business plan
to Establish a Graduate Medical Education Consortium in Oregon

prepared by:

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Research • Strategy • Impact

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I. Executive Summary

A Collaborative Solution to the Physician Workforce Crisis:
The Oregon GME Consortium

Oregon, like the rest of the country, is facing a critical primary care physician shortage. This shortage is due to many factors, including an aging patient and physician population, the expansion of health insurance coverage through the Affordable Care Act, and the shift from a medical education and health care delivery system focused on providing episodic care to one designed to prevent and manage disease.

Numerous studies and organizations note the need for an increase in the number of primary care physicians. According to a 2014 study by the American Academy of Family Physicians, the U.S. will face a shortage of 52,000 primary care physicians by 2025. Studies indicate that the primary care physician supply is associated with improved health outcomes at lower costs, especially important in an age of value-based care.

To address these issues, in 2015 the Oregon Educators Benefit Board (OEBB)/Moda Health Grant program provided $506,000 to fund the planning and development of the Oregon Graduate Medical Education Consortium (the Consortium). The following business plan outlines a roadmap for the development and implementation of the Consortium, which provides an infrastructure to enable the expansion of Graduate Medical Education (GME) beyond what can be developed by individual hospitals and organizations. The ultimate goal of the Consortium is to train excellent physicians who will provide the highest quality of care to patients living in rural and underserved regions of Oregon.

Consortium members include the following organizations:

- Adaugeo Healthcare Solutions (Pendleton)
- College of Osteopathic Medicine of the Pacific Northwest (Lebanon)
- Eastern Oregon Coordinated Care Organization
- Good Shepherd Health Care System (Hermiston)
- Grande Ronde Hospital (La Grande)
- Mercy Medical Center (Roseburg)
- Moda Health
- OHSU (Portland)
- Oregon Area Health Education Centers
- Pendleton IPA (dba Eastern Oregon IPA)
- Providence Health and Services
- Samaritan Health Services/Good Samaritan Regional Medical Center (Corvallis)
- St. Anthony Hospital (Pendleton)
- St. Charles Health System (Bend)
- Yakima Valley Farm Workers Clinic (Hermiston)

Oregon's Physician Shortage Crisis

A recent study estimated the need for 1,726 additional physicians, 332 nurse practitioners, and 168 physician assistants in Oregon, not including the number needed to replace those who leave the workforce due to retirement, relocation, and reduction in work hours.[1] In addition, taking into account the growing and aging population as well as the newly insured population resulting from the Affordable Care Act, the Robert Graham Center projected that Oregon would need a 38% increase in the primary care physician workforce by 2030 in order to maintain current utilization rates.

As Oregon Health Authority's Healthcare Workforce Committee stated in its July 2014 report, "the supply of primary care providers requires immediate action if Oregon's health reform efforts are to be successful." The Healthcare Workforce Committee recommended the development of a statewide, inclusive primary care GME Consortium: "A GME Consortium would allow all those who would benefit from a community-based primary care residency program to participate, to share the risks and rewards and support each other through the process."

To implement this recommendation, the Oregon Graduate Medical Education Primary Care Planning Group (the Planning Group) was created. Planning Group members include representatives from both of Oregon's medical schools, OHSU and the College of Osteopathic Medicine of the Pacific Northwest (COMP-Northwest), two health systems, the Oregon Health Authority, the Area Health Education Center of Southwest Oregon (AHEC SW), Moda Health, and several experts in Family Medicine GME. In February 2015, the Planning Group selected Tripp Umbach, a Pittsburgh-based consulting firm, to guide the development of the Consortium.

A Consortium for the Expansion of Physician Training

The path to becoming a practicing doctor takes at least seven years after college graduation, including four years of undergraduate medical education, or medical school, and a minimum of three years of graduate medical education, or residency training. During residency training, experienced physicians provide instruction to medical school graduates in teaching hospitals and other health care facilities such as primary care clinics or community health centers.

Studies show that when physicians complete both medical school and residency training in the same region, they are significantly more likely to set up practice in the region. A study completed by the Association of American Medical Colleges (AAMC) in 2013 indicates that 70% of physicians who complete both medical school and residency training in Oregon remain in the state to practice.

While Oregon has benefited from increases in medical school class size at OHSU and the development of COMP-Northwest in Lebanon, which graduated its first class of 100 medical students in June 2015, the state has not seen similar increases in residency training. In 2011, Oregon had only 8.4 primary care residents per 100,000 population, ranking Oregon 40th in the nation.

[1] 2014 study by Office for Oregon Health Policy and Research, OHSU, Center for Health System Effectiveness, and Oregon Healthcare Workforce Institute.

When Medicare was first created, funding to support the training of physicians who take care of Medicare patients was provided to hospitals with residency programs in the form of Direct Graduate Medical Education (DGME) and Indirect Medical Education (IME) payments from the Centers for Medicare and Medicaid Services (CMS). Traditionally, residency programs have relied on this funding for their financial support. Unfortunately, CMS payments often don't cover the full cost of starting and operating a residency program, and funding was "capped" for existing programs in 1997 through the Balanced Budget Act. In addition, federal budget cuts threaten existing support.

To address theses issues and the resulting physician workforce crisis, hospitals and other organizations throughout Oregon have begun the process of creating a GME Consortium to serve as the institutional sponsor of new residency programs that will be hosted by individual communities. A Consortium model is the most viable option for measurably increasing residency positions in rural and underserved areas, and enables the development of more graduate medical education capacity than would be possible through individual hospitals or organizations working on their own. By 2026, the Consortium is envisioned to support the training of 42 residents in Family Medicine and Rural Training Track residency programs.

Consortium Model Advantages

The Oregon GME Consortium will exist as an independent, non-profit organization guided by a Board of Directors comprised of the Consortium membership. The Consortium will serve as the institutional sponsor for new Family Medicine and Rural Training Track residency programs as required by the Accreditation Council for Graduate Medical Education (ACGME).

When programs are at maturity, the projected number of initial new residency training positions sponsored by the Consortium is estimated to equal 42. In addition to enabling the development of more residency programs than could be developed by individual organizations working on their own, the Consortium provides greater opportunity to attract private and public funding at all levels by leveraging dollars already invested by participating members.

Working with Area Health Education Center (AHEC) organizations throughout the state, the Consortium also enhances existing "pipeline" efforts to ensure that communities in Oregon have access to physicians who are most likely to remain in the state to practice.

Finally, through efficiencies related to institutional sponsor infrastructure, program development, recruitment, training sites, best practice sharing, and faculty development, a Consortium provides the opportunity to expand the number and size of residency programs more cost effectively than programs developed by individual organizations.

