Vision
A Native Community that enjoys physical, mental, emotional and spiritual wellness

Mission
Working together with the Native Community to achieve wellness through health and related services
Customer Ownership
Operational Principles

R elationships between customer-owner, family and provider must be fostered and supported
E mphasis on wellness of the whole person, family and community (physical, mental, emotional and spiritual wellness)
L ocations convenient for customer-owners with minimal stops to get all their needs addressed
A ccess optimized and waiting times limited
T ogether with the customer-owner as an active partner
I ntentional whole-system design to maximize coordination and minimize duplication
O utcome and process measures continuously evaluated and improved
N ot complicated but simple and easy to use
S ervices financially sustainable and viable
H ub of the system is the family
I nterests of customer-owners drive the system to determine what we do and how we do it
P opulation-Based systems and services
S ervices and systems build on the strengths of Alaska Native cultures
Core Concepts

Work together in relationship to learn and grow
Encourage understanding
Listen with an open mind
Laugh and enjoy humor throughout the day
Notice the dignity and value of ourselves and others
Engage others with compassion
Share our stories and our hearts
Strive to honor and respect ourselves and others
Objectives

- Describe study AIM 1: Brief review of Stakeholder understandings and preferences
- Describe AIM 2: Preliminary findings
- Describe AIM 3: Present study
Project Aims Overview

Aim 1
• Explore stakeholder preferences and needs regarding pharmacogenetics (PGX) & PGX use to guide tobacco cessation

Aim 2
• Identify and characterize polymorphic CYP2A6 and CYP2B6 variation

Aim 3
• Identify relative contributions of patient, clinical, and genetic factors to successful tobacco cessation
Objectives

- Describe study AIM 1: Brief review of Stakeholder understandings and preferences
- Describe AIM 2: Preliminary findings
- Describe AIM 3: Present study
Southcentral Foundation population
Research Preferences – Ensure Ethics

Abide by oversight

Return of individual results

No conflict of interest

Limit medical record entry

Secure data collection and handling
**The Good**

- "If there was something out there that could help me quit smoking"
- "That next big step"
- "Anything we can do"
- "The more individualized you can get it, then the better"

**The Bad**

- "Too much information that’s in the wrong hands can be harmful."
- "Nobody wants to be labelled or typecast."
- "People have been experimented on."
- "I imagine it not being very cost effective."

*Alaska Native People Shaping Health Care*
Objectives

- Describe study AIM 1: Brief review of Stakeholder understandings and preferences

- Describe AIM 2: Preliminary findings

- Describe AIM 3: Present study
Diverse Culture and Heritage
CYP2A6 Variation in SCF Population

Important SNVs
89 SNVs total
12 “common” SNVs
43 singletons

- 6/7 common SNVs from Tanner et al. 2017 were also found in the data; predicted to be gain of function SNVs
- Higher than expected 3HC/COT ratios in Yup’ik population – related to Tanner haplotype frequency?
- Some SCF subgroup differences in allele frequencies
Discovery Sub-Aim

- Randomly selected 288 DNA samples from 6 cultural subgroups:
  - Inupiaq (n = 56)
  - Yup’ik (n = 59)
  - Athabascan (n = 55)
  - Aleut/Aluutiq (n = 46)
  - Tlingit/Tsimshian/Haida (n = 39)
  - American Indian (n = 33)

- Sequenced all exons, introns, 5’-flanking and 3’-flanking regulatory regions of the CYP2A6 gene
Significance
Rare Coding SNVs

rs1809810 - PHE, TYR (exon 8)

Both Aleut

CYP2A6*18A - decreased activity
Expected Duplications and Recombinations

A.

Hybrid variant: CYP2A6 and CYP2A7 (*12)

Deletion of CYP2A6 (*4)

Non-homologous crossing over

Reported for Yup’ik Population

Binnington et al, 2012
Objectives

- Describe study AIM 1: Brief review of Stakeholder understandings and preferences

- Describe AIM 2: Preliminary findings

- Describe AIM 3: Present study
Present study: Aim 3

- Observational study to identify sociodemographic, clinical and genetic factors which aid AN/AI people to quit smoking.
- Will follow 150 participants for 6 months with three points of data collection (intake, 6w, 6mo). N=83
- Sociodemographic questionnaire, nicotine dependence, self-efficacy, readiness to quit, expelled CO, treatment type and persistence, TC success, blood, and urine.
Research Partnerships in AIM 3

• Work with SCF Health Education’s Quit Tobacco Program

• Study visits in Primary Care Center with CMAs that customer-owners are used to seeing
Questions?
Thank You!

Qaغاasakung  
Aleut

Quyanaa  
Alutiiq

Quyanaq  
Inupiaq

Awa’ahdah  
Eyak

Mahsi’  
Gwich’in Athabascan

Igamsiqanaghhalek  
Siberian Yupik

Háw’aa  
Haida

Quyana  
Yup’ik

T’oyaxsm  
Tsimshian

Gunalchééesh  
Tlingit

Tsin’aen  
Ahtna Athabascan

Chin’an  
Dena’ina Athabascan