

# UNIVERSITY OF HAWAI‘I SYSTEM ANNUAL REPORT



REPORT TO THE 2018 LEGISLATURE

Annual Report on the  
Hawai'i Medical Education Council

HRS 304A-1704

December 2017

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## **Executive Summary**

### **Physician workforce shortages persist and worsen**

Hawai‘i continues to have a significant physician shortage of about 700 physicians. The shortage is expected to worsen as demand for medical care increases due to an aging population burdened by more chronic illness; and retiring/off-island relocating physicians. The largest shortages are in primary care (Family medicine and Internal medicine). Insufficient access to primary care frequently results in delays in care as well as more costly care in emergency departments or hospitals. Several other specialties have large shortages including general surgery, psychiatry, and orthopedics. Many practicing physicians in all specialties have closed their practices to new Medicaid or Medicare patients, which further exacerbates access to care for those most vulnerable. The excess cost associated with avoidable emergency care is frequently borne by the state and our hospitals.

### **Why GME matters**

Physicians who train in Hawai‘i frequently practice in Hawai‘i. (See Appendix D) Studies have demonstrated that the following characterize Hawai‘i’s physician population: most have strong, long-standing family ties to our state; the University of Hawai‘i John A. Burns School of Medicine (JABSOM) is by far the greatest medical school source of Hawai‘i’s physicians; and physicians who train in Hawai‘i-based residency programs (also known as Graduate Medical Education or GME programs) are also more likely to practice and remain in Hawai‘i. The physician retention rate for physicians who train in Hawai‘i for both medical school and their GME programs is nearly 80%.

Despite extreme physician shortages and the expansion of JABSOM class size, there has been a contraction of overall GME positions in Hawai‘i from 241 (2009) to 230 (2017) [4%]. Hawai‘i is in the bottom quintile of GME positions per population. (See Appendix C)

*This downward trend at a time of shortage is of grave concern to this Council.*

### **Decreased federal and local GME funding, resulting in loss of GME positions**

Funding is the largest barrier to expanding GME in Hawai‘i. The federal GME reimbursement from Centers for Medicare & Medicaid Services to teaching hospitals has decreased substantially over the past several years and will continue to shrink. (See Appendix E) Hawai‘i’s community teaching hospitals (The Queen’s Health Systems hospitals, Hawai‘i Pacific Health hospitals, Kuakini Medical Center and Wahiawā General Hospital) have historically funded the increasing gap between the cost of GME and federal GME support for these programs. However, our teaching hospitals are no longer able to fund the growing gap in federal GME funding due to declining reimbursement for medical care, steeply rising hospital costs related to federally mandated healthcare reform, increased regulatory concerns, increasing malpractice claims naming residents when they were under supervision of a fully licensed attending physician, and increasing numbers of uncompensated care for certain populations.

State reductions in funding to the UH and JABSOM have also resulted in less funding for key faculty who are needed to provide excellent teaching and further expansion of selected GME programs. Financing GME in a sustainable manner to address future provider needs remains a critical challenge for JABSOM, teaching hospitals and the state legislature.

Myriad other factors negatively impact our ability to retain our GME trainees in Hawai'i and/or to attract and retain them to practice in the neighbor islands or more rural community settings. This report documents specific strategies to understand and reverse the decline of GME and its impact on the health of the peoples of Hawai'i.

#### **RECOMMENDATION #1**

UH JABSOM/HMEC recommends that UH JABSOM and the legislature work with vital stakeholders to identify options for funding GME and the return on investment to the state of Hawai'i in funding GME.

#### **RECOMMENDATION #2**

UH JABSOM/HMEC recommends that the 2018 State Legislature assess the advisability and feasibility of an annual GME Appropriation to fund HMEC designated residency/fellowship programs with a particular emphasis on primary care.

#### **RECOMMENDATION #3**

UH/HMEC recommends that the 2018 State Legislature and State Executive Branch support the State Department of Human Services and UH JABSOM to work together to develop a State Medicaid GME Matching program to augment GME funding.

#### **RECOMMENDATION #4**

UH/HMEC recommends that the 2018 State Legislature, UH JABSOM, the Hawai'i Medical Association and other stakeholders explore potential remedies or reforms to protect residents and fellows from being named in malpractice suits while they are in a formal training program and providing care under the supervision of a fully licensed attending physician.

## Statutes

The University of Hawai'i System (UH) and its John A. Burns School of Medicine (JABSOM) administer two (2) statutes related to graduate medical education (GME) and addressing the severe physician shortage needs in Hawai'i. *See excerpted text of statutes in the Appendix A.*

- [HRS § 304A-1702] – **Graduate Medical Education (GME) Program**, was established to formally encompass the administration of UH JABSOM's institutional graduate medical education (GME) program.
- [HRS §§304A-1703, 1704, 1705] – **Medical Education Council**, was created within UH JABSOM and called "The Hawai'i Medical Education Council" (HMEC). HMEC was given the administrative **duties and powers** to:
  - (1) Analyze the State healthcare workforce for the present and future, focusing in particular on the State's need for physicians;
  - (2) Assess the State's healthcare training programs, focusing on UH JABSOM's institutional GME enterprise to determine its ability to meet the workforce needs identified by HMEC;
  - (3) Recommend to the Legislature and UH Board of Regents (BOR) ways in which identified GME and other healthcare training programs can improve and change in order to effectively meet the HMEC assessment;
  - (4) Work with other entities and state agencies, and in consultation with the Legislature and BOR, develop and implement a Plan to ensure the adequate funding of healthcare training programs in the State, with an emphasis on UH JABSOM GME programs;
  - (5) Seek funding to implement the Plan from all public (county, state and federal government) and private sources;
  - (6) Monitor and continue to improve the funding Plan; and,
  - (7) Submit an annual report to the Legislature no later than twenty days before the convening of each regular Legislative session.

## Definitions

HRS §304A-1701, defines "**Graduate Medical Education**" or **GME** as that period of clinical training of a physician following receipt of the medical doctor (or osteopathic doctor) degree and prior to the beginning of an independent practice of medicine.

"**Graduate Medical Education Program**" means a GME program accredited by the American Council on Graduate Medical Education (ACGME). UH JABSOM has maintained full ACGME institutional accreditation.

"**Healthcare workforce**" includes physicians, nurses, physician assistants, psychologists, social workers, etc. "**Healthcare training programs**" means a healthcare training program that is accredited by a nationally-recognized accrediting body.