Benefits of Expanded Graduate Medical Education

GME programs are important drivers of health care quality, access, and economic development. In addition to increasing access to high quality primary care, studies completed by Tripp Umbach indicate that each resident in a community-based residency program generates $200,000 in annual economic benefits to the community while completing the program, and $1.5 million in economic benefits every year that he or she remains in the area to practice after training. This impact represents "fresh" dollars in the local economy.[2]

[2] Additional information relative to the methodology and assumptions used in the economic impact analysis included in this business plan can be found in Section VIII of this document.

Based upon national studies completed by Tripp Umbach and findings included in the Oregon Healthcare Workforce Institution's report *2013 Economic Contributions of Physicians*, expanding GME throughout Oregon will provide the state with the following benefits:

Economic Impact: In addition to $15.2 million in statewide annual economic impact generated through the operations of the Consortium, Tripp Umbach estimates that physicians who stay in Oregon after completing residency training at Consortium programs will generate $14.7 million in economic impact annually.

Job Creation: Tripp Umbach estimates that physicians who remain in Oregon after completion of residency training at Consortium programs will generate 225 jobs in 2030. Additionally, the operations of the Consortium will generate an additional 111 jobs by 2030.

Physician Workforce: Communities within 100 miles of a primary care residency program have significantly more physicians per capita than similar communities without such programs; residency programs often require the recruitment of specialists who train residents as well as provide clinical services not available in the community before the formation of the residency program.

Cost Savings to Taxpayers: Because most primary care residents train at clinics serving low income populations, newly created residency programs increase access to care for underinsured patients. In addition, each resident who establishes practice in an underserved community after completion of his or her residency program generates approximately $3.6 million in savings due to better care coordination and a decrease in unnecessary hospitalizations. Tripp Umbach estimates that residents who remain in Oregon to practice in underserved communities after completion of residency training at Consortium programs will generate $17.6 million in health care savings.

Stronger Hospitals: Tripp Umbach studies indicate that hospitals save an average of $75,000 in recruitment costs for every resident they hire, enabling investment in other efforts related to patient care and community health programs. Hospitals with primary care residency programs also have lower utilization of emergency care by uninsured patients due to clinics that are staffed by residents, resulting in millions of dollars of savings in uncompensated care. Finally, revenue from health insurance companies to hospitals may increase due to higher quality outcome measures anticipated from clinical operations which integrate residents into quality outcome programs.

Conclusion

The duration of medical training, including medical school and residency, is at least seven years after undergraduate education; the time to address the physician shortage is now. Health care and economic benefits associated with expanding the physician workforce depend upon immediate support for the development of new primary care residency programs throughout Oregon. **The Oregon GME Consortium provides the greatest opportunity for expanding the physician workforce throughout rural and underserved communities throughout the state.**

II. Background

It is widely recognized that the United States, as well as the state of Oregon, is facing a serious primary care physician shortage. This shortage is due to many factors, including an aging patient and physician population, the expansion of health insurance coverage through the Affordable Care Act, and the shift from a medical education and health care delivery system focused on providing episodic care to one designed to prevent and manage disease.

Numerous studies and organizations note the need for an increase in the number of primary care physicians. According to a 2014 study by the American Academy of Family Physicians, the United States will face a shortage of 52,000 primary care physicians by 2025. The Robert Graham Center projected that Oregon specifically would need a 38% increase in the primary care physician workforce by 2030 in order to maintain current utilization rates. Studies indicate that the primary care physician supply is associated with improved health outcomes at lower costs, especially important in an age of value-based care.

In recognition of Oregon's primary care physician shortage crisis and its impact on the successful reform of health care delivery throughout the state, the Oregon Health Policy Board charged the Healthcare Workforce Committee with the development of recommendations relative to the optimal expansion of the primary care workforce. Specifically, the Committee was asked to provide an analysis of options for the expansion of primary care Graduate Medical Education (GME), as studies have shown that GME expansion is one of the most effective ways to increase the number of physicians in areas where they are needed most.

The Committee determined that the development of a Primary Care GME Consortium was the best way to expand the primary care physician workforce in rural and underserved areas throughout the state. This recommendation was further supported by a $506,000 award from the Oregon Educators Benefit Board (OEBB)/Moda Health Grant program to fund the development of a Consortium to enable the creation of new primary care residency programs. In response, the Oregon Graduate Medical Education Primary Care Planning Group (the Planning Group) was created and began meeting in July 2014. The Area Health Education Center of Southwest Oregon serves as the fiscal administrator of the OEBB/Moda Health grant.

The Planning Group includes the following members listed in Table 1 below:

Table 1. Oregon Graduate Medical Education Primary Care Planning Group

Planning Group Member	Organization
Marcus Alderman	Director of Operations, GME, Samaritan Health System
Nancy Bell	Co-Chair, Administrative Director of Medical Education, Samaritan Health System
Patrick Brunett, MD	Co-Chair, Associate Dean for GME, OHSU
Cathryn Cushing	Workforce Policy Lead, Oregon Health Authority
Robyn Dreibelbis, DO	Department of Family Medicine, Western University of Health Sciences/COMP-Northwest
Jim Foley	Chairman, Moda Health Grant Committee
Chris Guastaferro	Executive Director, AHEC SW
Joan Kapowich	Executive for Accountable Care, Providence Health System
Chip Taylor, MD	Family Medicine Physician, Roseburg

The Planning Group conducted a review of potential consulting firms to assist with the development of the Consortium and selected Pittsburgh-based Tripp Umbach in February 2015. Tripp Umbach is a health care planning firm with experience in developing new and expanded undergraduate and graduate medical education programs throughout the country.

