

Strategies to Assure Access and Equity: Service Learning; Post Doctoral Residency Training; Educational Entrepreneurship and Disruptive Innovation as a Workforce Initiative.



Presented on April 29, 2014 in Fort Worth, Texas at the National Oral Health Conference and the American Board of Dental Public Health Symposium.

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Amino Acids:

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

Background:

- 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, including the impact of ACA
- The Lutheran Medical Center (LMC/LFHCN) a Federally Qualified Health Center (FQHC), started in 1976 has developed innovative post-doctoral residency programs. The distributed educational program places residents in over 200 FQHCs within 25 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
- Largest Dental School Health program in the country, 20 schools, 4,500 students enrolled, 20,000 visits.

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 to 3 years at an assigned CHC (clinical training site, over 200 in the system)
 - ✓ 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/Information system requirements**
- **Faculty development and loan repayment**

Vision/Mission:

- 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/county oral health plans and the US surgeon general’s report (Healthy People 2020) and IOM
- 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.





Lutheran
Medical Center
DENTAL MEDICINE



History of LMC:

- Founded in 1883 by Sister Elisabeth Fredde
- 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
- 106,000+ dental encounters at main site
- 750,000+ dental encounters at extramural partnership sites
- School Health Program (44 schools/40,000 visits)
- Culturally Diverse Patient Populations



Lutheran Medical Center

DENTAL MEDICINE

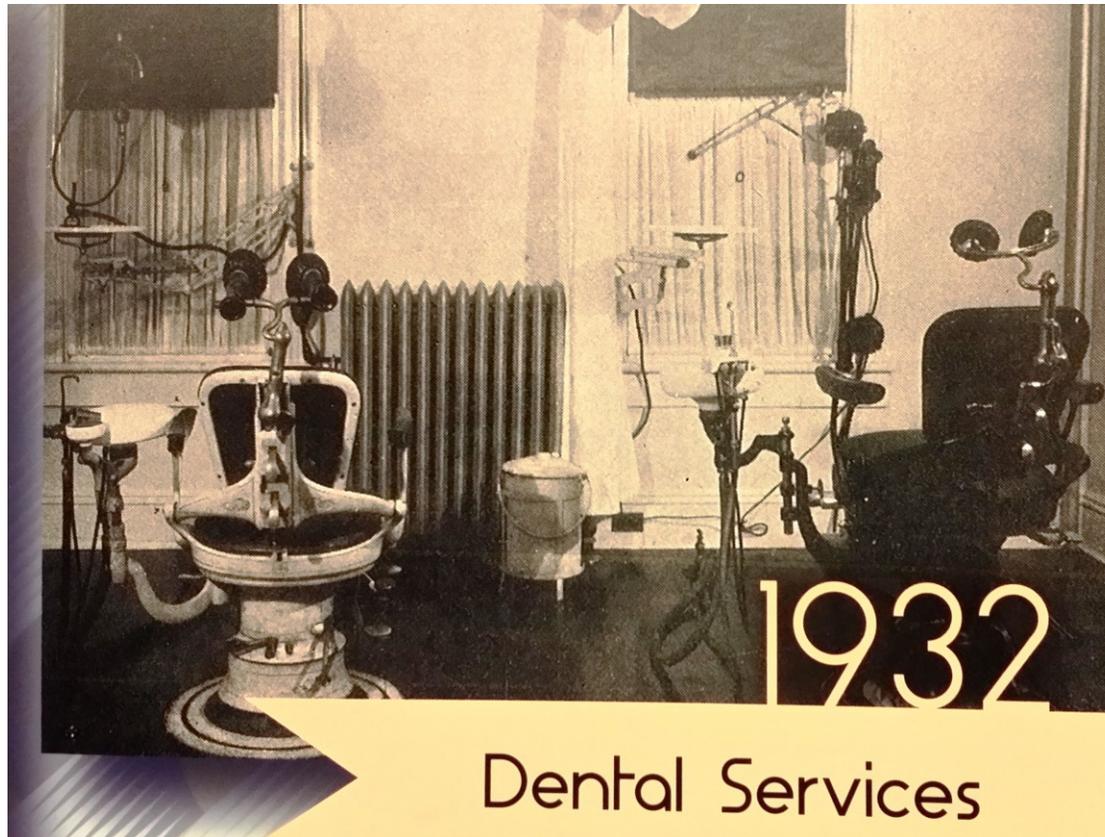
Real-World Experience. Real-World Advantage.