## HMEC Membership

Membership on Hawai'i Medical Education council (HMEC) - is comprised of eight Governor-appointed and Legislature-confirmed individuals and five ex-officio members listed in the Table 1 below:

TABLE 1 – HMEC CHAIR, MEMBERS AND STAFF						
#	Name	Appointment Dates		Expiration	Term#	Representing
	Hedges, Jerris (Chair)	Ex-officio			N/A	Dean, UH JABSOM
	Boland, Mary	Ex-officio (or designee)			N/A	Dean, UH School of Nursing
	Holcombe, Randall	Ex-officio (or designee)			N/A	Director/Designee, UH Cancer Center
	Otsuki, Alan	Ex-officio			N/A	Associate Dean, UH School of Medicine
	Pressler, Virginia	Ex-officio			N/A	Director, Hawai'i State Department of Health
1	Dubbs, William		04/22/2014	06/30/2019	1	Chief of Staff, VA Pacific Islands Health Care System
2	Flanders, Chris	06/13/2016	06/13/2016	06/30/2019	1	Executive Director, Hawai'i Medical Association
3	Mugiishi, Mark	01/12/2017	01/12/2017	06/30/2019	1	Executive Vice President and Chief Medical Officer, Hawai'i Medical Services Association
4	Hixon, Allen "Chip"		04/22/2014	06/30/2021	2	Chair, JABSOM Department of Family Medicine and Community Health
5	McManus, Vicki	07/01/2012	07/01/2014	06/30/2017	2	General Public/Community/Business
6	Robbins, Kenneth	07/01/2014	07/01/2014	06/30/2019	2	CMO, Hawai'i Pacific Health
7	Vitousek, Sharon	07/01/2012	07/01/2014	06/30/2021	2	Founding Board member HHIC, NHCH
8	Yoshioka, Paula		07/01/2012	06/30/2021	2	Senior VP, Queen's Health Systems
	<b>STAFF</b>					
	Buenconsejo-Lum, Lee	HMEC/GME Administrator			NA	Professor & DIO/Dir of GME, UH JABSOM
	Costa, Crystal	Administrative Support Staff			N/A	Program Specialist, ODIO, UH JABSOM

## HMEC Meetings

Four (4) HMEC meetings were convened and are covered in this report. Agendas and minutes were posted as required for meetings held on January 20, April 21, July 31, and October 14, 2017. Appendix B shows a sample meeting agenda. Each item provides members with opportunity for strategic brainstorming, synthesis, and development of specific next steps, recommendations, and/or directives to the HMEC/GME administrator.

**DUTY (1): Analyze the State healthcare workforce for the present and future, focusing in particular on the State’s need for physicians**

The latest Hawai‘i Physician Workforce Assessment Project showed 3,551 physicians practicing in non-military settings in Hawai‘i. However, there remains a shortage of 769 full time physicians (shortage is 441 before considering island and specialty specific needs). The largest shortages remain in primary care (Table 4), however other specialties and subspecialties are also needed throughout the State (Table 5). Selected information from the *2017 Legislature Report on Findings from the Hawai‘i Physician Workforce Assessment Project*, is included below. In Table 5, the notations indicate those specialties for which we currently have GME programs.

Table 2. 2017 Hawai‘i Physician FTE Supply Demand Estimates

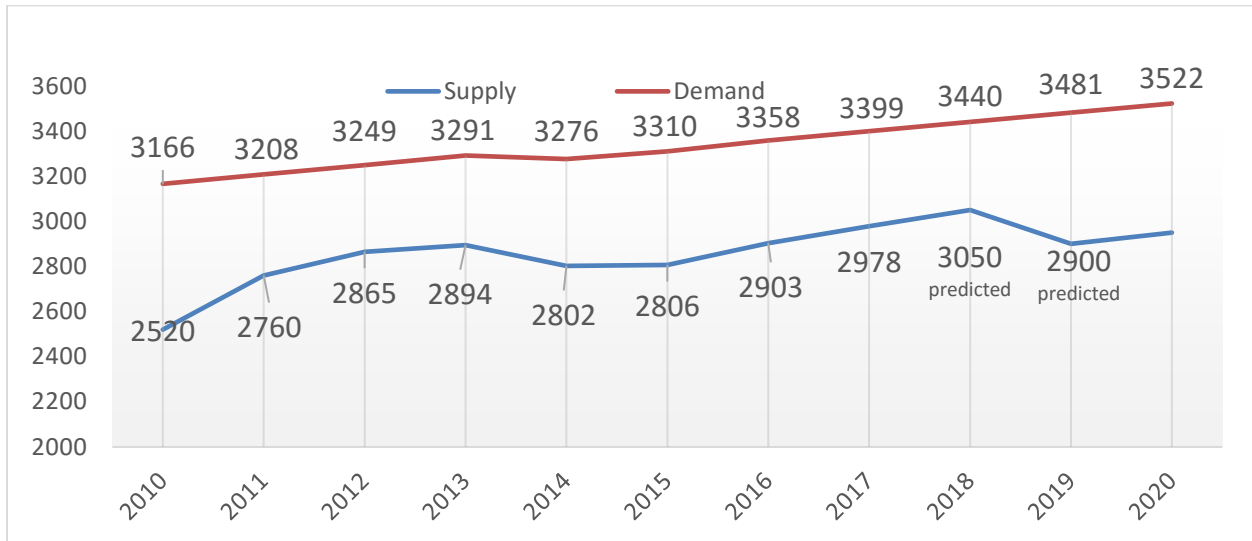


Table 3. Physician Shortage, in Numbers, by County, 2017

	Honolulu County	Hawai‘i County	Maui County	Kaua‘i County	Statewide
<b>Shortage</b>	381	196	139	53	769
<b>Percentage</b>	16.5%	38.7%	34%	30%	22.6%

Table 4. **Primary Care Physician Shortage**, in Numbers, by County, 2017

	Honolulu County	Hawai‘i County	Maui County	Kaua‘i County	Statewide
<b>Shortage</b>	187	46	39	10.5	282.5
<b>Percentage</b>	22%	25%	26%	16%	22%

Table 5. **2017 Top 5 Non-Primary Care Physician Specialty Shortages**, by county, by percentage of demand for that specialty

