health Center Costs

- **Universal Service Administrative Company (USAC)**

- **Primary Program**

- Rural Urban Difference
 - Service delivered over traditional T1s
 - Require 7 T1s for full 10 Mbps
 - 7 times \$198.30 = \$1,388.10 per month health center owes

- **Healthcare Connect Fund**

- 65% flat subsidy
- Average minimum \$39,000 per month total cost
 - \$13,650 per month health center owes

- **Real World Example**

- **Alaska Healthcare Provider (HCP)**

- Purchased 9 Mbps transport and 6 Mbps Internet
- Requires 6 T1's costing a total of \$1,189.80 (Urban rate, what the HCP pays)
- Internet content at an average of \$50 per Mb - \$300, RHD cost \$75, HCP cost \$225
- Total monthly HCP cost \$1,414.80

Alaska compared to the lower 48 states in creating Highly Reliable Telemedicine

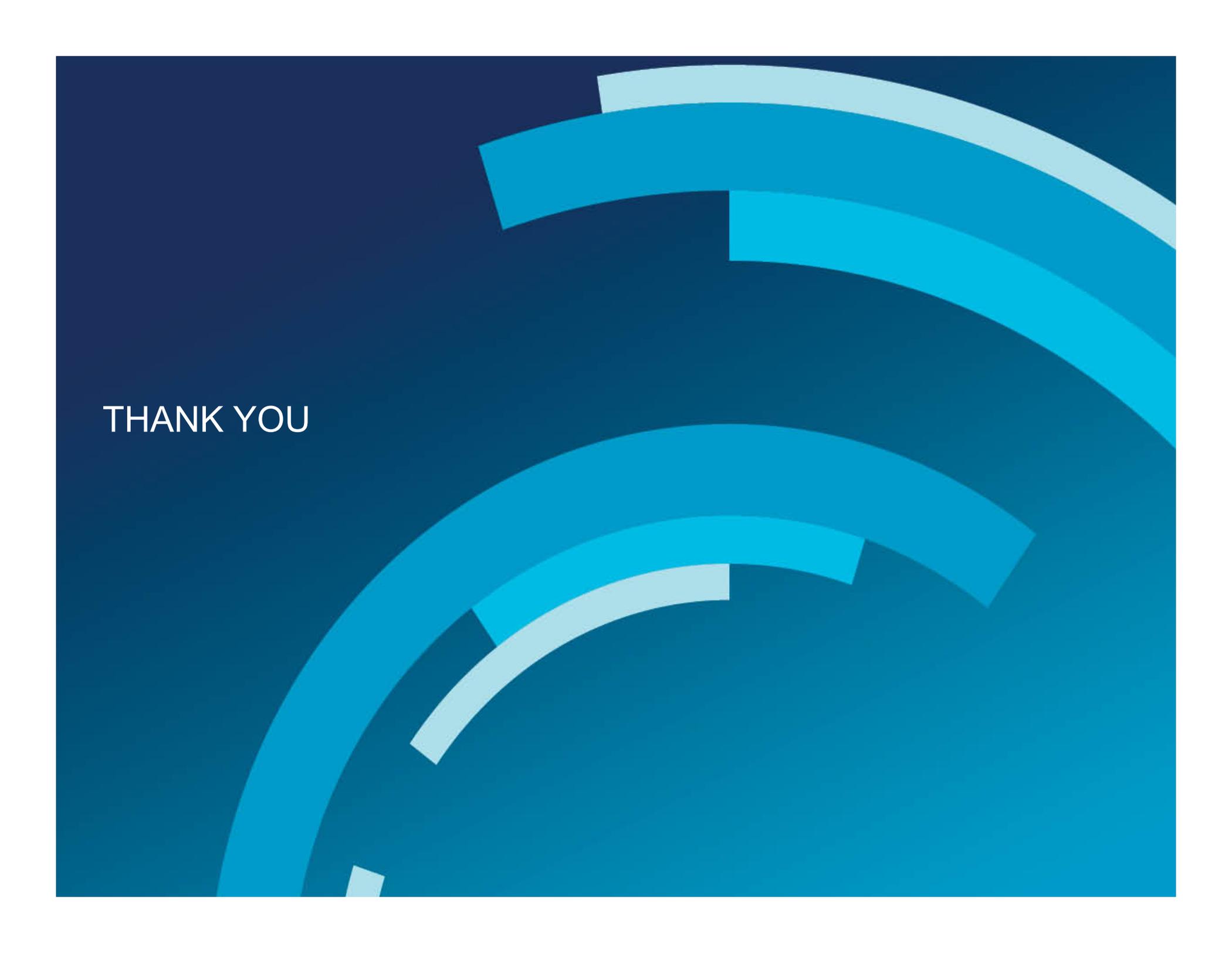
- **Most health centers across the country have reliable networks**
 - More network infrastructure
 - Access to geographically diverse, redundant network paths
 - Increased competitions reducing cost of telecommunication services
 - Excellent road system for quick access for service repairs
 - Provides for the delivery of highly reliable telemedicine
- **Most health centers across Alaska have limited reliable networks**
 - Extremely limited infrastructure developed
 - Lack of redundant network paths
 - No secondary network paths
 - Geographic
 - Lack of population density
 - Economic sustainability
 - Limited competition (population, geographic locations) increases costs of telecommunication services
 - Lack of road system and limited access to communities (weather, geography, cost, forms of transportation)

Current State of RHC and HCF

- HCP's currently allowed to participate in Telecommunications Program and Healthcare Connect Fund (HCF) at the same time
 - Example: Telecommunications program for rural / urban difference, and HCF for better Internet discounts
- **In Alaska the HCF goals are more difficult to obtain**
 - Increase Access to Broadband for Health Care Providers, Particularly Those Serving Rural Areas
 - Foster Development and Deployment of Broadband Health Care Networks
 - Maximize Cost-Effectiveness of Program
 - Administrative efficiency and value of services delivered
- **Barriers to Obtain These Goals in Alaska**
 - 65% discount of Telecommunication Services would lead to much higher costs for HCP's in Alaska
 - HCP's must participate in both the Internet and Telecommunications parts of the HCF to take advantage of additional services, such as network management and equipment to build private networks.
 - HCP's in Alaska will continue to use the RHC program for Telecommunications service to receive discounts at the rural/urban difference, and therefore not be able to take full advantage and obtain the goals of the HCF

Our Ask

- Requested Support Change
 - Allowing the additional components of the HCF such as equipment and network management to be funded when HCP's participate in the RHC Telecommunications Program for transport and the HCF Program for Internet service would help resolve the high cost for these services in Alaska, and allow HCP's to obtain the goals laid out in the HCF.

The background features several overlapping, curved bands in various shades of blue and teal, creating a sense of depth and movement. The bands are arranged in a roughly circular pattern, with some appearing as solid lines and others as more complex, layered shapes. The overall effect is a modern, geometric design.

THANK YOU