Using Smartphones to Overcome Language and Health Barriers
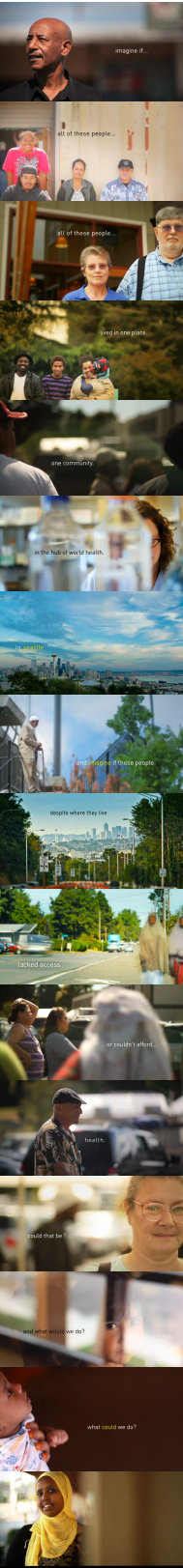
By Jared Clement (CSE), David Cohen (CSE), Steve Naranjo (HCDE), and Khadija Qader (HCDE)

Challenges Close to Home

In the Tukwila–SeaTac area, compared to King County averages:

- Life expectancy is seven years shorter
- Residents have little or no access to basic health services and economic opportunity
- Number of households below the poverty line is 76% higher
- 11% of residents do not speak English at home
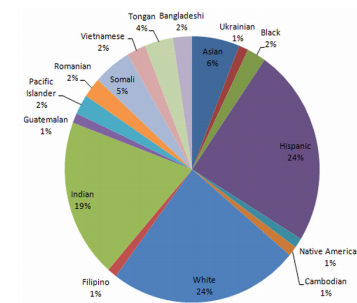
Ethnicity of Patients Who Visited New Hope Health Center in Tukwila

Global to Local

The Global to Local Initiative (G2L):

- Building on the expertise of Washington State's global health institutions
- Bringing home strategies that have proved effective in addressing health in developing countries.

SWEDISH

Public Health
Seattle & King County

HealthPoint

Washington
Global Health
ALLIANCE

Our Solutions

Over-the-Phone Community Interpretation

Step 1 - Client sends SMS to service from any cell phone

Step 2 - SMS fielded by server, which finds available interpreters (or responds to client explaining upcoming availability)

Step 3 - Server sends SMS to available interpreters, who have Android phones running our application

Step 4 - Application on interpreters' phones gets SMS and displays request

Step 5 - Interpreters confirm or reject request. First confirmation back to the server wins.

Step 6 - Server sends phone number of the client to winning interpreter, and interpreter's Android phone places call back to client (client's phone sees blocked Caller ID, not interpreter's phone number).
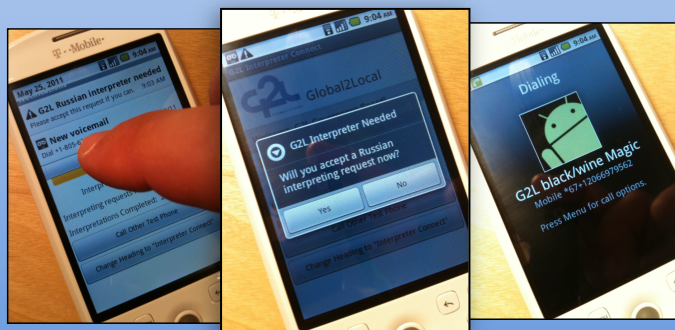
Diabetes Screening (Open Data Kit)

Encouraging preventive care: Diabetes risk screening by community health workers

Mitigating language barriers: Over-the-phone interpretation by community volunteers