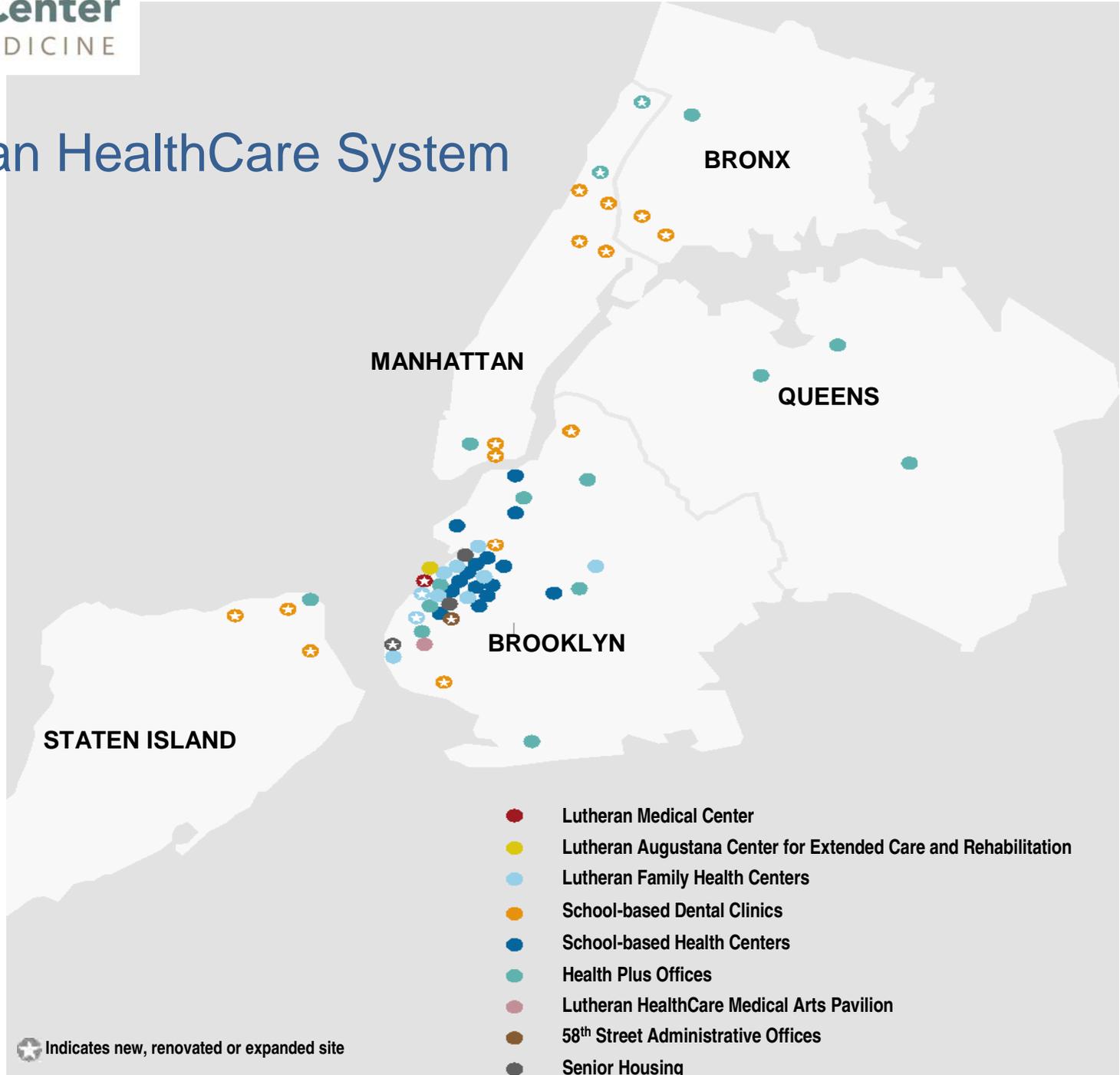
COMMUNITY SERVICE + LEARNING

Department of Dental Medicine:

- The first dental chair was added in 1932.



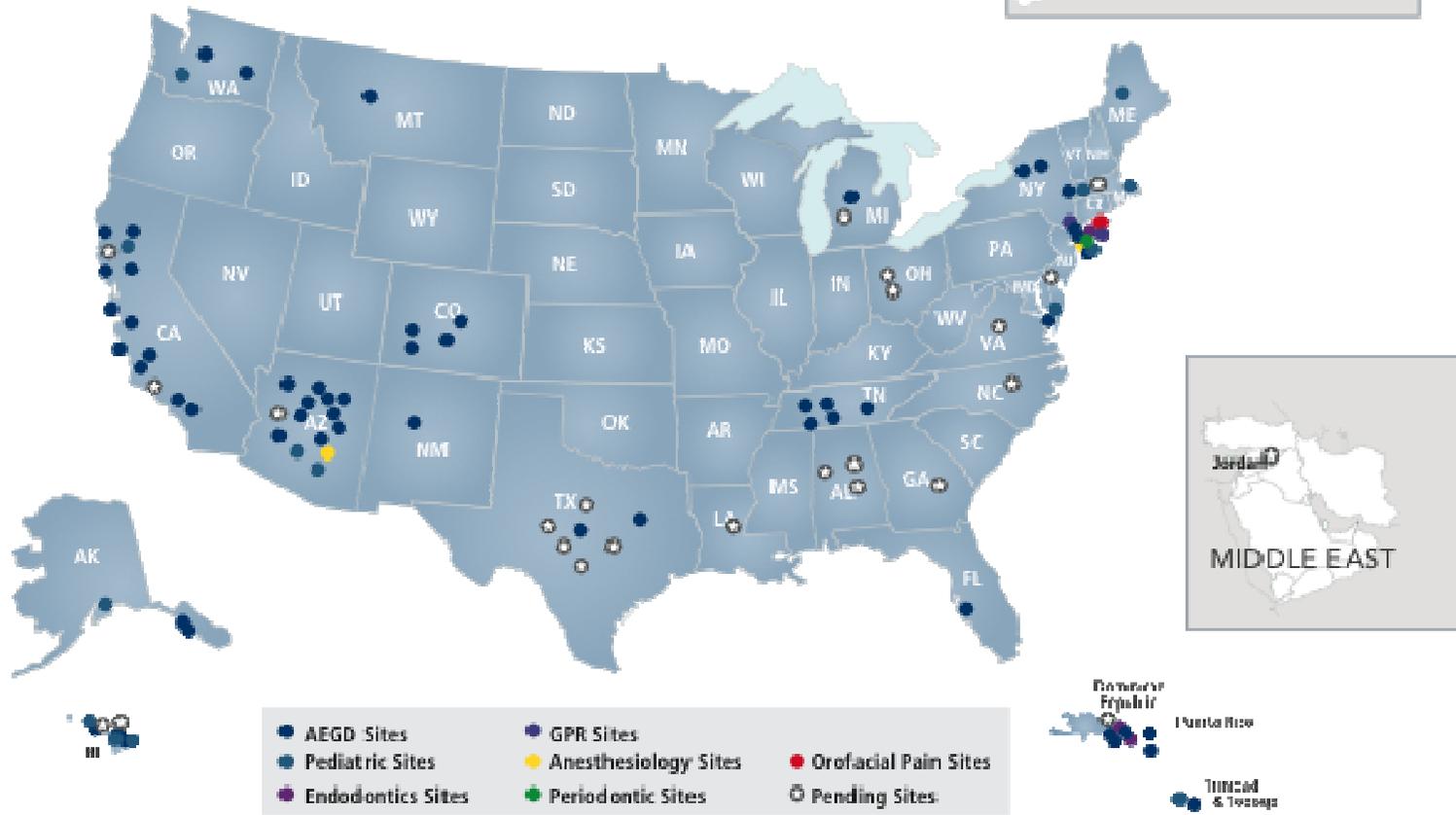
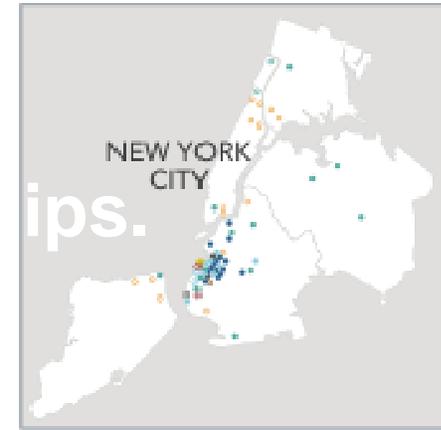
The Lutheran HealthCare System