Honolulu County	Hawai'i County	Maui County	Kaua'i County
1. Infectious Disease (60%) <sup>^</sup>	1. Infectious Disease (100%) <sup>^</sup>	1. Geriatrics (100%)*	1. Infectious Disease (100%) <sup>^</sup>
2. Pathology (50%)*	2. Colorectal Surgery (100%)	2. Colorectal surgery (100%)	2. Endocrinology (100%) <sup>^</sup>
3. Pulmonology (36%) <sup>^</sup>	3. Thoracic surgery (96%)	3. Neonatal-Perinatal (96%)*	3. Critical Care (100%) <sup>^</sup>
4. General Surgery (35%)*	4. Neurologic Surgery (94%)	4. Rheumatology (88%) <sup>^</sup>	4. Neonatal-Perinatal (100%)*
5. Neurologic Surgery (34%)	5. Neonatal-Perinatal (92%)*	5. Pulmonology (81%) <sup>^</sup>	5. Nephrology (94%) <sup>^</sup>

\* Existing JABSOM GME program

<sup>^</sup> JABSOM Internal Medicine residency is foundational for this subspecialty

**100% means there are none of those types of physicians practicing on that island**

*University of Hawai'i JABSOM Area Health Education Center. 2017 Hawai'i Physician Workforce Report, Appendix 1: 2017 Demand and Supply of Physicians (MD/DO) for the State of Hawaii.*

- The greatest number of physicians needed is in the category of Primary care (Family Medicine, General Internal Medicine). In fact, the number of primary care physicians needed increased from 228 (2016) to 283 (2017). The impact of the physician shortages on access to care is felt most severely on the neighbor islands because of the geographic limitations to access.
- In addition to the specialties noted in Table 5, there are also large shortages of Neurology, Orthopedics, Cardiology and Psychiatry. Insufficient Behavioral Health providers are a challenge on every island – but especially in Hawai'i and Maui counties – and lack of access likely influences high chemical dependency rates and suicide.
- Physician retirement is a major factor in widening the gap between demand and supply. Half of practicing Hawai'i physicians are older than 55, which means they will be in retirement age within 10 years. Payment transformation and other major health system changes are pushing some older physicians in small 1-2 person offices toward early retirement. On average, Hawai'i loses an average of 50 FTE of physicians annually due to retirement. However, in 2016, 65 retired and 136 left the State. Therefore, we need at least 100 new physicians per year to maintain current staffing levels.
- The JABSOM GME programs graduate about 85 residents and fellows per year, but most surgeons and orthopedic surgeons, about ½ of pediatricians and about 2/3 of internal medicine residents go to the continental U.S. for sub-specialty fellowships. Many of them do eventually return home, but about 10-15 years later depending on the specialty. The Hawai'i Island Family Medicine Residency Program (HHSC-sponsored) graduates 4 per year. The Kaiser Permanente Internal Medicine Residency Program graduates 5 per year.
- Appendix D provides a snapshot of JABSOM graduates practicing in Federally- or State-designated health professions shortage areas or medically underserved areas. This is a partial listing.



**DUTY (2): Assess the State’s healthcare training programs, focusing on UH JABSOM’s institutional GME enterprise to determine its ability to meet the workforce needs identified by HMEC**

The GME programs of UH JABSOM are fully accredited and in substantial compliance with accreditation requirements. The UH JABSOM is the sponsoring institution for eighteen (18) GME programs fully accredited by the ACGME: Nine (9) core residencies and nine (9) subspecialty fellowships. Without a UH owned-and-operated hospital, beginning in 1965, UH JABSOM formed collaborations with private community hospitals/clinics and state and federal health care departments and agencies to form an integrated network of teaching hospitals/clinics. UH JABSOM learners, i.e., residents and fellows (and 3<sup>rd</sup> and 4<sup>th</sup> year medical students) are educated and trained within this network of clinical learning environments. In addition, the core teaching hospitals/clinics house UH JABSOM’s eight (8) clinical departments: Family Medicine (Hawaii Pacific Health-Pali Momi Medical Center), Geriatric Medicine (Kuakini Medical Center), Obstetrics/Gynecology and Pediatrics (Hawaii Pacific Health-Kapi’olani Medical Center), and Internal Medicine, Pathology, Psychiatry and Surgery (The Queen’s Medical Center).

An average of 230 physician-trainees matriculate annually through one of the ACGME-Accredited GME programs listed in Table 6. About a third of these physicians are graduates from UH JABSOM, a third from U.S. Medical Schools outside Hawai‘i, and a third from international medical schools.<sup>1</sup> This mix of Hawai‘i, U.S. national, and international graduates is considered ideal for U.S. GME programs; and particularly valued in Hawai‘i with its multicultural population of indigenous and immigrant ethnic groups. In addition to these 18 ACGME-Accredited programs, UH JABSOM sponsors one (1) non-ACGME accredited fellowship in Family Planning, which follows the policies and requirements set by the National Office of the Family Planning and trains 2 fellows.<sup>2</sup> Hence, UH JABSOM has a total of nineteen (19) GME programs that produce primary care, specialty, and subspecialty physicians that become independent licensed practitioners in Hawai‘i, Guam, American Samoa, the Compact of Free Association nations, i.e., Micronesia, and North America.

Table 6. UH JABSOM GME Positions - Persistent Shortages

<b>TABLE 6 - UH JABSOM GME RESIDENT &amp; FELLOW POSITIONS SINCE 2009 HMEC REPORT</b>					
<b>UH JABSOM GME PROGRAM</b>	<b>2009 Actual GME Positions</b>	<b>2009 Additional Positions Needed to Address Shortage</b>	<b>2016-17 Actual GME Positions</b>	<b>Current GAP positions</b>	<b>Desired Total GME Positions in 2020</b>
<b>Core Residency Programs (9):</b>					
Family Medicine (FM) <sup>A</sup>	18	18	18	18	36
Internal Medicine (IM) <sup>B</sup>	58	9	59	8	67
Obstetrics & Gynecology (OB/GYN)	25	0	25	0	25
Orthopedic Surgery (ORTHO)	10	5	10	5	15
Pathology (PATH)	10	6	8	8	16
Pediatrics (PEDS)	24	0	24	0	24
Psychiatry (PSY)	28	0	26	0	28
Surgery (SURG)	23	7	20	10	30
Transitional – 1 Year (TY)	10	0	9	1	10

<sup>1</sup> A growing trend during the past decade shows increasing numbers of Americans who attend and graduate from international medical schools due to the extreme competitiveness of U.S. medical school admissions, where only 2% of applicants are accepted.

