**Proposal for Program Experimentation and Innovation Project**

***“Length-of-Training Pilot Project”***

1. **Project Description**
	1. **Title:**

Implementation of a Four-Year Residency Curriculum in Family Medicine

* 1. **Goals and Objectives:**

 **Goal:**

 This residency program will provide an enhanced, integrated, four-year curriculum that is comprehensive, challenging, and provides superior preparation for 21st century practice. It will attract committed learners with a passion for family medicine, meet their diverse education needs, and prepare them to practice in varied and innovative settings.

 **Objectives:**

1. Attract and retain high quality resident physicians
2. Expand the curriculum to prepare residents for practice in a Patient Centered Medical Home (PCMH)
3. Transform the continuity teaching practice into a PCMH
4. Prepare residents to manage population health more effectively
5. Offer high quality residency education that meets the future practice needs of residents
6. Improve chronic disease management and prevention outcomes in our practice
7. Graduate residents who are better prepared for and more satisfied with their eventual practice
	1. **Description of the Innovation**:

 As a participant in the Length of Training Pilot Project, we are implementing a fully integrated four-year residency program in family medicine. We have enhanced all components of our previous three-year curriculum intact, and expanded to four years of education through the integration of the following new elements:

1. PCMH block rotations in all years of curriculum.
2. Required group medical visit facilitation (longitudinal)
3. Required block rotation HIV medicine
4. Required block rotation in addiction medicine & pain management
5. Required block rotation in geriatrics in addition to longitudinal experience
6. Required block & longitudinal experience in integrated mental health
7. Required additional longitudinal experiences and study of Care of the Underserved as a formal academic discipline
8. Required longitudinal experiences and project in community medicine
9. Required longitudinal experiences in Information Mastery
10. Significantly increased requirements in residents’ Area of Concentration (block & longitudinal), required capstone project
11. Required longitudinal experiences in Organizational Effectiveness & Leadership, required project
12. Required practice-based or community-based longitudinal research, required presentation or publication
13. Required longitudinal integrative medicine experience including basic OMT skills for office-based treatment of musculoskeletal conditions
14. Required population medicine project utilizing practice and community data

Attached as Appendix A is a more detailed description of the background to our decision to pursue participation in the Length of Training Pilot Project.

A graphic depiction of our curriculum is included as Appendix B (modified block diagram)

We request a waiver to the specialty-specific three-year duration of the educational program requirement. (Introduction Section A, page 3). We will remain in compliance with all other common and specialty-specific program requirements.

* 1. **Justification:**

The innovative four-year curriculum allows:

1. superior acquisition of fundamental skills necessary for future practice through the addition of integrated core curriculum elements;
2. acquisition of the skills and experience necessary for rapid transition into superior level practice in a PCMH;
3. development of in-depth knowledge of family medicine; and,
4. additional education time to balance time lost to meeting duty hour requirements.

* 1. **Timeline:**

Entering residents beginning in July 2013 are participating in this mandatory four-year curriculum. If approved, we plan to continue the four-year curriculum indefinitely.

* 1. **Description of the Measures:**

We hypothesize that our innovation will result in:

1. improved graduate ability to practice in the PCMH
2. improved applicant interest and resident quality
3. greater mastery of the ACGME competencies
4. improved chronic disease management and prevention outcomes
5. improved population health management
6. increased satisfaction with training and practice

We will evaluate these hypotheses utilizing a mixture of the measures of the Length of Training Pilot Project Evaluation Framework, as well as internal ones, including:

1. annual resident and alumni surveys
2. annual practice assessments of care delivery and financial performance
3. resident application, ranking, and matching data
4. in-training and graduate board certification examination scores
5. communication assessments
6. coding and billing data
7. utilization of clinical pathways and disease management programs
8. outcomes data in chronic disease management and delivery of preventive services
	1. **Criteria for Assessing Degree of Success:**

 We will assess our degree of success based on our achievement of the objectives listed.

* 1. **Applicability:**

There is growing national interest in four-year residency curricula. Our outcomes in combination with those of the other residency programs modeling four-year curricula in the Length of Training Pilot Project will demonstrate the feasibility and benefits of an extended length of education in family medicine.

1. **Approval Signatures and Dates**
2. **Program Director:**

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Joseph W. Gravel, Jr., MD 5/11/12

1. **Department Chair, if applicable:** N/A
2. **If a dependent subspecialty, core Program Director:** N/A
3. **American Board of Family Medicine:**

The ABFM will send letters to each of the selected pilot programs indicating that a resident in a pilot program will be eligible to apply for certification if the program director verifies that he or she has successfully met all of the standardized requirements. Residents leaving pilot programs before the completion of four years of education will be expected to meet extant ACGME and ABFM requirements in order to be eligible to apply for certification.

