Strategies to Assure Access and Equity: Service Learning; Postdoctoral Residency Training and Educational Entrepreneurship as a Workforce Initiative

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Amino Acids:

- Health policy
- Social policy and social justice
- Workforce initiatives
- Partnerships/Collaboration
- Service learning
- On Line education/ outcomes assessment/ and distance learning /MOOC
- Economic viability
- Lifelong learning
- Educational entrepreneurship/disruptive innovation
Facts:

- Access to oral health services remains a critical problem for the underserved in the US.
- The safety net is fragmented and facing serious resource challenges in the current economy.
- The Lutheran Medical Center (LMC/LFHCN), a Federally Qualified Health Center (FQHC), has developed innovative post-doctoral residency programs. The distributed educational program places residents in FQHCs within 24 states, territories and internationally as a means of increasing access; ameliorating recruitment and retention issues.
- This service/learning initiative has been a national resource for workforce solutions.
- Accreditation of all training sites by CODA/ADA is a major objective.
Issues:

- **Health policy issue: To increase access to oral health care; workforce solutions**
  - Difficult to recruit & retain providers
  - Limited resources
- **Solution: Collaborative Partnerships**
  - Each resident provides dental services for 1 or 2 years at an assigned CHC (clinical training site)
  - Salaries/Fringes/Benefits of residents paid by LMC
  - Stable and ongoing manpower resources
  - Create alternative career pathway
- **Integration of service learning within FQHC**
- **Economic viability and sustainability**
- **Educational entrepreneurship**
- **Distance learning**
- **Faculty development and loan repayment**
Vision/Mission/Health Policy:

• Mission of LMC Dental “Institution Without Walls”
• Consistent with assuring equity and increasing access for community residents
• Consistent with HRSA oral health areas of focus
  ✓ Access to quality through community partnerships
  ✓ Eliminate disparities
  ✓ Improve oral health outcomes
• Consistent with goals/objectives of many state/country oral health plans and the US surgeon general’s report (Healthy People 2020)
• First teaching health center in country (1973)
Our Mission

To develop and grow a national oral health program that sets global standards for technologically advanced, culturally competent, patient-centered dental training; is grounded in service and collaboration; and delivers exceptional oral health care to the world’s neediest citizens and its most underserved communities.
Background:

- Lutheran Medical Center is a 476+ bed teaching hospital
- Level 1 Trauma Center
- Largest hospital-based Federally Qualified Health Center in the country (1968)
- 600,000+ medical encounters at main site
- 80,000+ dental encounters at main site
- 300,000+ dental encounters at extramural partnership sites
- School Health Program (44 schools/19,000 patients)
- Culturally Diverse Patient Populations
The Lutheran HealthCare System

- Lutheran Medical Center
- Lutheran Augustana Center for Extended Care and Rehabilitation
- Lutheran Family Health Centers
- School-based Dental Clinics
- School-based Health Centers
- Health Plus Offices
- Lutheran HealthCare Medical Arts Pavilion
- 58th Street Administrative Offices
- Senior Housing

Indicates new, renovated or expanded site
The largest community health center-based residency program in the world

Lutheran Medical Center Dental places new postgraduate dental residents in fully equipped extramural Clinical Healthcare Centers (CHC) and Indian Health Services (IHS) affiliate clinics in the United States and internationally.
Collaborative Partnerships:

- Community Health Centers
- Health Departments
- Indian Health Services
- Correctional Health Systems
- United States dental schools
- International dental schools
- Group practices (profit & non-profit)
- Managed Care Organizations
- Veterans Administration
- Community Hospitals
- Health Science Centers
- Area Health Education Centers
- Other Ambulatory Care Organizations
Dr. Jenny Spera, LMC AEGD resident, treats a patient for volunteer community service.
<table>
<thead>
<tr>
<th>PRIMARY CARE DENTAL RESIDENCY (INITIAL PROGRAM YEAR)</th>
<th>ADA COMMISSION ON DENTAL ACCREDITATION (LATEST APPROVAL)</th>
<th>LENGTH OF PROGRAM</th>
<th>NUMBER OF RESIDENTS ENROLLED 2012-2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENERAL PRACTICE RESIDENCY 1974</td>
<td>2011</td>
<td>1 YEAR / OPTIONAL 2(^{\text{ND}}) YEAR</td>
<td>25</td>
</tr>
<tr>
<td>ADVANCED EDUCATION IN GENERAL DENTISTRY 1988</td>
<td>2011</td>
<td>1 YEAR / OPTIONAL 2(^{\text{ND}}) YEAR</td>
<td>170+</td>
</tr>
<tr>
<td>ADVANCED EDUCATION IN PEDIATRIC DENTISTRY 1994</td>
<td>2011</td>
<td>2 YEARS</td>
<td>72</td>
</tr>
<tr>
<td>ADVANCED EDUCATION IN ENDODONTICS 2004</td>
<td>2009</td>
<td>25 MONTHS</td>
<td>12</td>
</tr>
<tr>
<td>ADVANCED EDUCATION IN DENTAL ANESTHESIOLOGY 2008</td>
<td>2010</td>
<td>2 YEARS</td>
<td>10</td>
</tr>
<tr>
<td>ADVANCED EDUCATION IN PERIODONTICS 2012</td>
<td>2012</td>
<td>3 YEARS</td>
<td>3</td>
</tr>
<tr>
<td>ADVANCED EDUCATION IN OROFACIAL PAIN 2012</td>
<td>2012</td>
<td>2 YEARS</td>
<td>4</td>
</tr>
</tbody>
</table>
Developing a new clinical training site:

- LMC program administrators visit the training site
- Complete LMC site evaluation packet
- Formal affiliation agreement
- Locate regional video teleconferencing site
- Recruit and retain an Assistant Director
- Faculty development and program orientation
- Recruit and accept residents
- Training site development throughout the first year
- Commission on Dental Accreditation by the American Dental Association (CODA) performs a site visit and approves each clinical training site
Distance Learning (DL) Equity in education:

- LMC sponsors innovative curriculum models for post doctoral residency training programs.
- Synchronous DL via live video teleconferencing is one of several telecommunication methodology used to provide the didactic education to residents that are separated geographically.
- Conversion to asynchronous modules (Sakai/2011)
- Provides equity in the didactic education across all programs
- Curriculum meets Commission on Dental Accreditation Standards
• Residents perception of Distance Learning
  • Overall grade for DL component
  • 2010 survey results N=81
    ✓ 69% Excellent or above average
    ✓ 20 % Average
    ✓ 11 % Below average

• Community Health Center perception of accreditation
Education Site Expands Slate of Universities and Courses

By: TAMAR LEWIN
Published: September 19, 2012
On Line Education - Massive Open On Line Courses (MOOC)

• Coursera - founded by two Stanford University Professors
• 1.35 million students in free online courses
• 33 Partners including Columbia, Princeton, University of Pennsylvania, Stanford, Brown, Wesleyan, University of California, Mount Sinai School of Medicine, University of Florida, Hebrew University of Jerusalem, Vanderbilt University, Emory, University of London, University of Pittsburgh, Ohio State University, University of Maryland, Hong Kong University, University of Melbourne, Berklee College of Music, University of Michigan, University of Washington, Johns Hopkins, Duke, Rice, University of Virginia, Cal Tech, University of Edinburgh, University of Toronto
• 196 countries; one third from United States; next largest in Brazil, India
• Student mentoring; discussion groups
Massive Open Online Courses (MOOC)

- Enhance credibility and reputation of leading Universities
- Access and reach more students
- Revenue generation by issuing Certificates and Degrees
- Statement of accomplishment and grade
- Venture capital
- Implications for many professions facing critical faculty shortages in dentistry
Massive Open Online Courses (MOOC)

- Video recordings of lectures/paused every ten minutes/quiz
- Homework mid-term and final
- University provides courses and Coursera via the online platform
- Boosts lackluster completion rates
- Increases global access
- May drive down higher education costs
- Peer-to-peer grading calibration with faculty
Disruptive Innovation

- “The Innovators Dilemma” by Clayton M. Christensen
- Disruptive Innovation allows a whole new population of consumers at the bottom of a market access to a product/service/process that historically had been only accessible to consumers with a lot of money or a lot of skills
- Alternatively, disruptive innovation describes a process by which a product/service/process takes root initially at the bottom of a market and then relentlessly moves up market, eventually displacing established competitors/practices
Disruptive Innovators

Five Discovery Skills of Disruptive Innovators

• Questioning
• Observing
• Networking
• Experimenting/risk taking
• Associating/connecting

Types of innovators

• Start up entrepreneurs
• Corporate entrepreneurs (from within corporation)
• Product innovators
• Process innovators
Responsibilities of Health Center:

• Provides faculty supervision for residents
• Provides auxiliary support, equipment and supplies
• Provides patients and clinical experiences consistent with CODA standards
• Complies with assessment and evaluation policies
• Completes affiliation agreement
Responsibilities of Lutheran Medical Center:

- Pays salaries and fringe benefits for residents
- Health Center retains revenue
- Provides comprehensive curriculum through distance learning.
- Provides on line outcomes assessment and evaluation
- Provides accreditation and orientation support
- Faculty appointments
- Faculty development
Key Responsibilities of Regional Assistant Director:

• New Resident Orientation
• Management of Resident Requirements
  – Evaluation Monitoring and Sign-off
• Mock Site Visits
• Resident Early Leave Policy
• Resident & Health Center Recruitment
• Regional Day Organization for Residents
• Faculty & Resident Communication
• Faculty Development Meetings
The HealthPath Foundation of Ohio serves a 36-county area, representing the former service area of Hospital Care Corporation (a predecessor to Anthem Insurance Companies Inc.)
Develop an Idea of the Level of Readiness of a Program to Host Students/Residents

• Most clinics have the infrastructure to host students/residents; concept is similar to hiring another new (temporary) clinician.
• Clinicians need to be on-board with concept of providing direct/in-direct supervision to students/residents.
• A self-study (or self-assessment) would benefit the clinic to determine their ability to support student/resident with required faculty, staff and other resources.
• For resident training, resources must meet CODA standards.
Advantages to FQHC’s with Residents as Providers

- Increased opportunity for cultural diversity of clinicians
- Increased productivity
- Improved morale and
- Recruitment opportunities following graduation of residents
- Academic and/or hospital appointments for faculty
- CDE opportunities for faculty
- Potential opportunities for enhanced status as participant in educational consortium
- Potential opportunities for future placement of “specialist” trainees
Advantages to Residents placed in FQHC for Clinical Experience

• Diversity of patients
• Work in true “Group Practice” – environment applicable to future practice
• Learn practice management skills
• Can include rotations to neighboring or affiliated CHC’s to maximize clinical experiences
• High faculty to student (resident) ratio
• Opportunities for F/T or P/T placement at CHC following graduation
• Research opportunities
• Work with multiple healthcare providers and paraprofessionals
Societal Advantages of Residency Training in FQHC

• Cadre of graduates more motivated to care for poor patients
• Cadre of graduates oriented towards providing services in CHC’s F/T or P/T anywhere in the country
• Increase in oral health services provided to underserved during training of residents
• Increase in number of dentists in practice with experience working with a variety of health providers and staff
• Increased opportunities for oral health services research
• Increased opportunities for medicine / dental home for all Americans
## What a Clinic Should Expect From a School or Residency Program When Placing a Student/Resident

<table>
<thead>
<tr>
<th>Student</th>
<th>Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student may be pre-assigned</td>
<td>Selection of resident</td>
</tr>
<tr>
<td>Traditional rotations by weeks/months</td>
<td>Full-time, one year assignment</td>
</tr>
<tr>
<td>Program orientation</td>
<td>Program orientation</td>
</tr>
<tr>
<td>Program resources (manual, curriculum outline, in-service, administrative support, etc.)</td>
<td>Program resources (manual, curriculum outline, in-service, administrative support, etc.)</td>
</tr>
<tr>
<td>Opportunity to evaluate candidate as potential future resident</td>
<td>Opportunity to evaluate candidate as potential future employee</td>
</tr>
</tbody>
</table>
# What is Expected of a Clinic When Hosting a Student or Resident

<table>
<thead>
<tr>
<th>Student</th>
<th>Resident</th>
</tr>
</thead>
<tbody>
<tr>
<td>• More direct supervision from clinician-faculty</td>
<td>• More indirect supervision from clinician-faculty</td>
</tr>
<tr>
<td>• Dental assistant support (can be optional)</td>
<td>• Dental assistant support (is required)</td>
</tr>
<tr>
<td>• Selection of specific cases/procedures to meet the needs of the student</td>
<td>• Assignment of comprehensive, advanced cases to allow for case completion.</td>
</tr>
<tr>
<td>• Student integration (for example: orientation, department meetings, chart audits, etc.) into the dental team may be limited due to rotation timeline</td>
<td>• Resident must be fully integrated (for example: orientation, department meetings, chart audits, etc.) into the dental team</td>
</tr>
</tbody>
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## Understand the Potential Impact of Student/Resident Placement

<table>
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<th>Resident</th>
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</thead>
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<tr>
<td>• Potential greater impact on the productivity of clinician-faculty (supervision &amp; evaluation)</td>
<td>• Potential lesser impact on the productivity of clinician-faculty (supervision &amp; evaluation)</td>
</tr>
<tr>
<td>• Basic practice overhead (staff, supplies, materials, etc.)</td>
<td>• Basic practice overhead (staff, supplies, materials, etc.)</td>
</tr>
<tr>
<td>• Patient cases may less likely be completed</td>
<td>• Patient cases more likely to be completed</td>
</tr>
<tr>
<td>• Mentorship to student for clinic-based program pursuit</td>
<td>• Mentorship to resident for clinic-based practice pursuit</td>
</tr>
<tr>
<td>• Increased access to care for patients</td>
<td>• Increased access to care for patients</td>
</tr>
</tbody>
</table>
Real-World Service.