Real-World Partnerships.

The largest community health center-based residency program in the world

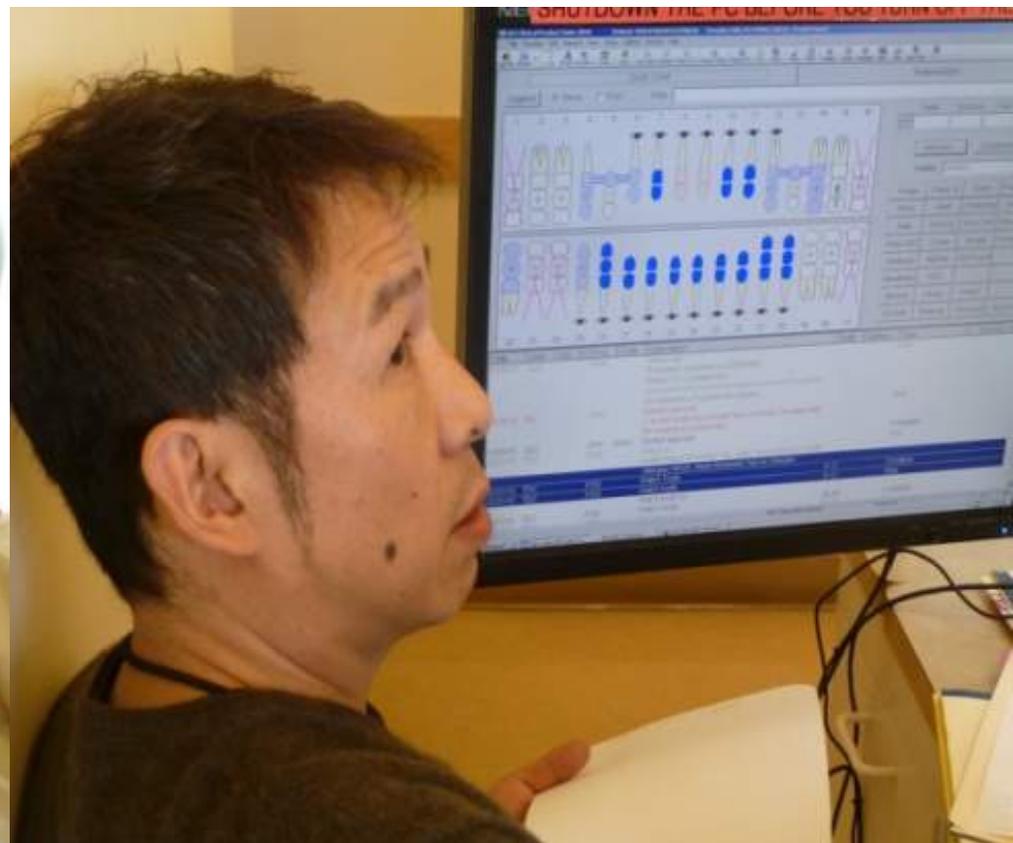
Lutheran Medical Center Dental places new postgraduate dental residents in fully equipped extramural Clinical Healthcare Centers (CHC) and Indian Health Services (IHS) affiliate clinics in the United States and internationally.



“Reply All is why you may be
fired one day.”

~ Stanley Bing

**The Curriculum: Everything You Need to Know
to Be a Master of Business Arts**



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
- Corporate Practices

“Meetings are essentially odious. Try to have as few as possible, but never miss one you should be at.”

~ Stanley Bing

Real-World Education.



**Dr. Jenny Spera, LMC AEGD resident,
treats a patient for volunteer community
service**

PRIMARY CARE DENTAL RESIDENCY (INITIAL PROGRAM YEAR)	ADA COMMISSION ON DENTAL ACCREDITATION (LATEST APPROVAL)	LENGTH OF PROGRAM	NUMBER OF RESIDENTS ENROLLED 2014-2015
GENERAL PRACTICE RESIDENCY 1974	2011	1 YEAR / OPTIONAL 2 ND YEAR	25
ADVANCED EDUCATION IN GENERAL DENTISTRY 1988	2011	1 YEAR / OPTIONAL 2 ND YEAR	225
ADVANCED EDUCATION IN PEDIATRIC DENTISTRY 1994	2011	2 YEARS	95
ADVANCED EDUCATION IN ENDODONTICS 2004	2009	25 MONTHS	12
ADVANCED EDUCATION IN DENTAL ANESTHESIOLOGY 2008	2010	2 YEARS	12
ADVANCED EDUCATION IN PERIODONTICS 2012	2012	3 YEARS	9
ADVANCED EDUCATION IN OROFACIAL PAIN 2012	2012	2 YEARS	6
ADVANCED EDUCATION IN DENTAL PUBLIC HEALTH 2014*	2014*	1 YEAR	6
ADVANCED EDUCATION IN ORTHODONTICS 2015*	2015*	2 YEARS	8



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 Associate 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



“Cost cutters do a lot of things under various euphemistic names, but what they really do is fire people”

~ Stanley Bing

LMC Outcomes Assessment System/Sakai:

- LMC Outcomes is an on line evaluation and assessment system for residents and faculty.
- It tracks all data (visits and services etc.) and evaluations of all types to comply with CODA Standards for each program.
- It is integrated with Sakai (Blackboard) that houses curriculum modules and exams; literature review, threaded discussion groups etc.
- It allows development of Dashboard process in areas deemed essential for programmatic and individual resident review.
- It features a Portfolio application for all residents.