1. **Designated Institutional Official:**



 Joseph W. Gravel, Jr., MD

 Chief Medical Officer/ Residency Program Director 5/11/12

 **F. Appendices:**

1. Length of Training Pilot Project – Innovative Curriculum Detail (Appendix A – See Below)
2. Four-year curriculum modified rotation diagram (Appendix B- See Below)

***Appendix A***

1. **Name of Applicant Residency Program**

Lawrence Family Medicine Residency

1. **State the reasons you want to offer/require a fourth year of residency. (Limit: 200 words)**

The mission of the LFMR is to provide residents with the skills to provide medical care and medical leadership in the emerging new healthcare system, particularly in underserved communities. Given the increasing depth of knowledge and breadth of expertise necessary for the optimal practice of Family Medicine, concurrent with work hour restrictions and other factors, the addition of a fourth year of residency will allow us the opportunity to provide training which offers:

1. Development of competencies in all aspects of PCMH in our NCQA Level 3 Family Medicine Center through immersion in and graduated responsibility for management of the medical home.  These will include team-based care, population medicine, community health, information mastery, chronic disease management, practice-based improvement, and leadership.
2. Increased depth of experience in core clinical aspects of Family Medicine, particularly essential in low resource clinical environments, with development of added competencies key to the care of underserved populations.
3. Increased opportunity for residents to develop additional competencies in areas of personal interest through the expansion of areas of concentration (AOC’s).
4. More meaningful and longitudinal community experiences which will serve as a foundation for substantive community involvement for residents throughout their careers.
5. **Summarize the components of your innovation and explain how your ideas connect to the PCMH model of practice. (Limit: 200 words)**

The focal innovation is the development of a graduated experience as a member of a patient and community oriented PCMH team in a FQHC environment through longitudinal and block experiences. Each year of residency will be focused on increasing competency and leadership in clinic and community teams:

1. Year 1: “Foundations”- Personal patient panel, learning to practice in a team-based model
2. Year 2: “Practice-Based Development”- Developing clinical and team practice skills with early community integration
3. Year 3: “Systems-Based Development” -Leading the clinical teams in the PCMH (paired residents share leadership of a PCMH team) and other sites of clinical care (hospital, nursing home, etc), and taking on leadership roles in the community
4. Year 4: “Capstone”- Clinic/Community Leadership. Residents will serve as PCMH Medical Director for at least one month focusing on overall operations, systems, and community integration. PGY4s will also be required to complete practice-based research.

Other innovations include the development of block and longitudinal experiences focused on clinical and non-clinical skills necessary to work effectively with underserved populations including population management, applied public health, leadership and advocacy skills. Requirements for Areas of Concentration will also be expanded.

1. **List all aspects of your program that you intend to change as part of your innovation. Summarize the purpose, instructional method, responsible person, location, and evaluation approach for each component and the expected timeline for implementation. (Limit: 1,000 words)**