Consortium Model Recommendation

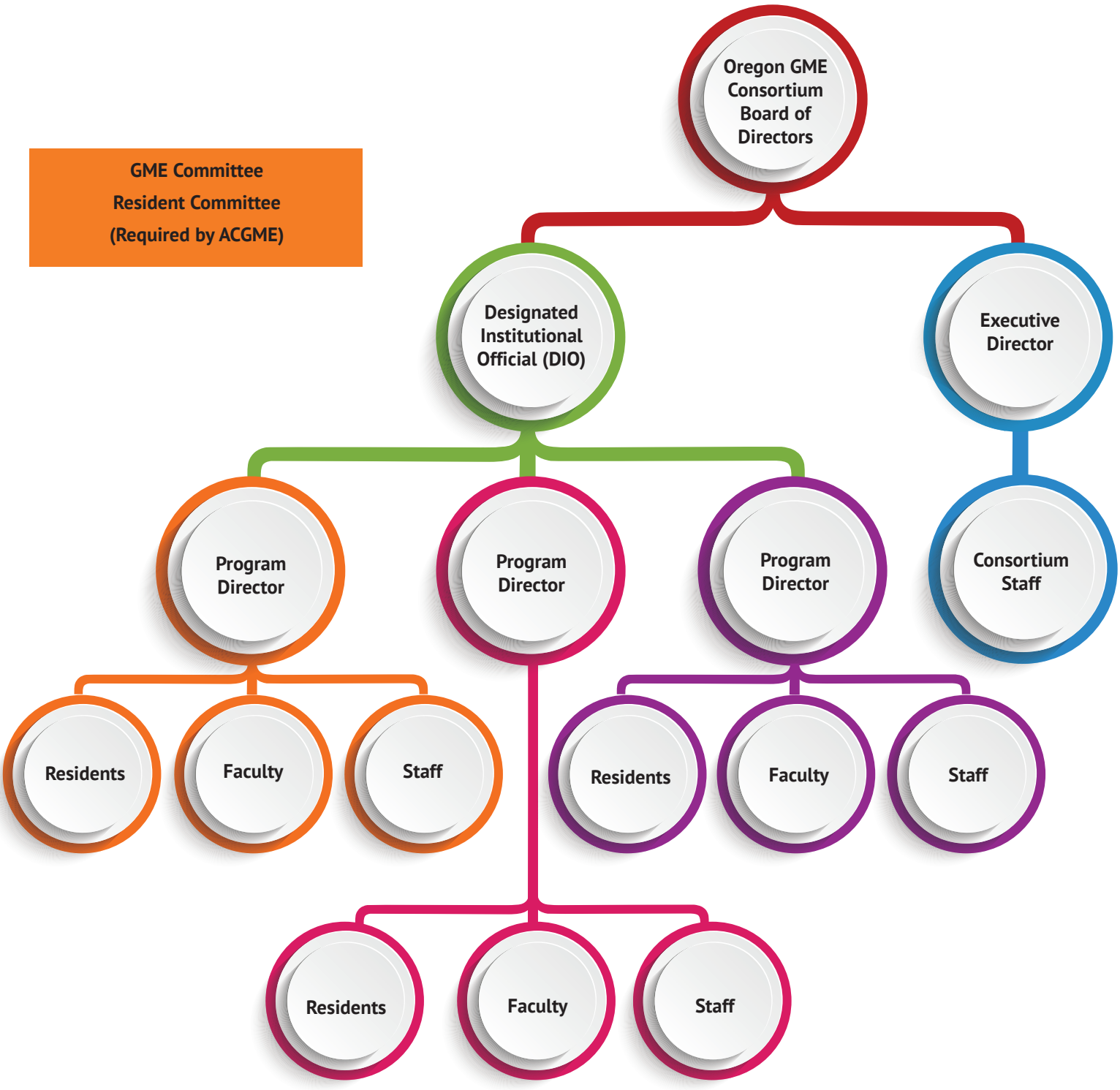
After a review of existing data, analysis, and reports related to health care delivery and education in Oregon and the rest of the country, Tripp Umbach completed a series of stakeholder interviews with health care and GME leaders throughout the state. Tripp Umbach used this information, as well as the firm's own national experience with medical education expansion projects, to develop recommendations that the Consortium be created as an independent, non-profit 501(c)(3) organization.

Tripp Umbach recommends that the Consortium serve as the institutional sponsor for primary care residency programs that will be located in Consortium member communities. The accrediting body for allopathic (MD) residency programs, the Accreditation Council for Graduate Medical Education (ACGME), requires that every residency program have an institutional sponsor.

Tripp Umbach also recommends that the Consortium include a central office staffed by an Executive Director and a Designated Institutional Official (DIO), among others, and provide cost-efficiencies to the Consortium by serving as the institutional sponsor for all Consortium residency programs. Program Directors, Program Coordinators, and residency program-specific staff for each program will be physically located in Consortium member communities.

The recommended organizational structure for the consortium is outlined in Image 1 below:

Image 1. Proposed Organizational Structure for Consortium



GME Forum

In March 2015, Tripp Umbach facilitated a GME Forum with the Planning Group and hospital and physician organizations. The Planning Group invited hospitals and health care organizations located throughout the state to the forum. The forum was designed to be as inclusive as possible; all interested entities were encouraged to attend. The objectives of the forum included the following:

- Development of relationships between potential Consortium members.
- Increase in awareness of the development of the Consortium.
- Education regarding GME benefits, costs, funding, and recommended Consortium structure.
- Potential Consortium member discussion regarding opportunities and challenges related to developing GME programs.

At the conclusion of the forum, meeting participants were asked to communicate their interest in participating in the development of the Consortium. Tripp Umbach then conducted on site visits and presentations at each of the organizations that expressed interest in Consortium development to begin to assess GME capacity and to generate awareness and support for the Consortium initiative.

Engagement with Potential Consortium Members

Tripp Umbach made on site visits in April 2015 to COMP-Northwest in Lebanon, PeaceHealth in Eugene, St. Charles Health System in Bend, Mercy Medical Center in Roseburg, and St. Anthony Hospital in Pendleton. Tripp Umbach also visited provider facilities and facilitated a community meeting in Eastern Oregon. Eastern Oregon meeting participants included representatives from Adaugeo Healthcare in Pendleton, Good Shepherd Health Care System in Hermiston, the Northeast Oregon Area Health Education Center, the Pendleton Independent Physician Association, St. Anthony Hospital, and Yellowhawk Tribal Health Center in Pendleton. The presentation used during these meetings is included in Appendix A of this business plan.

In August 2015, Tripp Umbach facilitated a webinar presentation for the Oregon Association of Hospitals and Health Systems to ensure that as many potential Consortium members were aware of and had the opportunity to participate in the Consortium initiative. The presentation used for the webinar is included in Appendix B of this business plan.

Tripp Umbach also interviewed representatives from Bay Area Hospital in Coos Bay and La Clinica, a Federally Qualified Health Center (FQHC) in Medford, to assess interest and capacity for participation in the development of the Consortium.

Finally, Tripp Umbach discussed the Consortium initiative with representatives from Providence Oregon Family Medicine Residency, Providence Medical Group, Providence Medford Medical Center, and Providence Health and Services North Coast Region.

Presentation of Proposed Residency Programs

Tripp Umbach developed preliminary programming and financial models after individual meetings and discussions with potential Consortium members were held. These were presented to potential Consortium members in June 2015 in Bend. After discussions with potential Consortium members, Tripp Umbach recommended that the Consortium develop the proposed programs and number of residents for each program listed in Table 2 below.