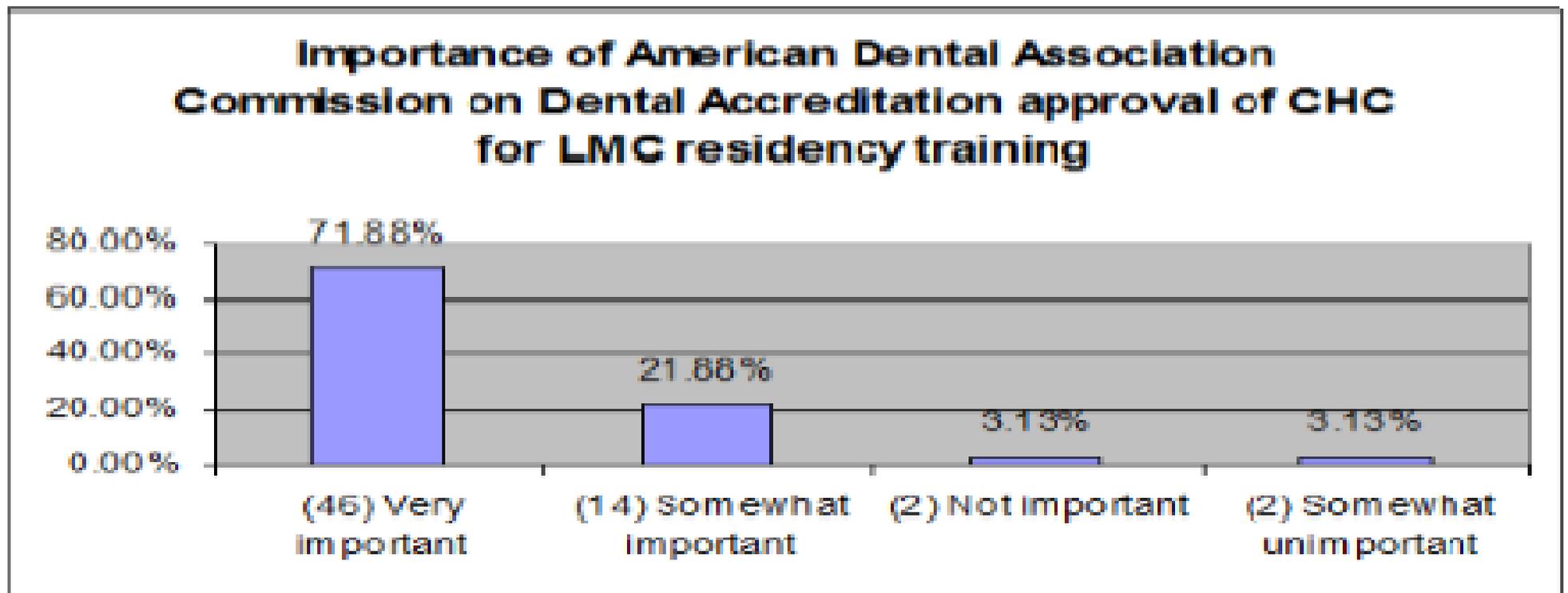
Curriculum Hours:

- 2000
 - sync: 100%
- 2007
 - **Sync:** 400 distance learning hours via VTC
 - **async:** curriculum forums for literature review and case presentations.
- 2013
 - **sync:**
 - 4th Tuesday each month from 1- 5 PM ET
 - core curriculum (40 hours) 3rd Tuesday each month from 1 -5 PM ET
 - regional curriculum (40 hours) Every Thursday from 1 -5 PM ET
 - Biomedical sciences and Peds (156 hours)
 - **async:** 216 modules equivalent to 216 hours

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



Pediatrics Hawaii 2013/2014 Dashboard

Accessed: Friday, April 25, 2014

Support

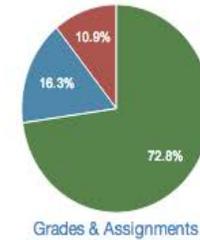
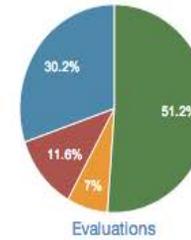
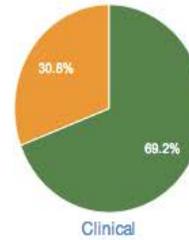


Colgan, John

Pediatrics PGY1 (2013-07-01 - 2015-06-30)
Waianae Coast Comprehensive Health Center - Oahu

620 Patient Visits
105 Clinic Days
136.0 Vacation Hours Used
40.0 Sick Hours Used

 Files Up-To-Date  Profile  Email

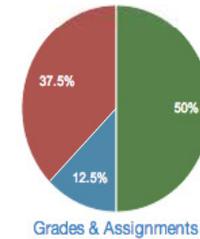
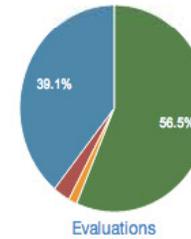
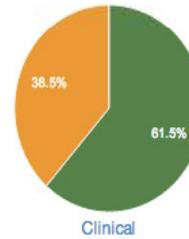


