Health Care Providers in Historically Underserved Communities: The Charles Drew University Experience

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Overview

- Profile of California’s Underserved Communities
- History, Structure, Mission of CDU
- Unique Elements of CDU Educational experience
- Program effectiveness
- Delivery System Innovation/ Demonstration projects
Under served Communities/Conventional Wisdom

- Most Health Profession Shortage Areas (HPSA) located in rural/frontier locations
- Physician Shortages are primarily (almost exclusively) related to primary care deficits
- Deficits relative to specialty care primarily confined to rural areas
- Urban (inner city) physician deficits exist (but magnitude, distribution and impact modest relative to rural burden)
Majority of primary care HPSAs located in rural communities
- Rural 139 HPSAs versus Urban 83 HPSAs

Majority of population residing in HPSAs are in urban communities
- Urban HPSAs: 8,688,702
- Rural HPSAs: 2,515,342

Urban population majority even in ‘extreme’ HPSAs
- Urban extreme HPSAs: 3,733,091
- Rural extreme HPSAs: 1,383,203
Underserved/California Reality

Specialty Care HPSAs

- Specialty care profile masked by inappropriate unit of measurement
  - Extreme geographic maldistribution at community level (160/100,000 vs 12/100,000)

- Most specialty care HPSAs in rural communities
  - 165 Rural HPSAs
  - 101 Rural HPSAs

- Majority of population residing in specialty care HPSAs urban
  - Urban HPSAs 10,437,085
  - Rural HPSAs 3,185,372

- Extreme specialty care HPSAs
  - Urban extreme > 6,000,000
  - Rural extreme approx 3,000,000
History

- Watts rebellion 1965/ McCone Commission Report
  - Martin Luther King Jr. County Hospital (Public)
  - Charles R Drew Post Graduate Medical School (Private)

- CDU/University of California partnership
  - CDU/UCLA Medical Education Program (M.D.)

- Establishment of College of Allied Health
  - First Physician Assistant program in California

- Only institution designated both Historically Black (Graduate) Institution and Hispanic Serving Health Professions School
CDU Mission

To Conduct education, research, and clinical service in the context of community engagement to train physician/health profession leaders who provide care with excellence and compassion, who promote health, and who transform the health of diverse and underserved communities.
Charles Drew University

- College of Medicine
  - Postgraduate medical education programs (Residencies)
  - CDU/UCLA medical education program (M.D.)

- College of Science and Health
  - Allied Health Professions

- School of Nursing
  - Graduate Nursing programs
CDU specific Program
Elements

- Admissions
- Longitudinal primary care clerkship experience
- Medical Thesis
- Urban Underserved College
- Clinical Training sites (unique single site to geographically distributed network)
CDU/UCLA Program
Effectiveness

- Program promotes significantly greater **intent** to serve diverse and underserved communities

- Graduates have significantly greater likelihood to **practice** in diverse and underserved communities

- ‘**Best Performer**’ in UC system for graduating under represented minority physicians (AA, HA, API)
CDU GME Program
Effectiveness

- Graduates of primary residencies **2.5 times** more likely to practice in underserved communities than other primary care physicians

- Graduates of specialty residencies **3.5 times** more likely to practice in underserved communities than other specialty physicians

- 1/3 of all minority physicians practicing in Los Angeles County trained at Charles Drew
Academic Performance

- Admissions: mission specific – highly selective

- Thesis Program

- AOA Performance

- Residency placement – excellent match results
CDU Core Values

- Excellence, Innovation, Leadership
- Commitment, Perseverance, Discipline
- Courage, Compassion, Family
The Urban Telemedicine Experience

Prototype models in South Central Los Angeles

California Health Policy Forum

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Director, Charles Drew Urban Telemedicine Center of Excellence
Brief Overview

- Evolution of CDU Telemedicine program
  - Public housing network
  - Public hospital delivery system network
  - Mary Henry Telemedicine Clinic
  - Primary care safety net consortium

- Observations/ Future Considerations
Telemedicine

- Remote delivery of health care and health information through the electronic transfer of medical and health information between distant sites and participants.

- Transmission of video, audio, still images and text.