Table 2. Proposed Residency Programs and Number of Residents to be Developed by the Consortium

Proposed Program	Total # of Residents	# of Years in Program	# of Residents Per Year	2016	2017	2018	2019	2020	2021	2022
St. Charles Family Medicine	12	3	4	0	0	0	4	8	12	12
St. Charles Rural Training Track (PGY1)	2	1	2	0	0	0	0	2	2	2
Eastern Oregon Rural Training Track (PGY2 & PGY3)	4	2	2	0	0	0	0	0	2	4
Mercy Family Medicine	24	3	8	0	0	0	8	16	24	24
Total Number of Residents	42		16	0	0	0	12	26	40	42

In addition to input regarding proposed programming and financial models, Tripp Umbach facilitated discussions during the meeting in Bend regarding the hopes and fears of meeting participants relative to the development of the Consortium. Tripp Umbach also worked with meeting participants to create mission and vision statements for the Consortium, included in Section III of this business plan.

Legislative Efforts

Throughout the Consortium development process, Tripp Umbach worked with Consortium members, COMP-Northwest, Moda Health, the Osteopathic Physicians and Surgeons of Oregon, and the Pac/West Communications firm to inform legislative representatives about the Consortium initiative and the need for state support. Pac/West Communications arranged a series of nine meetings with members of the Oregon Senate and House of Representatives in June 2015 so that Tripp Umbach could present an overview of the initiative and the benefits of expanded GME. A handout developed by Tripp Umbach was provided to meeting participants to outline the need for and objectives of the Consortium. This handout is provided in Appendix C of this business plan.

During the meetings, Senator Elizabeth Steiner Hayward and Representative Mitch Greenlick suggested that the Consortium meet with legislative representatives in September 2015 to provide additional information about the Consortium and discuss suggestions for state support. Tripp Umbach and Pac/West Communications coordinated a September 9, 2015 meeting in Portland to initiate discussions regarding policy to support the work of the Consortium.

In the interim, both the House and the Senate passed House Bill 3396, which requires the Oregon Health Policy Board to evaluate the effectiveness of existing financial incentive programs and address new types of programs to recruit and retain health care providers to practice in rural and medically underserved areas. Specifically related to the development of GME, House Bill 3396 calls for a study regarding the best way to support the development of residency programs, and states that the Oregon Health Policy Board may consult with the Oregon GME Consortium regarding the development of policy to support residency programs.

Consortium Formation and Official Announcement of Consortium Members

In September 2015, Cathryn Cushing, member of the Planning Group and former Workforce Policy Lead for the Oregon Health Authority, accepted the position of Consortium Executive Director.

Also in September 2015, AHEC SW initiated the process of incorporation on behalf of the Oregon GME Consortium. The Consortium was initially formed under the umbrella of AHEC SW in an effort to facilitate incorporation so that the Consortium could apply for tax-exempt status as quickly as possible. Once Board of Director representatives and responsibilities have been finalized, the articles of incorporation will be transferred to the Consortium Board of Directors.

Consortium bylaws were ratified on November 18, 2015 at the first official Consortium meeting, held in Roseburg, Oregon at Umpqua Community College. The presentation from this meeting is included in Appendix D of this business plan.

Financial Analysis

Tripp Umbach completed financial analysis to identify estimated costs and potential revenue projections for the Consortium. This analysis is included in Section VII of the business plan and includes preliminary budgets for the start up and ongoing operations of the Consortium and each of the proposed residency programs. Financial analysis also includes the estimated potential revenue that hospitals are projected to receive from Medicaid GME funding and from federal government funding in the form of Direct Graduate Medical Education (DGME) and Indirect Medical Education (IME) payments from the Centers for Medicare & Medicaid Services (CMS).

Tripp Umbach recommends that the Consortium and each of its members continue to develop relationships with the state and with community organizations and foundations to generate local support and funding to address the funding gap between Consortium-related revenue and expenses.

Communication and Fund Development Plan

Tripp Umbach recommends that the Consortium create and implement a Communication and Fund Development Plan to support the operations of the Consortium and the development of residency programs. Specifically, Tripp Umbach recommends that the Communication and Fund Development Plan include the following strategies:

- Develop and distribute key talking points and a "Q&A" document to Planning Group and Consortium members to ensure key stakeholders are communicating a unified message.
- Utilizing the expertise available through COMP-Northwest and Pac/West Communications, develop a comprehensive strategy to introduce policy for state support of GME expansion.
- Develop an inventory of community organizations and philanthropic foundations focused on economic development and/or access to health care and education, and communicate the benefits of the Consortium and expanded GME to these organizations.
- Approach private funders to explore the potential to develop funding for programs, possibly through an endowment for one or more new residents. Funders could be offered "naming" rights for residency positions.
- Develop and distribute a "white paper" to educate readers about the need for and benefits of expanded GME.
- Meet with and communicate the benefits of the Consortium and expanded GME to legislative representatives, health insurance plans and Coordinated Care Organizations, and philanthropic foundations throughout the state.
- Attend and present benefits of Consortium and expanded GME at state and national hospital and physician association meetings, especially those focused on rural health.
- Identify and apply for state and federal grants for GME expansion.

Tripp Umbach has provided presentations and communication handouts in the Appendices of this business plan, and can provide additional communication materials upon request, related to the social and economic benefits of expanded GME. Tripp Umbach recommends that the Consortium and its members utilize the data included in the presentations and handouts to communicate and engage various local, state, and national audiences.

III. Guiding Principle, Mission, and Vision of the Consortium

Tripp Umbach worked with the Planning Group and Consortium members to develop the following proposed guiding principle, mission, and vision of the Consortium. Tripp Umbach recommends that the Consortium Board of Directors finalize these statements over the next six months.

Guiding Principle:

The Consortium allows for the expansion of Graduate Medical Education beyond what can be provided by individual hospitals and organizations.

Mission:

The mission of the Consortium is to increase the number of physicians who practice in rural and underserved areas throughout the state of Oregon. The Consortium serves as a sustainable, cost-efficient infrastructure to support high quality residency programs, located in Consortium member communities, through institutional sponsorship, faculty development and expertise, and best-practice sharing among members and other existing residency programs in the State.

Vision:

The vision of the Consortium is to enable patients living in rural and underserved regions of the State to access the highest quality of care from excellent physicians.

IV. Governance and Organizational Structure

Tripp Umbach recommends that the Consortium exist as an independent non-profit, tax-exempt 501(c)(3) organization.