Kau, Ammon

Pediatrics PGY2 (2011-07-01 - 2014-06-30)
Kokua Kalihi Valley Health Center, Waianae Coast
Comprehensive Health Center - Oahu

814 Patient Visits
96 Clinic Days
120.0 Vacation Hours Used
72.0 Sick Hours Used

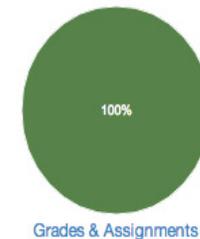
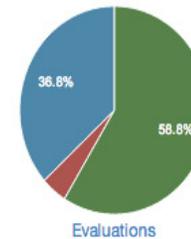
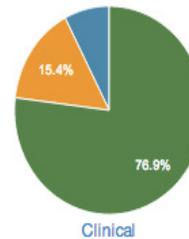
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Lim, Jane

Pediatrics PGY2 (2012-07-01 - 2014-06-30)
Kokua Kalihi Valley Health Center, Waianae Coast
Comprehensive Health Center - Oahu, West Hawaii
Community Health Center (Keiki Health Center)

1206 Patient Visits
135 Clinic Days
112.0 Vacation Hours Used

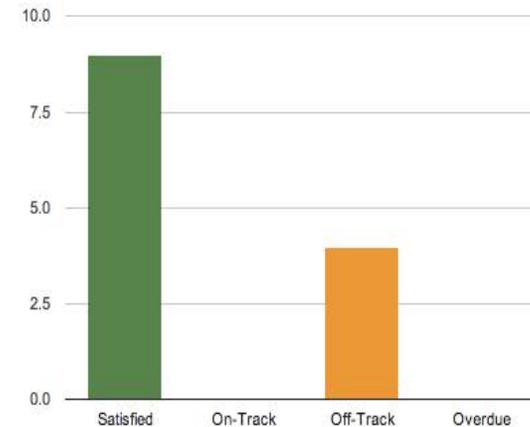
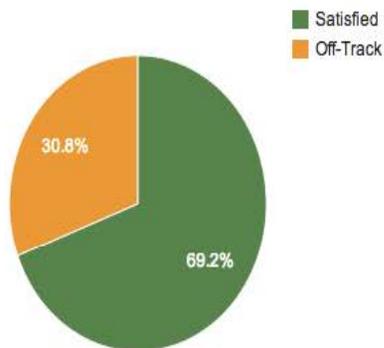


Dr. John Colgan Jr 2013/2014 Clinical Dashboard

Pediatrics Hawaii PGY1

Accessed: Friday, April 25, 2014

Support



Patient Visits: 620 (5.9 per day)

Clinic Days: 105

Name	Completed	Required	Status	Due Date
Conscious Sedation/ IV and Non-IV Any of: D9241, D9242, D9248	0	10	Off-Track	2014-06-30
Diagnostic - Comprehensive Oral Eval Any of: D9241, D9242, D9248	80	20	Satisfied	2014-06-30

Pediatrics Hawaii PGY1

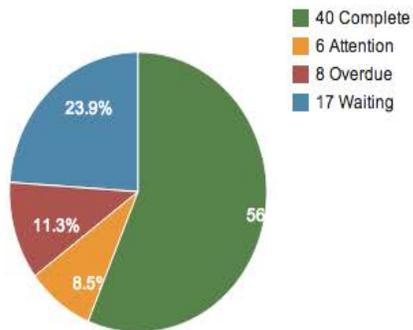
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Evaluatee

Evaluator

Support

Evaluations by Me



Complete: nothing else to do.

Attention: take action!

Overdue: missed deadline.

Waiting: up-to-date for now.

Jul

Aug

Sep

Oct

Nov

Dec

Jan

Feb

Mar

Apr

May

Jun

Research 1314 VTC

Evaluators, course: 206-Research 1314 VTC

evaluating

Supervisor: [Dr. Barbara Ottenio](#)

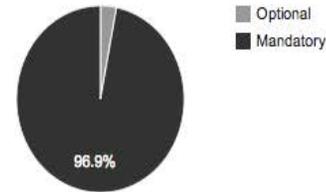
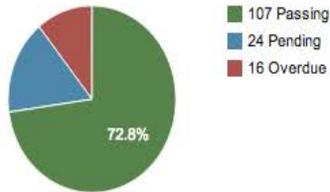
Evaluatees, course: 206-Research 1314 VTC

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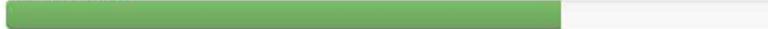
Dr. John Colgan Jr 2013/2014 Scores

Accessed: Friday, April 25, 2014

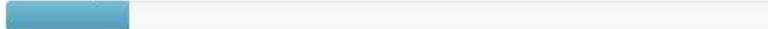
Support



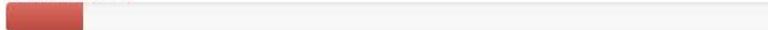
107 Passing [i](#)



24 Pending [i](#)



16 Overdue [i](#)



Total: 147

Course	Module	Score	Status	Due Date
Behavior Guidance for the Pediatric Dentist 1314	Behavior Guidance for the Pediatric Dentist	100.0%	required passing	2013-11-30
Dental Public Health 1314	Adverse Pregnancy Outcomes	0.0%	required overdue	2014-03-31 !
Dental Public Health 1314	Cardiovascular Disease	0.0%	required	2014-05-31

“Social Media is linking all human life on the planet into one gigantic brain stem throbbing with unintelligible thought”

~ Stanley Bing

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

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

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

Advantages to FQHC's with Residents as Providers

- Increased opportunity for cultural diversity of clinicians
- Increased productivity
- Improved morale
- 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