<sup>2</sup> The non-ACGME accredited GME program, Family Planning Fellowship, is supported through grants to the JABSOM Department of Obstetrics-Gynecology. Their compliance and accreditation are monitored by the UH JABSOM GMEC and DIO.

Subspecialty Fellowship Programs (10):	2009 Actual GME Positions	2009 Additional Positions Needed to Address Shortage	2016-17 Actual GME Positions	Current GAP positions	Desired Total GME Positions in 2020
FM-Sports Medicine (SM)	1	0	1	0	1
IM – Cardiovascular Disease (CVD)	6	3	9	0	9
IM – Geriatric Medicine (Geri-Med)	10	0	7	3	10
OB/GYN – Maternal Fetal Medicine (MFM)	1	3	3	0	3
OB/GYN – Family Planning (FP)	n.a.	n.a.	2	0	2
PEDS-Neonatal Perinatal (Neo-Peri)	4	0	1	3	4
Combined Triple Board (PEDS-PSY-CAP)	4	0	Closed	5	5
PSY-Addictions Psychiatry (Addict-PSY)	2	2	0	4	4
PSY-Child & Adolescent Psychiatry (CAP)	4	2	6	0	6
PSY-Geriatric Psychiatry (Geri-PSY)	1	0	0	1	1
SURG-Surgical Critical Care	2	0	2	0	2
<b>EXISTING PROGRAMS TOTALS</b>	241	55	230	68	298
<sup>A</sup> FM – Expansion via FM Primary Care Consortium Rural Track	n.a.	n.a.	0		18
<sup>B</sup> IM – Gastroenterology (GI)	n.a.	n.a.	0		6
<b>EXISTING &amp; PROPOSED TOTALS</b>	n.a.	n.a.	230		322

### Large Gaps remain in number of GME positions needed

- Table 6 shows the large current gap of 68 positions in GME needed to address both current and 2020 projected Hawai‘i Workforce Shortages. Additionally, the total number of GME positions is actually 11 **less** than in 2009. This decrease is despite an identified need for 55 new positions.
- Insufficient and declining federal and hospital funding and almost no State funding for resident/fellow positions is the major reason we cannot attain the projected increases for Family Medicine, Internal Medicine, Surgery, Geriatrics and Addiction Psychiatry fellowships. The Triple Board Combined Residency Program (Pediatrics / General Psychiatry / Child & Adolescent Psychiatry) was closed due to lack of funding. The Family Medicine rural expansion was not achieved due to lack of funding. The GI fellowship was postponed as securing funding for this initiative continues.
- To achieve growth, resources are also needed for faculty and clinical training sites to ensure provision of appropriate clinical supervision in the context of providing high quality and safe patient care. Many of the patients cared for on the academic teaching services are under- or uninsured and/or highly medically and socially complex.

### Continuing work on improving retention (or return to Hawai‘i) of GME program graduates

- JABSOM has increased its class size to maximum capacity. In July 2017, seventy-four (74) medical students, including 13 Native Hawaiians, were accepted into the UH JABSOM class of 2021 from a pool of 2,231 applicants. Thirty-nine (53%) are female. Seven students are from the neighbor islands. Sixty-one (82.4%) of the entering students attended high school in Hawai‘i and 22 (29.7%) were graduates of UH.
- Certain GME programs retain more than 85% of their program graduates who also completed their medical education at JABSOM: Family Medicine (91%), Pediatrics (86%) Obstetrics-Gynecology (88%), General Psychiatry (100%), and Child and Adolescent Psychiatry (90%). In Pediatrics, those who subspecialize after residency often return to Hawai‘i. The other GME programs are working to recruit residents who are more likely to practice in Hawai‘i. For those programs whose graduates continue in subspecialty fellowships on the continental U.S., those with Hawai‘i ties do eventually return home, but it may be 10-15 years later depending on the specialty.
- Three hundred fifty of the 558 “2016 Top Doctors of Hawai‘i” (published in Honolulu magazine) are graduates of JABSOM, its residency programs and/or serve as faculty to JABSOM students and

residents. Continued work is needed to develop more teachers of JABSOM students and residents throughout the State.

### **Additional barriers to physician retention that must be addressed**

- High student loan burden combined with lower salaries and reimbursement rates (compared to other parts of the country) and very high cost of living may entice JABSOM graduates to the continental U.S. Our GME residents and fellows, including those who trained on the continental U.S., carry an average educational debt load of \$300,000. However, those who train at JABSOM (because 90% are State residents), have about half that debt and often are able to live with family during their training. This lower debt burden makes it more attractive for them to practice in Hawai‘i.
- Rapid changes in the practice of medicine and reimbursement sway many young physicians away from primary care specialties and ambulatory practices in the communities where they are most needed. Local health systems and insurers need to work together to create attractive and meaningful jobs for JABSOM graduates and other Hawai‘i-born students who have completed their schooling in the continental U.S. More group practices with staffing to provide team-based, high quality care are needed, especially on the neighbor islands.
- The disturbing trend of UH residents being named as parties in malpractice claims – when they were providing proper care while supervised by a fully licensed physician in their formal training program – has further limited our teaching hospitals’ ability to fully fund GME and consider expanding residency positions in high-need specialties. Being named initially, even when they are removed from the claim, may discourage residents from accepting jobs in Hawai‘i.

### **GME Programs Outside of JABSOM**

- In addition to the UH GME programs, Hawai‘i Health Systems Corporation (HHSC) Hilo Medical Center has welcomed their fourth class of four (4) residents to the Hawai‘i Island Family Medicine Residency Program. There are 12 total Hilo Family Medicine residents. The Hilo program graduated their first class of three (3) Board eligible family medicine specialists in June 2017.
- Tripler Army Medical Center’s (TAMC) 12 GME programs also continue to help serve the physician workforce needs of the military community. Some of those trained at TAMC eventually return to Hawai‘i to practice in the military and then in the civilian community upon retirement.
- Kaiser Permanente on O‘ahu recruited their third class of five (5) residents to its Internal Medicine Residency Program. Of note, the Kaiser Permanente Medical School in Pasadena, CA is slated to open in 2019.

### **Funding GME is the largest barrier to UH JABSOM’s ability to meet workforce needs**

Declining federal and hospital funding of GME is a particular challenge for the state of Hawai‘i because Hawai‘i unlike many states does not currently appropriate state funds for GME in order to reduce workforce shortages, especially in the rural areas. For these reasons, a major focus of HMEC in 2016 and 2017 was strengthening partnerships and examining possibilities for additional GME resources.