Board of Directors

Governance of the Consortium will be exercised through a Board of Directors comprised of representatives from member organizations. The Board will be responsible for determining the strategic direction of the organization, approving Consortium budgets, and providing oversight for academic and operational activities of the Consortium. Consortium member organizations will each have one vote on the Board. The Board is also envisioned to include representatives from OHSU, COMP-Northwest, and appropriate AHECs.

Definitive Agreements

Definitive agreements, which will outline specific governance rights and financial obligations concerning the Consortium, must be developed. Tripp Umbach recommends that three types of agreements be developed:

- Consortium member agreements to address how member organizations participate and support residency programs, including the sharing of expenses and revenues between Consortium members.
- Medical school affiliation agreements to address the role of the medical schools relative to the Consortium.
- Affiliated institution agreements to address the relationships that the Consortium has with nonmember institutions.

Tripp Umbach recommends that the following principles guide the development of Consortium member agreements:

- The purpose of the Consortium is to expand GME throughout Oregon.
- Commitment to the Consortium will supersede individual hospital interests in issues related to GME. Existing competition among member organizations should not be considered in decision-making at the Consortium level.
- Founding members hold voting privileges with one vote per founding member organization.
- Founding members will commit to a long-term sustainability plan to support GME development and expansion.
- Strong partnerships with physician organizations, public health organizations, and a wide range of health care organizations are vital to the success of the Consortium.
- Consortium members will create a coordinated workforce recruitment policy to ensure that workforce efforts are shared throughout members' communities. Tripp Umbach recommends that the Consortium form a physician workforce leadership group to develop and oversee this function.

The governance structure outlined above provides several benefits to the Consortium. It allows for decision-making and control by voting members of the Consortium, and provides a cost-effective infrastructure to enable the accreditation of the Consortium as the institutional sponsor of residency programs by the ACGME. It also places the Consortium in a favorable position to receive new federal and state funding for innovative medical education programs, if such funding becomes available.

Organizational Structure

The Consortium will be staffed by an Executive Director, responsible for day-to-day operations and management of the Consortium, and a Designated Institutional Official (DIO), required by the ACGME to serve as the primary contact for GME activities and responsible for ensuring compliance with ACGME requirements. Tripp Umbach also recommends that the Consortium eventually hire a part-time Finance Director, Human Resource Director, and Information Technology Director.

In addition to the leadership and staff directly related to the Consortium infrastructure, Program Directors, faculty, staff, and residents will be required for each of the proposed residency programs. Program Directors are responsible for the quality of residency programs. Proposed budgets included in the business plan reflect compensation to account for 70% of Program Directors' time to be allocated to administrative responsibilities for the residency programs. Tripp Umbach assumes that the remainder of Program Directors' time will be allocated to clinical activities. Faculty time required for each of the residency programs is outlined in the proposed budgets and reflects ACGME requirements for Family Medicine residency programs.

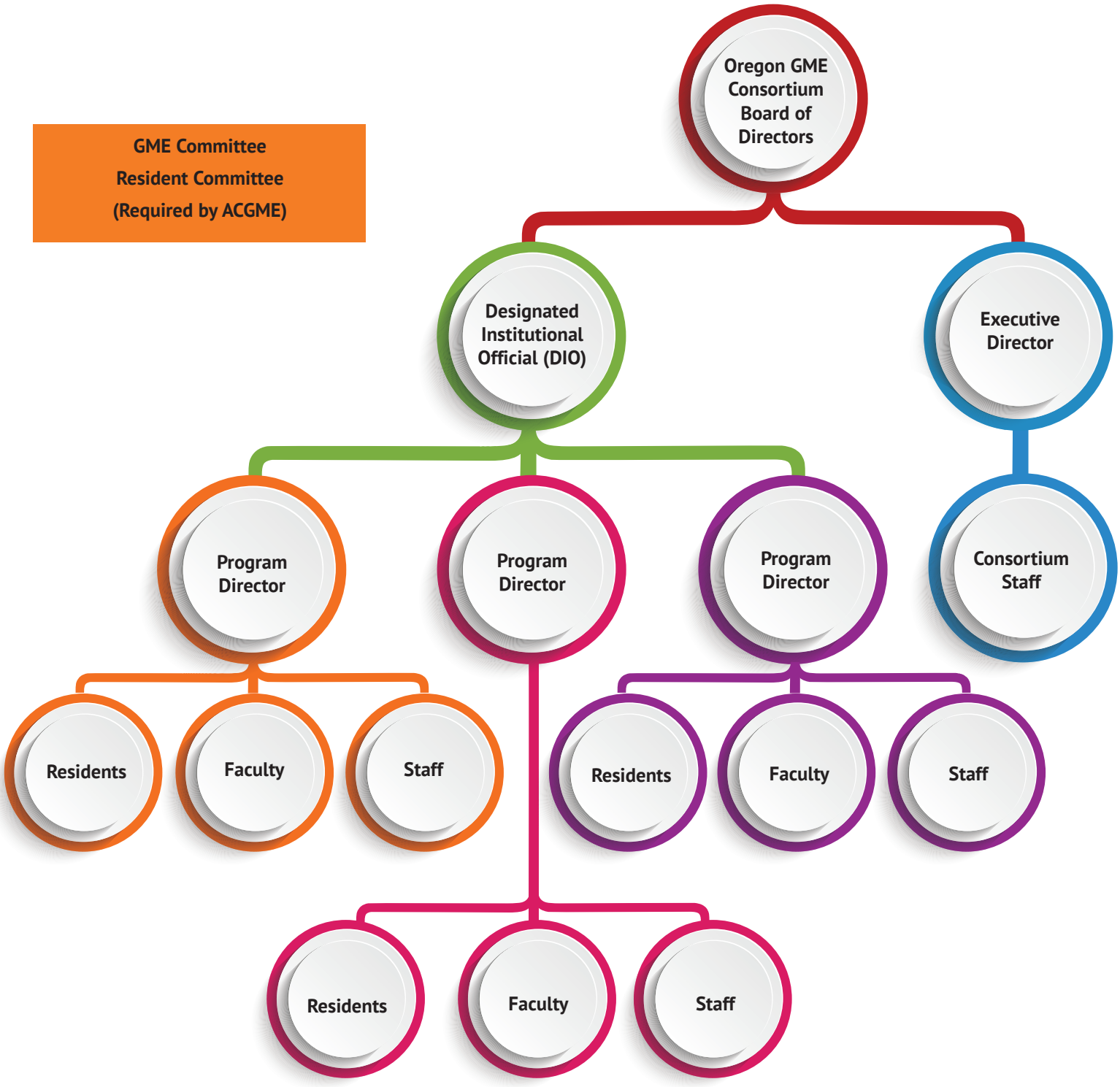
Compensation for teaching time by core faculty is required by the ACGME for each residency program. Consortium compensation arrangements with faculty members can vary and may include direct employment or contractual arrangements with either individual hospitals or physician groups. Tripp Umbach developed estimated faculty compensation for each of the proposed residency programs based upon national physician compensation data, as well as Tripp Umbach's own experience with medical education expansion projects. However, due to regional differences in physician compensation and varying levels of physician interest in academic activities for non-financial reasons, Tripp Umbach recommends that these estimates be reviewed carefully by Consortium members and refined to reflect any local physician compensation differences.

