

# **A Look at the Health Care Interpreter Network (HCIN) Underlying Technology**

---

A Collaborative Solution for  
Access to Language Interpretive  
Services

Ray Otake

Chief Technologist

Paras and Associates

[rotake@parasandassociates.net](mailto:rotake@parasandassociates.net)

# Hospital Systems in the HCIN Collaborative

---

- San Joaquin General Hospital
- Contra Costa Health Services
- San Mateo Medical Center
- Riverside County Regional Medical Center
- Rancho Los Amigos (LA)
- LA County-USC Medical Center
- Kern Medical Center



## Connected and Installation in Progress

- Harbor-UCLA Medical Center
- Olive View–UCLA Medical Center



# What HCIN Does

---

- Interpreters are located in public hospitals across the State and are shared in a “virtual call center”
- Includes Voice and Video Interpretation Calls
- Among member hospital systems, routes over 6,000 interpretation calls per month
- Spanish is the predominate language with about 12 languages supported by HCIN interpreters; and 120 languages with the backup by Language Line
- Public hospital collaboration with the fiscal agent being Contra Costa Regional Health Foundation
- HCIN is managed by Paras and Associates

# HCIN Operates in a Range of Clinical Settings

---

- Most Common:
  - All hospital ED's and Trauma Centers
  - Hospital Specialty and Primary Care clinics
- Also:
  - Some in In-patient wards, Lab and Pharmacy
  - San Joaquin County Health Services Behavioral Health, neighborhood based health centers, and the jail health center
  - Rancho Los Amigos Rehabilitation Center
  - San Mateo Medical Center Burlingame Long Term Care facility
  - Contra Costa Regional Medical Center hosted After-hours Nurse Triage Line

# For The Provider

---

- 97% answered in under 1 minute
- Access from every point of health care, ER, outpatient clinic, pharmacy, long term care
- Usually one to two buttons to push
- Trained Interpreters Respond 24-7, including ASL.
- During business hours Monday – Friday most calls are answered by HCIN interpreters

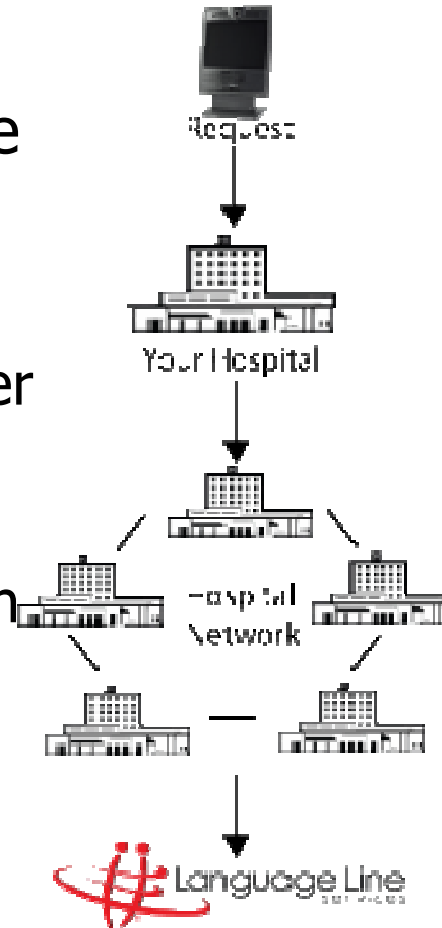
# HCIN Technology Features:

---

- HCIN Automatic Call Distribution (HCIN-ACD) System (“Brain” of the System)
- Audio and Video Interpretation
- Efficient Sharing of Interpreters across Hospitals
- Automatic rollover to contracted language services including American Sign Language

# Call Process

- Clinician initiates request on-demand by video device or phone
- Automated Call Distribution (ACD) routes request to an available interpreter inside your medical center
- If no local interpreters are available, ACD routes request to interpreters in hospitals in your network
- If no network interpreters are available, ACD routes the request to Language Line Services