### **State level collaboration and coordination of GME efforts is needed**

- To the extent possible, it is in Hawai‘i’s best interest to have HMEC serve as a systems-level forum through which statewide strategic planning of GME programs can occur to find the optimal economies of scale to train and deploy graduating residents/fellows into the physician workforce.
- Currently, there is strong collaboration with the Veterans Administration (VA). The VA representative on the HMEC provides important information regarding current and anticipated VA needs and how the UH GME programs may help the VA meet future workforce needs, particularly outside of urban Honolulu on neighbor Hawaiian Islands, Guam, and American Samoa. Several GME programs train their residents and fellows in VA sites throughout Hawai‘i and the Pacific.

- As part of a long-standing collaboration with the Tripler Army Medical Center (TAMC), several UH residency and fellowship programs have a portion of their clinical rotations at TAMC. Similarly, several TAMC programs rotate their residents at The Queen’s Medical Center and Kapi‘olani Medical Center for Women and Children. The only neonatology program in the US Pacific is shared between UH and TAMC.
- As mentioned in prior HMEC reports, the Family Medicine Residency Program (FMRP) and Department of Family Medicine and Community Health established a primary care consortium model supported by UH JABSOM, Hawai‘i Pacific Health (HPH), The Queen’s Health System (QHS) and Hawai‘i Medical Services Association (HMSA). Over the past 4 years, the consortium business plan has been implemented and has been an essential safety net that provided a smooth transition of resident rotations from Wahiawā General Hospital to the HPH system. The Physician’s Center at Mililani is the primary ambulatory teaching site for the family medicine program and its ownership and operation are now incorporated into the faculty practice of JABSOM. A key, unfunded component of the business plan and consortium model included securing State funding to stabilize this program and ensure its continued conservative growth required to meet the primary care and family medicine shortages on O‘ahu, Maui, Kaua‘i, and Hawai‘i Island. Almost 85% of the UH FMRP graduates since 2007 currently practice in Hawai‘i, with many serving rural and underserved populations. However, securing necessary resources for statewide expansion of the FMRP is critical, because even with the Hawai‘i Island Family Medicine Program (an additional 4 graduates per year) the demand is much higher than the current supply of residency graduates.
- Stronger partnerships between local health systems and faculty practice plans will be needed to attract and retain academic faculty who are committed to working with diverse populations, teaching and conducting scholarly activity to reduce health disparities and improve health for all of Hawai‘i’s populations.

**DUTY (3) Recommend to the Legislature and UH Board of Regents (BOR) ways in which identified GME and other healthcare training programs can improve and change in order to effectively meet the HMEC assessment**

The UH JABSOM’s Institutional Program and its 19 UH JABSOM GME training programs are fully accredited and seventeen (17) are in substantial compliance with accreditation requirements. Only one (1) citation related to faculty scholarship exists in one program. Programs undergo an annual review process each spring that considers health care demands that might impact their curricular experiences. The Annual Institutional Review meeting in September 2017 refined and continued the numerous activities used for continuous improvement of the Institution (across programs) and to support program-specific quality improvement efforts. Starting in late 2016, the UH JABSOM GME programs, their major partner training sites and key community stakeholders including the HMEC started a long-term strategic planning process aimed at identifying viable and sustainable strategies to develop a physician workforce that continues to advance the health and well-being of the people of Hawai‘i. The results of these meetings were presented at the October 13, 2017 HMEC meeting. Several of the major initiatives identified through the GME Strategic Planning process have also been incorporated in this report to the 2018 Legislature:

1. Secure additional **resources** to maintain and expand GME programs. This includes funding for resident positions, supplemental educational activities and for additional faculty and clinical training sites (especially on the neighbor islands).
2. Develop a multi-pronged approach to improve physician **retention** in Hawai‘i. This includes ongoing activities before and during residency training, as well as a significant need to engage health systems, insurers, the State and other partners to make Hawai‘i a desirable place to practice – especially for new graduates with an average of \$300,000 in educational debt.
3. Develop strategies, in partnership with the health systems and insurers, to address and **prevent physician burnout and to promote physician well-being**.
4. Expand **neighbor island** and telehealth training opportunities for residents and fellows. Numerous national studies prove that the best ways to attract and retain physicians in rural

settings is to ‘grow your own’ and to provide clinical training that is embedded within community clinics and hospitals. Resources will be needed to develop clinical sites and faculty, as well as for resident housing and transportation. The current lack of these resources constrains most programs’ ability to offer neighbor island rotations,

5. Incorporate more aspects of **population health** and **inter-professional education and training** into all GME programs, to better equip future physicians to practice in team-based, patient and population-centered clinical settings. This effort includes primary care-behavioral health integration.

**DUTY (4): Work with other entities and state agencies, and in consultation with the Legislature and BOR, develop and implement a Plan to ensure the adequate funding of healthcare training programs in the State, with an emphasis on UH JABSOM GME programs**

**RECOMMENDATION #1 –**

UH JABSOM/HMEC recommends that UH JABSOM and the legislature work with vital stakeholders to identify options for funding GME and the return on investment to the state of Hawai‘i in funding GME.

- Strategies to explore include, but are not limited to, Legislative line items, Medicaid, Medicaid Managed Care, new arrangements with health insurers, all-payor GME financing models, new models of teaching in partnership with hospitals.

**RECOMMENDATION #2**

UH JABSOM/HMEC recommends that the 2018 State Legislature assess the advisability and feasibility of an annual GME Appropriation to fund HMEC-designated residency/fellowship programs with a particular emphasis on primary care.

**RECOMMENDATION #3**

UH/HMEC recommends that the 2018 State Legislature and State Executive Branch support the State Department of Human Services and UH JABSOM to work together to develop a State Medicaid GME Matching program to augment GME funding.

- In 2016 and ongoing in 2017, JABSOM and its faculty practice plans, as well as HHSC, have had discussions with the Department of Human Services and outside consultants to determine details and processes that would be needed to implement a successful Medicaid GME Matching program.
- Of note, in 2015 the Hawai‘i Medicaid program reported contributing an additional \$70,000 to hospitals for GME training, as a percentage add-on to routine per diem and ancillary per discharge rate.<sup>3</sup> Twenty-one (21) States make separate GME payments directly to teaching hospitals, managed care organizations, or to teaching programs under managed care contracts (16 States and DC). Nine (9) other states distribute GME payments as a supplemental or special payment.