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| **Innovation** | **Purpose** | **Method** | **Resp. Person** | **Location** | **Evaluation** |
| **PCMH Block Rotation (with longitudinal experience)** | Develop expertise in PCMH principles and leadership. Establish the FMC and PCMH as a standard residency service with defined resident roles/responsibilities to enhance the functioning and educational value of the PCMH | Block rotations in all years of curriculum (see description below). Ongoing QI and research projects. Clinical team meetings. | Zandra Kelley,Kiame Mahaniah | GLFHC | Patient outcomes, 360 evaluations, project completion, clinic metrics |
| **Group medical visits** | Residents will develop expertise in group medical visit facilitation and administration. Residents will participate in at least 3 sets of group visits of at least 2 different medical areas | Participation of group co-facilitator (R1, R2) and lead facilitator (R3, R4) for resident clinic group visits.  | Wendy Barr, Jeffrey Geller | GLFHC | Patient outcomes, 360 evaluations |
| **HIV** | Develop competency in providing primary care for patients with HIV. | Block rotation in team-based HIV care along with longitudinal experience of caring for HIV patients in continuity panel. | Chris Bositis | GLFHC | Patient outcomes, 360 evaluations |
| **Addiction Medicine/Pain Management** | Develop competency in providing primary care for patients with addiction and/or chronic pain. Specifically will develop competence in the use of suboxone in a primary care setting. | Block rotation in team-based addiction management and clinical management of chronic pain along with longitudinal experience with continuity patients. Standardized suboxone training. OMT training. | Kiame Mahaniah, Mia Sorcinelli | GLFHC | Patient outcomes, 360 evaluations |
| **Integrated Mental Health** | Develop competency to providing primary care-based mental health care and working with multi-disciplinary teams focused on behavioral and mental health. | Block and longitudinal rotations | Carlos Cappas-Ortiz, Alan Smith | GLFHC, HFH | Patient outcomes, 360 evaluations.  |
| **Care of the Underserved** | Develop competencies in skills that enhance the care of underserved populations such as: health literacy, use of interpreters, care for the homeless, health disparities | Longitudinal experiences | Keith Nokes | GLFHC | 360 evaluationsAdvocacy skill evaluation |
| **Community Medicine** | Develop expertise in community assessments and developing partnerships to enhance health of patients and provide added depth to community curricular experiences.  | Didactics, community placements, partnership with defined community and community organization | John Raser and Will Kauffman | Lawrence, MA | Community health outcomes, 360 evaluations, project completion/outcomes |
| **Information Mastery (IM)** | Develop expertise in information mastery skills | Didactics, Journal Club, IM skill tasks on clinical rotations | Mary Nordling, Brian Randall | GLFHC/LGH/Tufts Conf. | 360 evaluations, resident testing, performance in IM activities |
| **Areas of Concentration (AOC)** | Develop expertise in personal area of interest. Potential AOCs include:1. Maternity Care
2. Hospitalist Medicine
3. Advocacy/Leadership
4. Integrative Medicine
5. Global Health
6. Addiction/Pain Management
 | Block and longitudinal experiences. Residents are active participants in developing own learning plan. | Wendy Barr | GLFHC | 360 evaluations, patient outcomes, project completion |
| **Organizational Effectiveness and Leadership** | Develop competencies in working in large organizations such as health systems, ACOs, and CHCs including effective intra-organizational advocacy and personal management | Didactics, Longitudinal experiences | Joseph Gravel  | GLFHC | 360 evaluations, project completion |
| **Practice-Based or Community-Based Research** | Develop ability to originate and study a research question pertinent to the resident’s future practice, collect, organize, and analyze data and be able to present the findings to colleagues.  | Longitudinal research project | Wendy Barr, Anthony Valdini | GLFHC | Completed project, presented at meeting and/or published in peer-reviewed publication |
| **Population Medicine** | Develop ability of residents to manage the health of populations through both quantitative and qualitative research methods | 1:1 review of Lawrence community and patient data with faculty member, design and implement an intervention  | Dean Cleghorn, EdD | GLFHC | Demonstrate application of population data into an improved clinical outcome measure  |
| **Integrative Medicine** | Develop ability to utilize proven integrative modalities in their clinical practice. | Longitudinal experiences | Jeffrey Geller, Robert Luby | GLFHC | Patient outcomes, successful completion of on-line course, demonstration of basic OMT skills |

All new changes will be implemented with entry of the first 4 year class in July 2013.

Further description of PCMH curricular components:

1. Addition of block PCMH experiences throughout the course of training.  This will include a minimum of 3 block experiences in which residents will, as a group, address core aspects of PCMH, population/community medicine, quality improvement, health systems and health management, leadership, and research.
	1. Year 1:  Focus is on the core relationship of patient and physician.  Training includes advanced EMR skills, design/implementation of patient registries, information mastery, principles of chronic disease management, teaching skills (with students, staff and community) and community medicine with a focus on identification and use of community resources in patient care.
	2. Year 2:  Focus is on the physician/patient relationship as part of the PCMH team and the community.  Building upon skills from year 1, residents learn advanced panel management, teaching skills, quality improvement and design of quality improvement and research projects.  Community medicine moves beyond initial stages to include asset mapping, outreach and involvement with a defined community group.  Residents begin personal/team projects in QI, research and community medicine, and continue these in longitudinal time over the next 12-18 months.
	3. Year 3/4:  Focus is on advanced skills in all domains.  Residents bring projects to completion and advance to stage of presentation or expansion/refinement.  Community medicine involvement continues and the focus of block training moves to skills in leadership and advocacy, as well as specific practice management skills such as budget analysis, personnel management, and clinical leadership.
2. Expansion and refinement of longitudinal PCMH elements
	1. Year 1: Integration of the new resident into the PCMH team through regular participation in team meetings and ongoing quality improvement activities.
	2. Year 2: Resident is more comfortable as a team member and takes a more active role in the ongoing activities of the team.
	3. Year 3: Paired residents co-lead the PCMH team (with 4 clinical teams each will be led by a pair of 3rd year residents).
	4. Year 4: In turn, each resident serves 4-8 weeks as “Clinic Chief” overseeing integration of activities between PCMH teams and between FMC and outside clinical entities (hospital, nursing homes, etc.).
3. **List testable hypotheses for each component of your innovation. (Limit: 200 words)**
4. **PCMH**- Residents in the four year curriculum will graduate better prepared to:
5. assume clinical leadership roles in community health centers
6. effectively lead quality improvement teams
7. practice full-scope family medicine in resource-poor settings (rural, urban underserved, international)
8. Residents in the four year curriculum will acquire enhanced expertise in:
9. Patient population management
10. Group medical visits
11. Information mastery
12. providing primary care for special populations such as those with HIV, addiction/ substance abuse, chronic pain, homelessness
13. working with multi-disciplinary teams focused on behavioral and mental health
14. skills that enhance the care of underserved populations
15. community assessments and developing partnerships to enhance health of patients and provide added depth to community curricular experiences
16. a personal area of specialized interest
17. competencies in working in large organizations such as health systems and CHCs
18. originating and studying a research question pertinent to the resident’s future practice, collect, organize, and analyze data and be able to present the findings to colleagues
19. managing the health of populations through both quantitative and qualitative research methods
20. utilizing proven integrative modalities in their clinical practice
21. **Explain how you will test your hypotheses (measures and outcomes) and identify a lead person who will guide your evaluation. Please indicate why that person was chosen. (Limit: 300 words)**