In addition to the Consortium office and individual residency program infrastructure, the ACGME also requires development of a GME Committee (GMEC) that meets at least once every quarter and includes the DIO, a representative sample of Program Directors, peer-selected residents, and a quality improvement or patient safety representative. Along with the DIO, the GMEC is responsible for oversight of accreditation status and the quality of GME activities and environments, and for the approval of policies and procedures, resident compensation, and changes in programming and program leadership.

Finally, the ACGME requires that the Consortium create a Resident Committee to serve as a forum to allow residents in all Consortium programs to communicate and exchange information with each other and raise concerns to the DIO and GMEC.

Image 2 below reflects the proposed organizational structure of the Consortium.

Image 2. Proposed Organizational Structure for Consortium



V. Consortium Membership

Tripp Umbach facilitated multiple discussions among potential Consortium members throughout Oregon during the spring and summer of 2015. Ultimately, the following organizations have committed to becoming the founding members of the Consortium:

- Adaugeo Healthcare Solutions (Pendleton)
- College of Osteopathic Medicine of the Pacific Northwest (Lebanon)
- Eastern Oregon Coordinated Care Organization
- Good Shepherd Health Care System (Hermiston)
- Grande Ronde Hospital (La Grande)
- Mercy Medical Center (Roseburg)
- Moda Health
- OHSU (Portland)
- Oregon Area Health Education Centers
- Pendleton IPA (dba Eastern Oregon IPA)
- Providence Health and Services
- Samaritan Health Services/Good Samaritan Regional Medical Center (Corvallis)
- St. Anthony Hospital (Pendleton)
- St. Charles Health System (Bend)
- Yakima Valley Farm Workers Clinic (Hermiston)

VI. Residency Programs

Tripp Umbach recommends the development of the Family Medicine and Rural Training Track residency programs listed in Table 3 below. Each residency program will be hosted by an individual hospital due to accreditation and CMS GME payment regulations; however, the Consortium will have the ability to allocate residents among members to maximize the experience for residents and increase the likelihood that residents will establish practices in the areas of the state where they are needed most.

Rural Training Tracks (RTTs) are envisioned to be an important part of the Oregon GME Consortium. According to the Rural Health Information Hub, "Rural Training Track (RTT) residency programs provide graduate medical education to prepare resident physicians broadly for rural family medicine. The most popular model is the "1-2" RTT. In "1-2" programs, the first year of residency takes place in an urban-based program setting while the second and third years occur in a more rural area. This model capitalizes upon the best training opportunities in both contexts."

In addition to allowing residents to train in communities which may not have the volume of clinical experiences required by the ACGME to host Family Medicine residency programs on their own, RTTs can provide hospitals with an exception to their CMS funding cap. This is especially important to St. Charles Health System since they have an already established low cap. RTTs are also one of the most effective ways to recruit and retain physicians to rural areas.

Because RTTs are relatively few in number and definitive guidelines for their development and implementation have not been finalized, Tripp Umbach recommends that the Consortium initiate discussions with a national RTT expert. Specifically, Tripp Umbach recommends that the Consortium explore, possibly through a work session that would include Eastern and Central Oregon representatives as well as a national RTT expert, a model in which residents of a Family Medicine program spend the first year training in Bend at St. Charles Health System, and the second and third years in Eastern Oregon. An overview of RTTs is included in Appendix E and specific Family Medicine residency program requirements are outlined in Appendix F of the business plan.

Table 3. **Proposed Residency Programs and Number of Residents to be Developed by the Consortium**

Proposed Program	Total # of Residents	# of Years in Program	# of Residents Per Year	2016	2017	2018	2019	2020	2021	2022
St. Charles Family Medicine	12	3	4	0	0	0	4	8	12	12
St. Charles Rural Training Track (PGY1)	2	1	2	0	0	0	0	2	2	2
Eastern Oregon Rural Training Track (PGY2 & PGY3)	4	2	2	0	0	0	0	0	2	4
Mercy Family Medicine	24	3	8	0	0	0	8	16	24	24
Total Number of Residents	42		16	0	0	0	12	26	40	42

VII. Financial Analysis

To complete the financial analysis for the development of the Consortium and implementation of its residency programs, Tripp Umbach developed preliminary budgets for the start up and ongoing operations of the Consortium infrastructure and each of the residency programs included in the business plan. Tripp Umbach also developed projections for estimated federal GME revenue from CMS.

The financial analysis included in the business plan assumes that Consortium revenue will include Medicaid GME funding and federal CMS DGME and IME payments. Funding gaps between these revenues and expenses are included in the financial analysis outlined in Table 4 below. Additional financial detail, including estimated budgets for each program as well as the Consortium office, has been provided to the Consortium in spreadsheets that enable the Consortium to manipulate assumptions and data as programs are refined and implemented.

Table 4. Estimated Consortium Expenses and Revenues

	2016	2017	2018	2019	2020	2021	2022
Expenses							
Consortium Expenses	$323,000	$399,250	$613,500	$608,500	$608,500	$608,500	$608,500
St. Charles Family Medicine	$0	$470,650	$656,100	$1,275,990	$1,658,930	$1,969,870	$1,969,870
St. Charles RTT*	$0	$0	$296,350	$296,350	$579,820	$579,820	$579,820
Eastern Oregon RTT*	$0	$0	$303,500	$303,500	$491,500	$806,970	$965,440
Mercy Family Medicine	$0	$470,650	$656,600	$1,668,130	$2,513,210	$3,207,090	$965,440
Total Expenses	**$323,000**	**$1,340,550**	**$1,995,325**	**$4,152,470**	**$5,851,960**	**$7,172,250**	**$7,330,720**
CMS Revenue							
St. Charles Family Medicine	$0	$0	$85,700	$85,700	$171,347	$256,942	$256,942
St. Charles RTT*	$0	$0	$0	$0	$385,389	$385,389	$385,389
Eastern Oregon RTT*	$0	$0	$0	$0	$0	$0	$0
Mercy Family Medicine**	$0	$0	$410,400	$410,400	$820,800	$1,231,200	$1,231,200
Total CMS Revenue	**$0**	**$0**	**$496,100**	**$496,100**	**$1,377,536**	**$1,873,530**	**$1,873,530**
CMS Revenue	$0	$0	$496,100	**$496,100**	$1,377,536	$1,873,530	$1,873,530
Medicaid Funding* **	$0	$0	$144,000	$144,000	$312,000	$480,000	$504,000
Expenses	$323,000	$1,340,550	$1,995,325	$4,152,470	$5,851,960	$7,172,250	$7,330,720
Surplus/Deficit	**-$323,000**	**-$1,340,550**	**-$1,995,325**	**-$3,512,370**	**-$4,162,424**	**-$4,818,720**	**-$4,953,190**