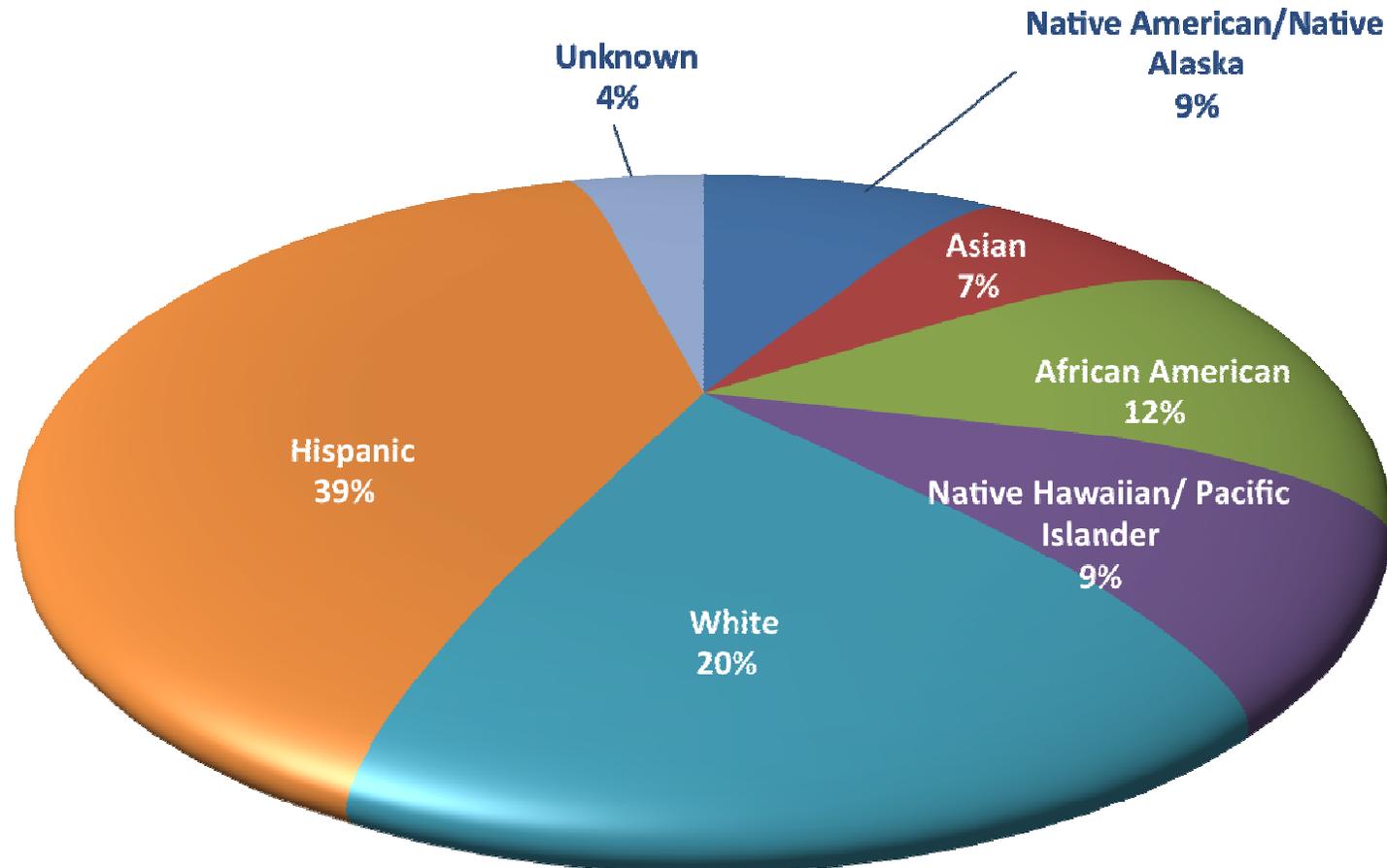
Advantages to Residents placed in FQHC for Clinical Experience

- 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

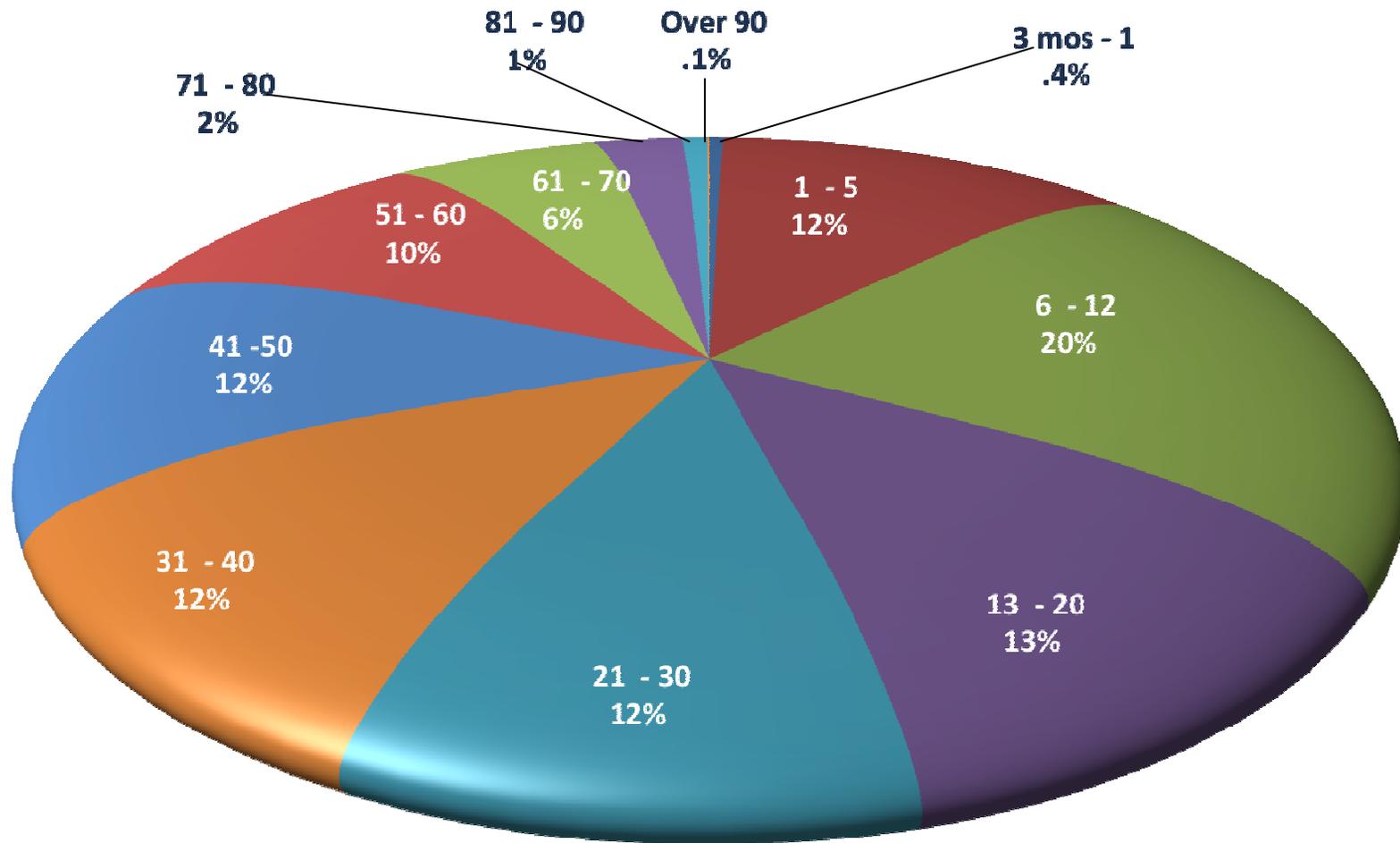
Real-World Service.