**RECOMMENDATION #4**

UH/HMEC recommends that the 2018 State Legislature, UH JABSOM, the Hawai‘i Medical Association and other stakeholders explore potential remedies or reforms to protect residents and fellows from being named in malpractice suits while they are in a formal training program and providing care under the supervision of a fully licensed attending physician.

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<sup>3</sup> Henderson TM. Medicaid Graduate Medical Education Payments: A 50-State Survey 2016. Washington, D.C.: Association of American Medical Colleges, 2016. Table 2, page 11.

**DUTY (5): Seek funding to implement the Plan from all public (county, state, and federal government) and private sources**

- Federal and private funding to retain health providers through loan repayment programs was obtained in 2012. The 2017 Legislature and Governor Ige approved matching funds to increase the number of scholarships offered through the Hawai'i State Loan Repayment Program. The program works to retain existing primary care providers through loan repayment which is contingent on a commitment to practice in a Health Professions Shortage Area in Hawai'i for two years after loan repayment. Efforts will continue to demonstrate effectiveness and to seek renewal of matching funds in two years.
- The Hawai'i/Pacific Basin Area Health Education Center (AHEC)'s three Federal grants support the "Pre-Health Career Core" program that establishes a pipeline for health careers. The program has already recruited more than 500 high school and college students interested in health careers. The program is funded for four years and covers health sciences, shadowing, mentoring, and research experiences, and Medical College Admissions Test preparation. These and other JABSOM pipeline programs target students of Native Hawaiian descent, as well as those public school students from medically underserved areas, including the neighbor islands.
- Legislative funding to support the Primary care consortium training was sought in 2016 but was not appropriated.

**DUTY (6): Monitor and continue to improve the funding Plan**

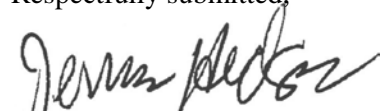
See recommendations under DUTY 4 and DUTY 5.

Monitoring the implementation and effectiveness of the plans to stabilize and grow GME in the shortage specialties will be done by UH JABSOM's GMEC, with oversight by the Office of the DIO and HMEC. A summary of the results shall be submitted to the Legislature in our annual HMEC report.

**DUTY (7): Submit an annual report to the Legislature no later than twenty days before the convening of each regular Legislative session.**

Please see this report to the legislature.

Respectfully submitted,



Jerris R. Hedges, M.D., M.S., M.M.M.  
Professor & Dean and Chair of HMEC  
Barry & Virginia Weinman - Endowed Chair  
John A. Burns School of Medicine  
University of Hawai'i at Mānoa

## **HMEC Recommendations to 2018 Legislature**

### **RECOMMENDATION #1**

UH JABSOM/HMEC recommends that UH JABSOM and the legislature work with vital stakeholders to identify options for funding GME and the return on investment to the state of Hawai'i in funding GME.

### **RECOMMENDATION #2**

UH JABSOM/HMEC recommends that the 2018 State Legislature assess the advisability and feasibility of an annual GME Appropriation to fund HMEC designated residency/fellowship programs with particular emphasis on primary care.

### **RECOMMENDATION #3**

UH/HMEC recommends that the 2018 State Legislature and State Executive Branch support the State Department of Human Services and UH JABSOM to work together to develop a State Medicaid GME Matching program to augment GME funding.

### **RECOMMENDATION #4**

UH/HMEC recommends that the 2018 State Legislature, UH JABSOM, the Hawai'i Medical Association and other stakeholders explore potential remedies or reforms to protect residents and fellows from being named in malpractice suits while they are in a formal training program and providing care under the supervision of a fully licensed attending physician.

## APPENDIX A – State Statutes Related to HMEC

HRS excerpts below downloaded December 22, 2014 from:

[http://www.capitol.hawaii.gov/hrscurrent/Vol05\\_Ch0261-0319/HRS0304A/HRS\\_0304A-1701.htm](http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0304A/HRS_0304A-1701.htm)

[http://www.capitol.hawaii.gov/hrscurrent/Vol05\\_Ch0261-0319/HRS0304A/HRS\\_0304A-1702.htm](http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0304A/HRS_0304A-1702.htm)

[http://www.capitol.hawaii.gov/hrscurrent/Vol05\\_Ch0261-0319/HRS0304A/HRS\\_0304A-1703.htm](http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0304A/HRS_0304A-1703.htm)

[http://www.capitol.hawaii.gov/hrscurrent/Vol05\\_Ch0261-0319/HRS0304A/HRS\\_0304A-1704.htm](http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0304A/HRS_0304A-1704.htm)

[http://www.capitol.hawaii.gov/hrscurrent/Vol05\\_Ch0261-0319/HRS0304A/HRS\\_0304A-1705.htm](http://www.capitol.hawaii.gov/hrscurrent/Vol05_Ch0261-0319/HRS0304A/HRS_0304A-1705.htm)

### CHAPTER 304A UNIVERSITY OF HAWAII SYSTEM

#### Part I. System Structure

Section

#### Part IV. Divisions, Departments, and Programs

##### J. Medical Education Council

304A-1701 Definitions

304A-1702 Graduate medical education program

304A-1703 Medical education council

304A-1704 Council duties

304A-1705 Council powers

##### J. MEDICAL EDUCATION COUNCIL

**[§304A-1701] Definitions.** As used in this subpart:

"Centers for Medicaid and Medicare Services" means the Centers for Medicaid and Medicare Services within the United States Department of Health and Human Services.

"Council" means the medical education council created under section [304A-1703].

"Graduate medical education" means that period of clinical training of a physician following receipt of the medical doctor degree and prior to the beginning of an independent practice of medicine.

"Graduate medical education program" means a graduate medical education training program accredited by the American Council on Graduate Medical Education.

"Healthcare training program" means a healthcare training program that is accredited by a nationally-recognized accrediting body. [L 2006, c 75, pt of §2]

**[§304A-1702] Graduate medical education program.** (a) There is created a graduate medical education program to be administered by the medical education council in cooperation with the department of health.

(b) The program shall be funded with moneys received for graduate medical education and deposited into the Hawaii medical education special fund established under section [304A-2164].

(c) All funding for the graduate medical education program shall be nonlapsing.