Note: Expenses and revenues are provided in constant dollars.
**RTT indicates a Rural Training Track in which residents spend the first year of the program at St. Charles, and the second and third years in Eastern Oregon.*
***CMS revenue for Mercy Family Medicine residency program does not include IME payments due to Mercy's Sole Community Provider status.*
****Assumed to equal $12,000 per resident.*

Development of Expenses for Start Up and Ongoing Operations

Tripp Umbach developed preliminary budgets for the start up and ongoing operations of the Consortium office and residency programs using ACGME requirements related to faculty, staff, and infrastructure, as well as Tripp Umbach's national experience with medical education projects throughout the country. It is important to note that these budgets are estimates of costs and should be reviewed carefully by Consortium leadership once the implementation process begins. Particular attention should be given to estimates for faculty compensation since this expense can vary significantly based upon regional differences and local physician interest in teaching activities.

Development of Projections for Estimated Federal DGME and IME Payments

Tripp Umbach developed projections for estimated federal support of Consortium programs based upon hospital-specific information provided by Consortium members and Tripp Umbach models developed to calculate estimated payments. Because formulas to determine DGME and IME payments are complex and change frequently based upon federal regulations, Tripp Umbach recommends that revenue projections are reviewed carefully by Consortium leadership and hospital representatives, preferably those with Medicare cost report experience.

Medicare provides GME funding to teaching hospitals in the form of payments to reimburse hospitals for the direct and indirect costs of training residents (described below). The financial analysis provided within the business plan assumes that these payments to Consortium member hospitals will be shared with the Consortium; however, actual financial arrangements between Consortium members must be outlined in definitive agreements.

DGME Payments

Payments to reimburse hospitals for the direct costs of training residents are called Direct Graduate Medical Education (DGME) payments. These payments are meant to reimburse hospitals for the costs to train residents, such as resident, faculty, and staff compensation, supplies, and other overhead costs. These payments are calculated based upon the actual costs of the residency program, the number of residents (in Full-Time Equivalent counts, or FTEs) that are eligible to be counted for the DGME payment, and the percentage of hospital care that is provided to Medicare patients (the Medicare patient load).

IME Payments

Payments to reimburse hospitals for the indirect costs of training residents are called Indirect Medical Education (IME) payments. These payments are intended to cover the costs incurred by hospitals due to the fact that they are teaching facilities, such as inefficiencies related to a sicker patient population and the use of additional diagnostic services by residents. IME payments are provided to hospitals in the form of a percentage increase (or add-on) to Medicare payments. The percentage increase is calculated based upon a hospital's ratio of residents-to-beds and a formula developed by Medicare.

Resident FTEs and Caps

DGME and IME payments to hospitals are calculated based upon resident FTEs eligible for inclusion in payment calculations. Eligible FTEs are determined based upon the number of residents that the ACGME has accredited for each residency program, the time that residents spend in facilities that have been approved by Medicare for inclusion in the payment calculation, and the resident "cap" that has been determined by Medicare. The resident cap was introduced through the Balanced Budget Act of 1997 (BBA), which determined that funding for existing residency programs would be "capped" based upon the number of the resident FTE count for 1996. Residency programs that started after 1996 at hospitals that did not offer GME in 1996 are exempted and able to establish a cap within five years after the first accredited residency program is established at the hospital. As noted previously, RTT programs provide hospitals with an already established cap an exception to the cap for RTT residents.

The resident cap creates an incentive for a hospital to become accredited to train as many residents as the hospital may need in the future within the five year timeframe. While the development of the highest quality training environment for residents takes a significant amount of time, hospitals should work to capitalize the potential reimbursement from CMS within the five year timeframe.

VIII. Economic Impact

Tripp Umbach completed analysis to determine the economic impact that the Consortium will have on Oregon's economy. Tripp Umbach's analysis indicates that the Consortium will generate $15.2 million in economic impact annually for the state of Oregon by 2030. [3]

The development of medical education in a region results in a significant infusion of economic growth to the community. Medical education means business. Medical education attracts dollars to the region and is also a foundation for the training of needed primary care physicians and specialists in medically underserved regions.

The primary goal of the Consortium is to increase the number of physicians practicing in rural and underserved areas of Oregon. An additional benefit will be the significant positive impact of the Consortium and its residency programs on the economy of the state, including the generation of jobs and tax revenue. Tripp Umbach completed economic impact analysis to project the business volume, employment, and government revenue impacts that the operations of the Consortium and its residency programs will bring to the state.

Methodology Employed in the Economic Impact Study

This economic impact analysis measures the effect of direct and indirect business volume, employment, and government revenue impacts. The Tripp Umbach economic impact methodology was originally derived from a set of research tools and techniques developed for the American Council on Education (ACE). [4] The ACE-based methodology employs linear cash flow modeling to track the flow of institution-originated funds through a delineated spatial area. Tripp Umbach modified the ACE model to accommodate the complexities of graduate medical education.

Data utilized in the analysis includes estimated operational expenditures, jobs, and compensation for faculty, staff, and residents. Studies measuring economic impact capture the direct economic impact of an organization's spending, plus additional indirect spending in the economy as a result of direct spending.

This analysis includes not only spending on goods and services with a variety of vendors within the state and the spending of faculty, staff, residents, and visitors, but also the business volume generated by businesses within Oregon that benefit from this spending. It is important to remember that not all dollars spent by an institution remain in its home state. Dollars that "leak" out of the state in the form of purchases from out-of-state vendors are not included in the Consortium's economic impact on the state.

[3] Tripp Umbach utilized linear cash flow modeling to determine the economic impacts included in this business plan. Tripp Umbach has completed hundreds of economic impact studies for hospitals and academic medical centers throughout North America. For the past 20 years, Tripp Umbach has utilized linear cash flow modeling to complete national level economic impact studies of every US allopathic medical school and major teaching hospital for the Association of American Medical Colleges (AAMC).