- Strategy to increase access, improve quality and reduce cost of underserved communities.
Conventional wisdom against Urban Telemedicine

- Too many specialists in urban areas
- Relatively small number of urban residents affected
- Individuals affected in close proximity to high density physician areas
- Magnitude of specialty deficit not as great
Comparison to U.S. Cities
(Official Census 2000)

- King-Drew 5 mile radius service area - 721,188

Total City Population
- Oakland - 399,484
- Atlanta - 416,474
- Las Vegas - 478,434
- Seattle - 563,374
- Wash., D.C. - 572,059
- Boston - 589,141
- Baltimore - 651,154
- San Francisco - 776,733
Urban Specialist Distribution

- High population impact and extreme demographics (HPSA)
- Non random HPSA distribution (islands??)
- Magnitude of deficit as great or greater
- Burden of disease (demand) is very high
Public Housing Network
CDU Telemedicine Program

- Not an academic exercise
- Not driven by technology
- Need based
- Provider driven
- Opportunistic
- Multi-generational/ Phased growth
Impetus for Telemedicine Intervention

- Five ophthalmologist/service area of 1.5 million residents
- Prolonged waiting time/patient backlog
- Profound effect of delayed care
Catalyst for Telemedicine Intervention

- LA County Community Development Commission (Public Housing Authority)
- Well defined low access communities
- Availability of clinical champion(s)
Los Angeles Public Housing Communities

- LA County Public Housing Commission/DCU partnership
- Carmelitos (Long Beach)
- Nueva Maravilla (East Los Angeles)
- Ujimaa Village (South Central Los Angeles)
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Teleophthalmology System

- Specialist hub site
- **Telemedicine room**
  - Care link workstation, multiple screens
  - Central server
  - ISDN connectivity
Teleophthalmology System

n Community Site
  n Fully equipped exam suite
  n Slit lamp biomicroscope with CCD single chip digital video
  n Indirect ophthalmoscope with CCD single chip video
  n Robotically controlled free standing digital camera
    n Patient interviewer
    n Provider to provider consultation
    n External exam

n Personnel
Public Housing Network Outcomes / Lessons Learned

- Enhanced Access to Primary Eye Care
- Timely Subspecialty Consultation/Decision Support
- Well received by local public housing residents
- Job training vehicle for local residents
- Established Feasibility / Proof of concept
Public Hospital Delivery System
Network
Public Hospital “Integrated” Delivery System

- King/Drew Medical Center (tertiary hub)
- HHH Comprehensive health center (high volume ambulatory center)
- Community-based County clinics
  - Imperial Heights
  - Dollarhide
  - Compton
  - Bell Gardens
Rationale: Public Hospital System Telemedicine Intervention

- Ophthalmology received highest number referrals within system
- Significant waiting time/backlog for serious eye conditions
- Significant influx of referrals for vision care and primary eye care services
- Rapidly increasing “chronic disease” burden due to diabetes and HIV
- Poor communication and continuity of care between tertiary center and outlying county clinics
Public Hospital System Outcomes/Lessons Learned

- High volume compared to other published studies
- Quality and quantity of teleophthalmology interactions highly dependent on ancillary personnel
- Confirmatory validation studies performed
- Significant impact on time to treatment and continuity of care
Mary Henry Pediatric Telemedicine Clinic
Mary Henry Telemedicine Clinic

- ‘Single site system’ (versus network)
- True multi-specialty telemedicine cart
- End user (specialty-specific) standardized clinical protocols
- Telemedicine Technician
Primary Care Safety Net
Consortium Network
Regional CHC Consortium

- FQHCs and look alikes represent backbone of Primary Care Safety Net
- Eight clinics geographically distributed across South Central Los Angeles
- Uniformly poor access to specialty services
- Opportunity for regional assessment and coordination of care
Charles R. Drew CHC Telemedicine Network
Impetus: CHC Consortium telemedicine intervention

- Unabated increase diabetic clinic population
- Profound deficit/inaccessibility to specialist
- Successful FQHC pilot study
- University of California sponsored telemedicine expansion
- Store and forward teleophthalmology now billable in California
Driven by local CHC clinic need

DSL (instead of T1)

Web based (instead of closed system)

Embedded in Primary Care Clinic
Current CDU Telehealth Initiatives

$ 5 million University of California Telemedicine Grant
- Geographically distributed medical education network
- Medical Education Simulation Center enhancement
- Safety Net integrated care telemedicine initiative

- Mervyn Dymally School of Nursing
  - Comprehensive Simulation Center
  - Nurse managed chronic disease telehealth center
  - Mobile Telehealth Vans
n Recognize urban telemedicine as a powerful tool for system change

n Need for identification and evaluation of different models of care (Public health model, managed care business model, etc)

n Need to address ‘Elephants’ directly and identify unique role of telemedicine in addressing health disparities

n Need for urban telemedicine demonstration project
Thank you...
Observations/Future Considerations
Urban (high volume) Telemedicine as a tool

- Decision support
- Evidence based care
- Workflow enhancement
- Provider and patient education
- System and information integration
Urban (high volume) Telemedicine as a tool

- Disease Management
- Surveillance/ triage
- Care coordination
- Electronic data platform
- Enhancement of Quality and Safety measures
Observations / Considerations

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