A variety of measures will be used to test our hypotheses. These include graduate and alumni surveys, assessment of resident patient outcomes, completion of QI and research projects, and competency evaluations performed in residency. Outcomes that will be assessed with these measure include:

1. A high percentage of graduates reporting:
	1. Leadership roles in CHCs
	2. Leading QI projects in their practices
	3. Working in HPSA or international
	4. Practicing full-spectrum FM (maternity care, pediatrics, inpatient medicine, nursing home, home visits)
	5. Facilitating group medical visits in practice
	6. Caring for special populations
	7. Involvement with local community groups (outside of employer)
	8. Self-reported competence and confidence with population management, information mastery, integrative medicine, and clinical research methods
2. Graduates demonstrate:
	1. Completion of resident run QI project
	2. Improvement in patient panel key quality indicators
	3. Competency in facilitating and directing group visits with at least three group visit cohorts
	4. competency or expertise level in information mastery in residency – demonstrated in OSCE-like encounters and/or structured evaluation system

Lead faculty for evaluation will be Wendy Barr MD, MPH, MSCE and Anthony Valdini MD, MS. Both Drs. Barr and Valdini have previous experience in curriculum evaluation. Dr. Valdini is the Research Director and has been involved in previous evaluations of our Spanish curriculum[[1]](#footnote-1). Dr. Barr is the Associate Residency Director and has been involved with curriculum evaluations involving OSCE development and extensive evaluations of the use of group prenatal visits in residency curricula[[2]](#footnote-2).

1. **How will residents and patients help guide and influence your innovation? (Limit: 100 words)**

* Residents were members of the Length of Training Pilot Steering Committee and have helped shape this Innovation proposal. This committee will continue and provide ongoing project guidance.
* Residents from each class will be involved in each new rotation’s “Curricular Assessment Tool” process to review evaluations and implement recommendations.
* Patients and community members will help develop the community medicine and population management components. The standing Patent Care Committee will review patient satisfaction surveys. Patients and community members (who constitute a majority of the sponsoring institution’s Board) will be provided regular updates on progress and their feedback incorporated.
1. **Briefly describe how you achieved institutional support for participation in this project. (Limit: 100 words)**

The Greater Lawrence Family Health Center is a single-residency sponsoring institution dedicated to our vision of being a national leader in innovative CHC-based GME. LFMR received the 2012 Innovative Program Award from STFM and was designated one of eleven original HRSA-designated Teaching Health Centers in 2011. Our sponsor commissioned a RPS consultation which determined that the resource feasibility of enrolling in the pilot is excellent. The pilot’s areas of curricular emphasis are synergistic with ongoing efforts to build on our current NCQA Level 3 PCMH status. Participation has the full support of the CEO, CFO, and Board of Directors.

1. **What resources/assistance will you require that you do not currently have in order to conduct your innovation and/or evaluation, and from where will these come? (Limit: 100 words)**

As per our RPS consultant’s report of 3/12 (Alan David, MD) “This program is well positioned to consider moving to four years of required family medicine training as part of a national pilot project. The size, depth, large community health center setting, leadership, quality of the residents and the successful NRMP match describe a program that is strong and successful.”

Needed additionally is 0.5 FTE administrative support resource and 1.0 FTE faculty; the sponsoring Health Center already employs these personnel resources that will be redeployed in support of this project.

1. **Valdini A, Early S, Augart C**, Miles HCR, **Cleghorn D**. Spanish Language Immersion and Reinforcement During Residency: A Model for Rapid Acquisition of Competency. *Teaching and Learning in Medicine*. 2009;21(3):1-6. [↑](#footnote-ref-1)
2. **Barr WB**, Aslam S, Levin M. Evaluation of a Group Prenatal Care-based Curriculum in a Family Medicine Residency. *Family Medicine.* 2011;43(10):712-7. [↑](#footnote-ref-2)