(d) Program moneys shall only be expended if:

(1) Approved by the medical education council; and

(2) Used for graduate medical education in accordance with sections [304A-1704] and [304A-1705]. [L 2006, c 75, pt of §2]

**[§304A-1703] Medical education council.** (a) There is established within the University of Hawaii, the medical education council consisting of the following thirteen members:

(1) The dean of the school of medicine at the University of Hawaii;

(2) The dean of the school of nursing and dental hygiene at the University of Hawaii;

(3) The vice dean for academic affairs at the school of medicine who represents graduate medical education at the University of Hawaii;

(4) The director of health or the director's designated representative;

(5) The director of the Cancer Research Center of Hawaii; and

(6) Eight persons to be appointed by the governor as follows:



- (A) Three persons each of whom shall represent a different hospital at which accredited graduate medical education programs are conducted;
- (B) Three persons each [of] whom represent the health professions community;
- (C) One person who represents the federal healthcare sector; and
- (D) One person from the general public.

(b) Except as provided in subsection (a)(1), (2), (3), and (4), no two council members may be employed by or affiliated with the same:

- (1) Institution of higher education;
  - (2) State agency outside of higher education; or
  - (3) Private entity.
- (c) Terms of office of council members shall be as follows:

- (1) Except as provided in paragraph (2), the dean of the school of medicine, dean of the school of nursing and dental hygiene, vice dean for academic affairs of the school of medicine at the University of Hawaii, and the director of health, or the director's designated representative, shall be permanent ex officio members of the council, and the remaining nonpermanent council members shall be appointed to four-year terms of office;
- (2) Notwithstanding paragraph (1), the governor at the time of the initial appointment shall reduce the terms of four nonpermanent council members to two years to ensure that approximately half of the nonpermanent council members are appointed every two years; and
- (3) If a vacancy occurs in the membership for any reason, the replacement shall be appointed by the governor for the unexpired term in the same manner as the original appointment was made.

(d) The dean of the school of medicine at the University of Hawaii shall chair the council. The council shall annually elect a vice chair from among the members of the council.

(e) All council members shall have voting rights. A majority of the council members shall constitute a quorum. The action of a majority of a quorum shall be the action of the council.

(f) Per diem and expenses incurred in the performance of official duties may be paid to a council member who:

- (1) Is not a government employee; or
- (2) Is a government employee, but does not receive salary, per diem, or expenses from the council member's employing unit for service to the council.

A council member may decline to receive per diem and expenses for service to the council. [L 2006, c 75, pt of §2]

**[§304A-1704] Council duties.** The medical education council shall:

- (1) Conduct a comprehensive analysis of the healthcare workforce requirements of the State for the present and the future, focusing in particular on the State's need for physicians;
- (2) Conduct a comprehensive assessment of the State's healthcare training programs, focusing in particular on graduate medical education programs and their role in and ability to meet the healthcare workforce requirements identified by the council;
- (3) Recommend to the legislature and the board of regents changes in or additions to the healthcare training programs in the State identified by the council's assessment;
- (4) Work with other entities and state agencies as necessary, develop a plan to ensure the adequate funding of healthcare training programs in the State, with an emphasis on graduate medical education programs, and after consultation with the legislature and the board of regents, implement the plan. The plan shall specify the funding sources for healthcare training programs and establish the methodology for funding disbursement. Funds shall be expended for the types of costs normally associated with healthcare training programs, including but not limited to physician salaries and other operating and administrative costs. The plan may include the submission of an application in accordance with federal law for a demonstration project to the Centers for Medicaid and Medicare Services, for the purpose of receiving and disbursing federal funds for direct and indirect graduate medical education expenses;
- (5) Seek funding from public sources, including state and federal government, and private sources to support the plan required in paragraph (4);

- (6) Monitor the implementation and effectiveness of the plan required in paragraph (4), making such modifications as may be required by future developments and changing needs and after consulting with the legislature and the board of regents, as appropriate; and
- (7) Submit a summary report to the legislature no later than twenty days before the convening of each regular session, of the expenditures of program moneys authorized by the council under this subpart. [L 2006, c 75, pt of §2]

**[§304A-1705] Council powers.** The medical education council may:

- (1) Conduct surveys, with the assistance of the department of health and the department of commerce and consumer affairs, to assess and meet changing market and education needs;
  - (2) Appoint advisory committees of broad representation on interdisciplinary clinical education, workforce mix planning and projections, funding mechanisms, and other topics as is necessary;
  - (3) Use federal moneys for necessary administrative expenses to carry out its duties and powers as permitted by federal law;
  - (4) Distribute program moneys in accordance with this subpart; provided that any expenditures authorized shall be for a public purpose and shall not be subject to chapters 42F, 103, 103D, and 103F;
  - (5) Hire employees not subject to chapters 76 and 89 necessary to carry out its duties under this subpart; and
  - (6) Adopt rules in accordance with chapter 91, necessary to carry out the purposes of this subpart. [L 2006, c 75, pt of §2]
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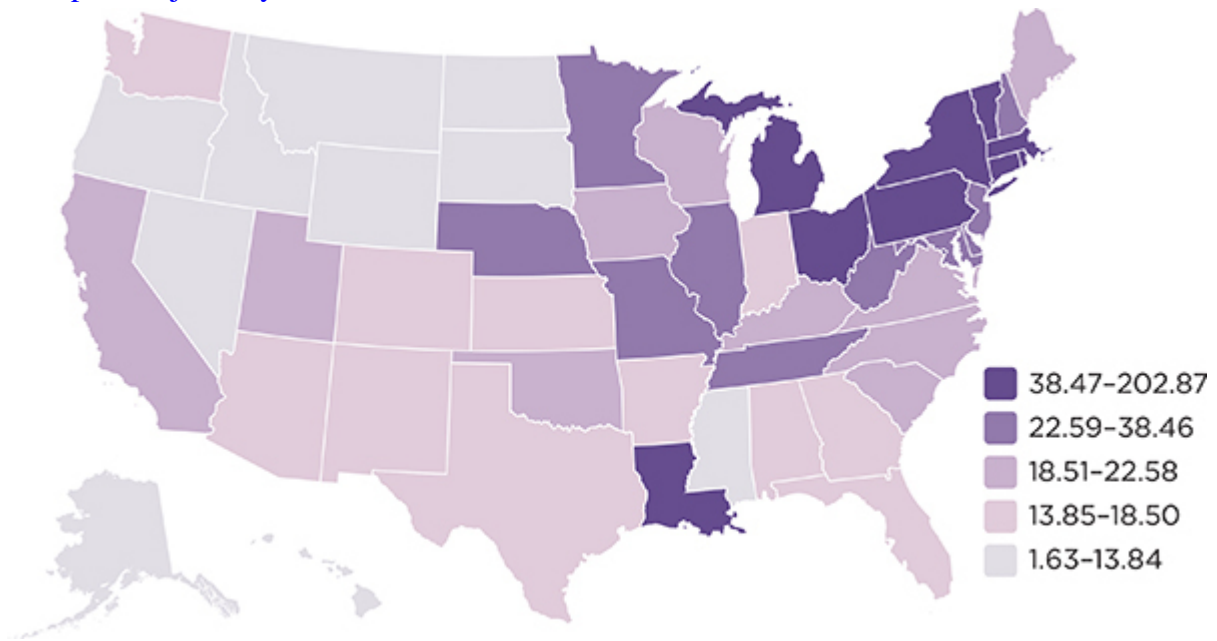
APPENDIX B: Sample HMEC Meeting Agenda