[4] Caffrey, John and Isaacs, Herbert, "Estimating the Impact of a College or University on the Local Economy," American Council on Education, 1971.

The Oregon GME Consortium impacts business volume in Oregon in two ways:

- Direct expenditures for goods and services by the Consortium, its residency programs, and faculty, staff, residents, and visitors. This spending supports local businesses, which in turn employ local individuals to sell the goods and provide the services that Consortium constituencies need.
- Indirect spending within the state of Oregon. The businesses and individuals that receive direct payments re-spend this money within the state, thus creating the need for even more jobs.

By 2030, Tripp Umbach estimates that the Consortium will generate a total of $15.2 million in annual economic impact for Oregon's economy. This impact is generated through the spending of the Consortium, the spending of faculty, staff, and residents, and the spending by visitors to the Consortium and faculty, staff, and residents. Included in this impact is $8 million in statewide economic impact generated each year by the residents training in Consortium programs.

Tripp Umbach estimates that 111 jobs will be created in Oregon due to the operations of the Consortium by 2030. Further, an additional 225 jobs will be created in Oregon annually as 10 physicians establish practice in Oregon each year after completing their final year of residency training through the Consortium.[5]

Based upon national studies completed by Tripp Umbach and findings included in the Oregon Healthcare Workforce Institution's report *2013 Economic Contributions of Physicians*, expanding GME throughout Oregon will provide the state with the following benefits:

Economic Impact

In addition to generating $15.2 million in statewide annual economic impact through the operations of the Consortium, each physician who stays in Oregon after completing residency training will generate $1.5 million in annual economic impact. Tripp Umbach estimates that 10 physicians will remain in Oregon to establish practice each year. These physicians will generate $14.7 million in economic impact annually.

Job Creation

Each physician who remains in Oregon generates an average of 23 direct, indirect, and induced jobs. This business plan assumes that 10 physicians will complete Consortium-sponsored residency training and establish practice in Oregon each year; these physicians will generate 225 jobs in 2030. Additionally, the operations of the Consortium will generate an additional 111 jobs by 2030.

Physician Workforce

Communities within 100 miles of a primary care residency program have significantly more physicians per capita than similar communities without such programs; residency programs often require the recruitment of specialists who train residents as well as provide clinical services not available in the community before the formation of the residency program.

[5] Tripp Umbach assumes that 14 residents will graduate each year from Consortium-sponsored residency programs, 70% of these graduates will establish practice in Oregon, and 23 jobs will be created due to the establishment of each practice.

Cost Savings to Taxpayers

Because most primary care residents train at clinics serving low income populations, newly created residency programs increase access to care for underinsured patients. In addition, Tripp Umbach has completed studies which estimate that each resident who establishes practice in an underserved community after completion of his or her residency program generates approximately $3.6 million in savings due to better care coordination and a decrease in unnecessary hospitalizations. Tripp Umbach estimates that half of the residents who remain in Oregon to practice will establish practices in underserved communities, and that these residents will generate $17.6 million in health care savings.

Stronger Hospitals

Tripp Umbach studies indicate that hospitals save an average of $75,000 in recruitment costs for every resident they hire, enabling investment in other efforts related to patient care and community health programs. Hospitals with primary care residency programs also have lower utilization of emergency care by uninsured patients due to clinics that are staffed by residents, resulting in millions of dollars of savings in uncompensated care. Finally, revenue from health insurance companies to hospitals may increase due to higher quality outcome measures anticipated from clinical operations which integrate residents into quality outcome programs.

IX. Implementation Timeline

Tripp Umbach recommends that the development of the Consortium and the implementation of residency programs proceed in the following manner. Although a more aggressive implementation timeline is possible, based upon Tripp Umbach's experience working with other Consortiums throughout the country who have also had to reach consensus among members relative to programmatic and financial agreements, Tripp Umbach believes that the following timeline is realistic.

In addition to the specific activities outlined below, Tripp Umbach recommends that GME Implementation Teams be created at each of the Consortium members that will host residents. These teams should include key physician and administrative leadership to prepare the organization for expanded GME, particularly related to physician engagement and facility readiness.

Implementation Activity	Timing
Incorporation of Consortium Under AHEC SW	Fall 2015
Legislative Engagement and Communication of Consortium Initiative	December 2015 - ongoing
Initiation of Institutional Accreditation Application	January 2016
Creation of Fund Development Plan	January 2016
Creation of Board of Directors	January 2016
Transfer of Incorporation from AHEC SW to Consortium Establish finance, accounting, and HR functions	January 2016
Policy Recommendations to State	February 2016
Finalization of Bylaws	February 2016
501(c)(3) Tax-Exempt Status	Spring 2016
Development of Definitive Agreements	Spring 2016
Board of Director Approval of Proposed Program and Financial Model	May 2016
Communication of Program Model and Engagement of Physicians and Staff at Member Organizations	May 2016 - ongoing
Residency Program Development » Hire Program Director(s) (June – December 2016) » Faculty Recruitment (June 2016 – December 2017) » Write and Submit Program Information Form(s) (PIF) (November 2016 - March 2017) » Site Visit(s) (Spring/Summer 2017) » Accreditation and Recruitment (Fall 2017 – December 2017) » National Resident Matching Program (NRMP) Match (March 2018) » First Class(es) of Residents (August 2018)	June 2016 - August 2018

X. Conclusion

The Oregon GME Consortium is to be commended for its ability to convene and engage a wide variety of stakeholders, communicate the need for and the benefits of the development of the Consortium, and secure commitments from a large group of Consortium members from rural locations throughout the state, including Eastern, Central, and Southern Oregon. The fact that the Consortium was able to hire an Executive Director, incorporate the organization, and ratify bylaws in less than a year speaks volumes about the commitment of the Planning Group and Consortium members to the initiative.

Although significant challenges remain, particularly related to securing funding to ensure ongoing sustainability for the Consortium and its programs, Tripp Umbach believes that the significant need for expanded GME and the collaborative energy of the Consortium members will enable the Oregon GME Consortium to achieve its mission to increase the number of physicians who practice in rural and underserved areas throughout the state.

As noted in the Executive Summary, the duration of medical training, including medical school and residency, is at least seven years after undergraduate education. Health care and economic benefits associated with new residency programs depend upon immediate support for the Consortium.

The Oregon GME Consortium provides the greatest opportunity to expand the physician workforce throughout rural and underserved communities throughout the state.