Lutheran Medical Center
DENTAL MEDICINE

Winslow Indian Health Care Center Inc.
Dental
Dilkon 928-657-3824  Leupp 928-686-6554
Winslow 928-289-6116
Patients in 2010 by Ethnicity

- Hispanic: 39%
- White: 20%
- African American: 12%
- Native Hawaiian/Pacific Islander: 9%
- Native American/Native Alaska: 9%
- Asian: 7%
- Unknown: 4%
Patients in 2010 by Age

- 3 mos - 1.4%
- 1 - 5 - 12%
- 6 - 12 - 20%
- 13 - 20 - 13%
- 21 - 30 - 12%
- 31 - 40 - 12%
- 41 - 50 - 12%
- 51 - 60 - 10%
- 61 - 70 - 6%
- 71 - 80 - 2%
- 81 - 90 - 1%
- Over 90 - .1%
- 3 mos - 1 - .4%
- 71 - 80 - 2%
Patients in 2010 by Payment Options

- Medicaid: 50%
- Selfpay: 14%
- Medicare: 2%
- Federal Assistance (IHS): 11%
- Insurance: 10%
- Managed Care: 8%
- No charge: 1%
- HMO: 4%
In the operating room, Pediatric residents perform multiple restorations on a pediatric patient. Dr. Kenneth Reed administering anesthesia in the operating room.

### Region & % Treatments

<table>
<thead>
<tr>
<th>Region</th>
<th>% Treatments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alaska</td>
<td>47%</td>
</tr>
<tr>
<td>Hawaii</td>
<td>3%</td>
</tr>
<tr>
<td>Arizona</td>
<td>2%</td>
</tr>
<tr>
<td>Rhode Island</td>
<td>30%</td>
</tr>
<tr>
<td>New York Metro</td>
<td>15%</td>
</tr>
<tr>
<td>Massachusetts</td>
<td>4%</td>
</tr>
<tr>
<td>Total OR PEDs Procedures -2010</td>
<td>1,393</td>
</tr>
</tbody>
</table>
Results: Vulnerable Populations Benefit:

Increase Number of Providers (recruitment/retention)

Increased number of patient visits/year
~ 1300-2000 patient visits/year/resident
LMC Network provides > 300,000 safety net dental visits/year

Increase in Access to Oral Health Care

Improved oral health service outcomes
The Goal

- Resident recruited and assigned to clinical training sites in CHC/IHS facilities
- Resident exposure to community health & alternative career pathways
- Resident develops commitment to community health
- Resident becomes teacher, mentor, role model & administrator
- Resident develops commitment to community health
Educational Entrepreneurship:

• Opening the marketplace as wide as possible to entrepreneurs may be best chance to improve educational outcomes
• Leadership in post doctoral education
• Product development
• Technological innovation
• Financial sustainability
• Disruptive innovation
Real-World Accomplishment.

Dr. Dax Rapp, Pediatric Resident with a mom and her two year old
Our Facilities

EL-RIO COMMUNITY HEALTH CENTER

SOUTHWEST DENTAL

WELCOME TO THE NORTHEAST Community Center

Information
Public Computers
Food Bank
NE Child Development Center

WIC
SNAP
Head Start
Senior Center

Riverstone Family Health Northeast Clinic
Barriers:

- State Dental Practice Acts
- Politics
- Inadequate infrastructure
- Resident recruitment
- Mandatory PGY 1
Current Strategies:

• Post doctoral primary care clinical campus
• Comprehensive online post doctoral curriculum development and evaluation (Sakai)
• Multiple service learning models.
• Integration of pre-doctoral/post-doctoral/specialty
• Pipeline plus
• Remote mentoring
• Faculty development
• MA; MPH; MBA Certificate and Degree Programs
Summary:

- Residents are a significant source of oral health services for the nation’s underserved within a teaching milieu.
- Residents can ameliorate recruitment and retention issues that continue to plague CHCs and other safety net providers.
- Residents provide an educational framework and stimulant within a service/learning environment.
- Residents foster collaborative, sustainable and economically viable partnerships between a major teaching hospital/FQHC and other FQHCs.
- Residents treat more complex cases and 12% of patient visits are to special needs patients.
- Longitudinal (30 year) survey of residents suggest that they devote 21% of patient care time to treating underserved and 27% practice on hospital staffs; and minimize specialty referral patterns.