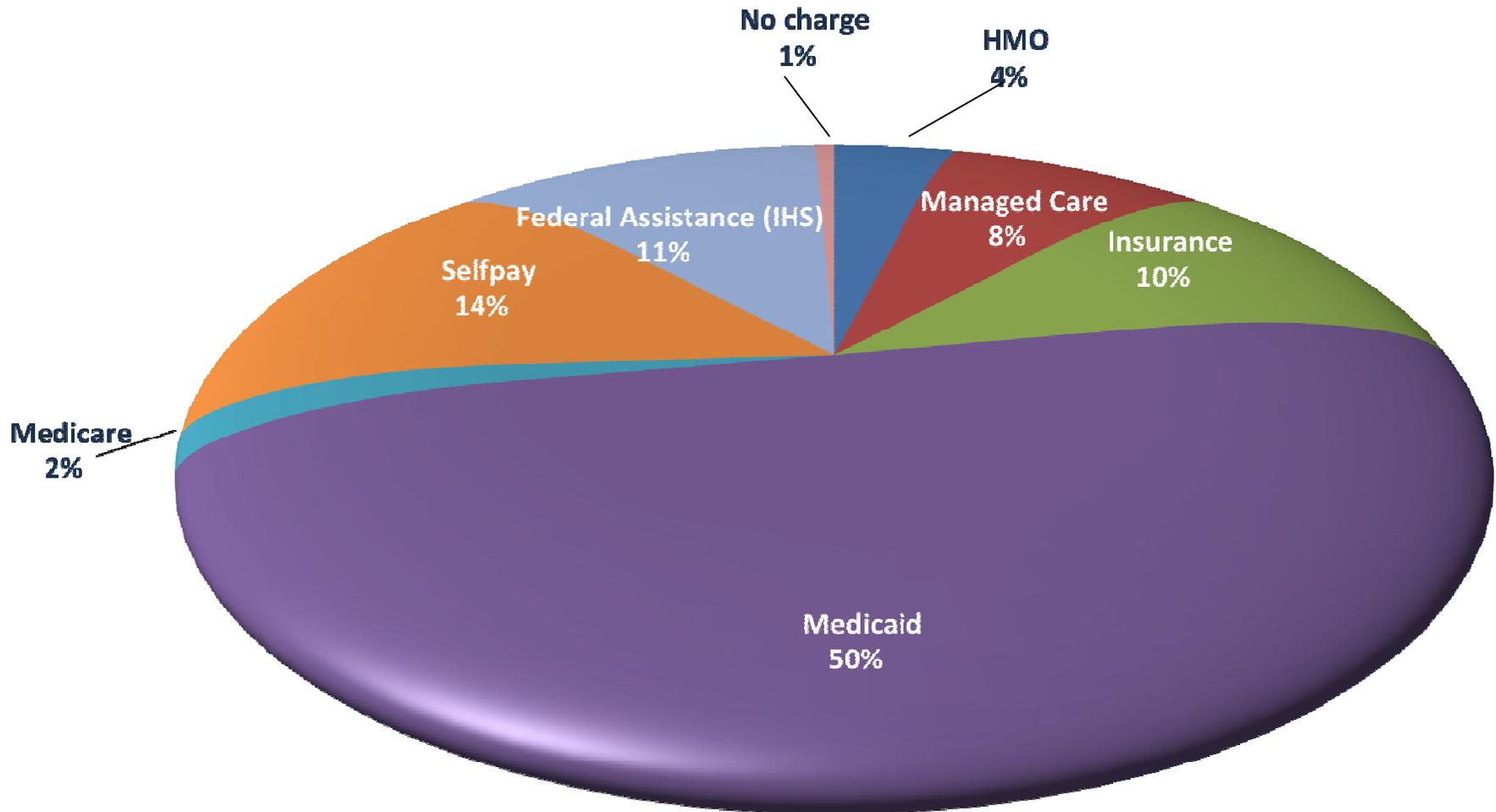
Patients in 2012 by Ethnicity



Patients in 2012 by Age



Patients in 2012 by Payment Options



Real-World Programs.