# More Details on How It Works

---

- Interpreter logs in, and associated with the login is an “Interpreter Profile”
  - Hospital System (e.g. San Joaquin General Hospital)
  - Language (e.g. Spanish)
  - Sex (e.g. Male)
  - Special Proficiency (e.g. Mental Health)
- Interpreters use Video Phones for video and audio calls
- Providers use Video device or own phone system telephone to request for Interpretation. Calls are identified by:
  - Hospital System automatically is determined (e.g. SJGH)
  - Language request (e.g. Spanish)
    - Option for “In-person” interpretation
- HCIN-ACD tries to match the Call to the “logged in” and available Interpreter



# How It Works II

---

- HCIN Automatic Call Distribution Programming Rules
  - Try your own medical centers' Interpreters first
  - Then try your priority business partners (e.g. LA County Hospitals sharing)
  - Then try HCIN partners
  - Then go to an outside contracted Language Services provider (e.g. Language Line)
- No Dispatching Staff is Needed
- Caller and Interpreter are connected
  - 97% of all calls are connected within 1 minute
  - Data stream is point-to-point between Caller and Interpreter
  - Very small amounts of monitoring data continue to flow to the HCIN-ACD
- Hospitals are staffed so that most of the calls (80%) are handled internally
  - Best practice for operational and technical reasons

# About the HCIN Call Center and Data Network

---

- HCIN Call Center including the Automated Call Distribution Server is based on Cisco Voice Over IP technology
- Located in a 24-7-365 monitored state-of-the-art Network Operations Center
- Data travels over a AT&T Private Multi-Protocol Layer Switched Broadband Network dedicated to Language Interpretation: NO Internet Access on the Network
- Data travels across hospital controlled firewalls into local hospital data networks dedicated to HCIN traffic

# Key Features: Video

---

- Video in addition to Audio
  - If caller is using a Video phone then connection is with Video
  - If the caller is using telephone, then connection is Audio only
  - Bandwidth for Video call is about 470kbps
    - For calls within a Hospital generally not a problem
    - Outside a hospital with a single T1 broadband connection, 3 concurrent video calls can be easily supported
- Video call averages 13 min. and audio call averages 9.5 min.
  - Anecdotally, more information is communicated than in an audio call

# Features: Hospital Uses Its Own Phone System

---

- Special telephones used by some vendors are not necessary.
- Audio Telephone calls for Interpreters use the hospital's current phone system.
- Recommend a variety of phones to plug into existing phone system. For example:
  - Dual handset adapters
  - Cordless dual handset or dual headset phones
- Staff call an extension that is designated by the hospital as the “gateway” to HCIN-ACD.
- Call is handled like the video call.

# Features: Interpreter Sharing

---

- Scope of Languages is broadening
  - Internal to HCIN
    - Hmong Interpreter in San Joaquin GH
    - Korean in Rancho Los Amigos Nat'l Rehab Center Los Angeles
    - Tongan in San Mateo Medical Center
- Allows for optimized use of own interpreters
  - Optimum 80% of calls handled internally
  - Better use of staff with “bilingual premium”

## ***Sample HCIN Monthly Shared Services Report (Hospital System A)***

	<b>Call Count</b>	<b>Total Minutes</b>	<b>Credit (Debit)</b>
<b>Calls Handled Internally</b>	318	2,869.43	
<b>Calls Sent to Other HCIN Interpreters</b>	256	2,596.65	(\$1,818.39)
<b>Calls Received from Other HCIN Users</b>	652	6,143.07	\$4,607.30
	<b>Total Monthly Balance:</b>		<b>\$2,788.91</b>

\* All Calls are Charged \$.75/ min.

\*\* Calls between LA County Hospitals are \$0.00.

# Programmatic Value to this Technology

---

- “Economies of scale” to manage and operate these technologies
  - e.g. shared automated call distribution
- “Economies of scale” of having a large, distributed Spanish interpreter pool.
  - This boosts productivity to 25-30 encounters/day, even for a single hospital with 1 or 2 interpreters.
- “Economies of scale” in covering evening and weekend shifts in Spanish
- “Economies in scale” in coverage of other languages
  - Might not warrant full-time interpreters in one hospital, but can be very productive in serving multiple hospitals.

# Questions?

---