In the operating room, Pediatric residents perform multiple restorations on a pediatric patient



Dr. Kenneth Reed administering anesthesia in the operating room

Year	Total # OR Cases	Total # of Residents	Total OR's Per Resident
*2010 – 2011 (*PGY1 data only)	419	16	26.2
2011 - 2012	1258	56	22.5
2012 - 2013	1566	70	22.4
2013 – 2014 (7/1/13 – 4/22/14)	2564	86	29.8

Results: Vulnerable Populations Benefit:

Increase Number of Providers (recruitment/retention)

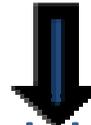


Increased number of patient visits/year
~ 1300-2000 patient visits/year/resident

LMC Network provides > 750,000 safety net dental visits/year



Increase in Access to Oral Health Care



Improved oral health service outcomes



Resident recruited and assigned to clinical training sites in CHC/IHS facilities

Resident exposure to community health & alternative career pathways



The Goal

Resident becomes teacher, mentor, role model & administrator

Resident develops commitment to community health



BIO MED ARCHIVE

Sigma



Luth
M

Leadership

Service Learning

***Enhancing
the Safety
Net***

***Community Based
Partnerships***

Real-World Accomplishment.



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

Our Facilities



Barriers:

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

“No is a serious profanity in business. You seldom want to say it. Better to just say "Yes" or "Maybe" and do nothing about the matter until it goes away.”

~ Stanley Bing

Current Strategies:

- Post doctoral primary care clinical campus
- Comprehensive on line post doctoral curriculum development and evaluation (Sakai)
- Multiple service learning models/Inter-professional education
- Integration of pre-doctoral/post-doctoral/specialty
- 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.



**POLITICAL
COMMITMENT**

**LEADERSHIP
MANAGEMENT
(TRUST AND
TRANSPARENCY)**

ADVOCACY

**COLLABORATIVE
PARTNERSHIPS
(PUBLIC AND
PRIVATE)**

**INNOVATION
(DISRUPTIVE OR
NOT)**

**TECHNICAL
PACKAGE
EVIDENCE BASED
INTERVENTIONS**

PERSISTENCE

COMMUNICATION

Real-World Experience. Real-World Advantage.

Real-World
Education



Real-World
Programs



Real-World
Accomplishments



Real-World
Partnerships

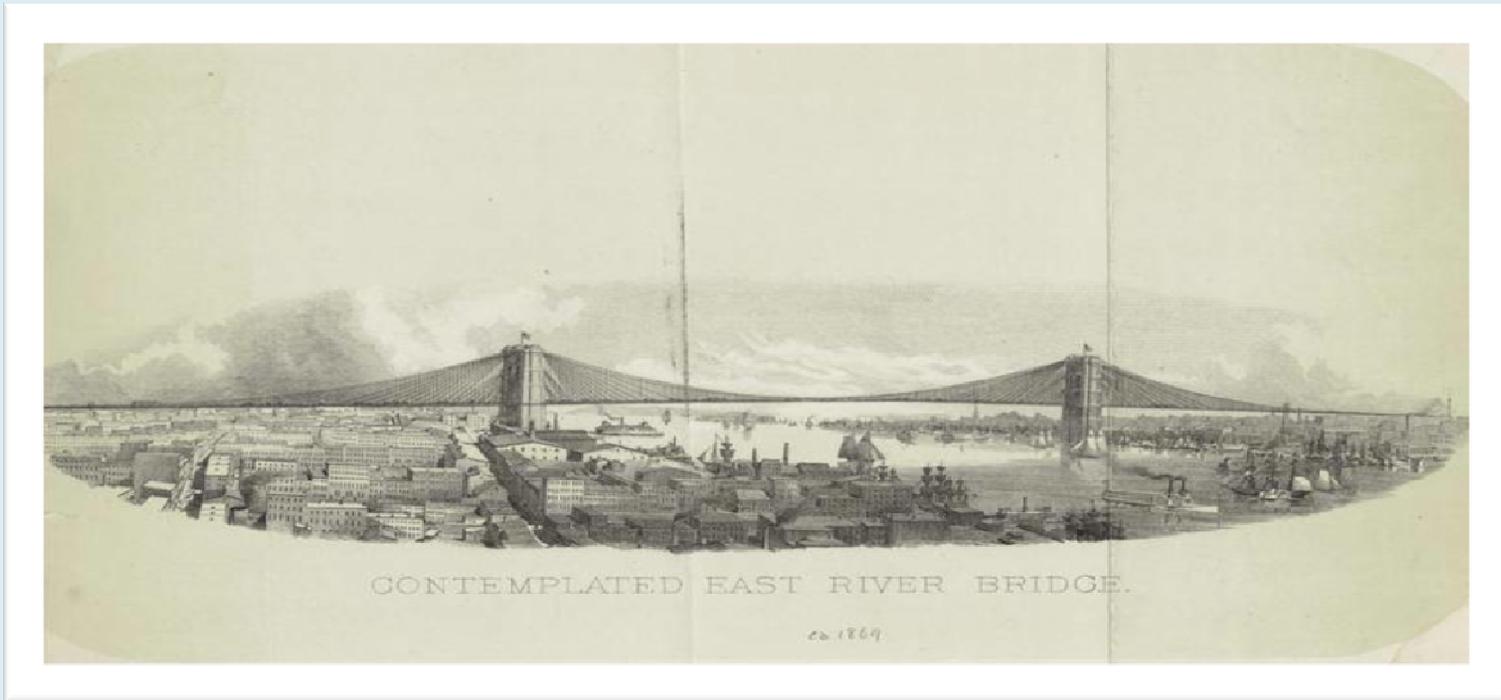


Real-World
Service



“Workaholics are not people who work hard. Workaholics are people who replace life with the appearance of work. Much of what the workaholic does isn't work per se. Its activity-Brownian motion. Up to a certain point, workaholics must be pitied, for they are the prototypical victims of their own success. After that, they are just crazy people getting between you and your dinner, kids and poker game.”

~ Stanley Bing



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