HMEC MEETING AGENDA – STANDING ITEMS FOR 2017		
Item #	HMEC Agenda Items & Salient Discussion Themes	Presenter(s)
1.	Review and Approval of Minutes	Dean J. Hedges
2.	Report from HMEC Chair <ul style="list-style-type: none"> <li>• Impact/outcomes of key legislation</li> <li>• National trends in Medical Education</li> <li>• HMEC activities &amp; outcomes</li> </ul>	Dean J. Hedges
3.	Legislative and Health workforce initiatives <ul style="list-style-type: none"> <li>• On GME, health workforce, loan repayment and other healthcare professional training</li> </ul>	Dean J. Hedges, Dr. K. Withy, HMEC members, & guests
4.	GME Report from Dr. L. Buenconsejo-Lum <ul style="list-style-type: none"> <li>• UH JABSOM GME Programs updates</li> <li>• Progress of HMEC initiatives and directives assigned to her.</li> <li>• UH JABSOM Annual Program Evaluations and Institutional Review</li> </ul>	Dr. L. Buenconsejo-Lum
5.	Follow-up to prior HMEC recommendations	Dr. L. Buenconsejo-Lum
6.	Announcements	

## Appendix C

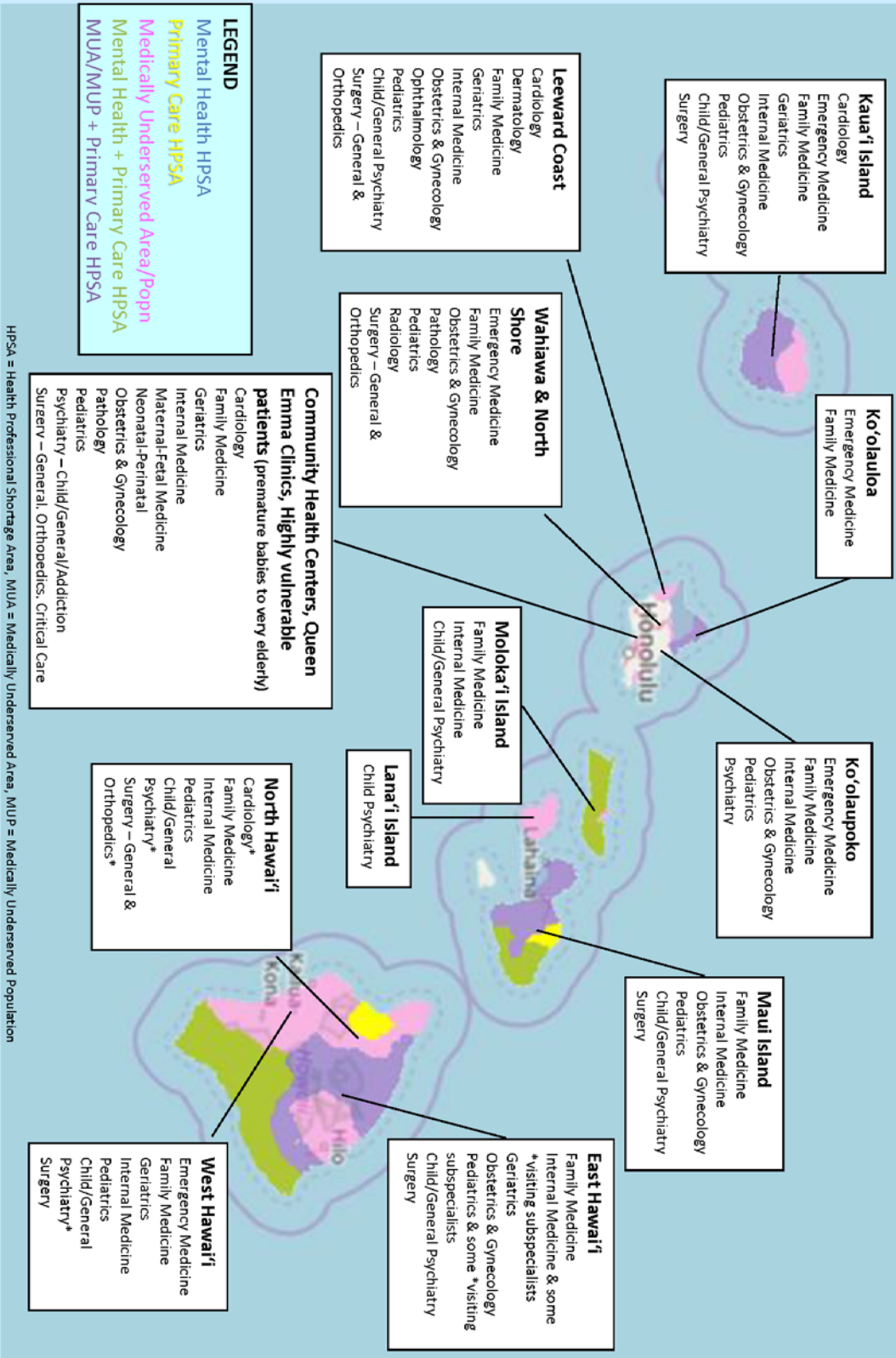
Number of Medicare-funded training positions per 100,000 population, 2010

SOURCE: Mullan et al., 2013. [https://www.ncbi.nlm.nih.gov/books/NBK248024/figure/fig\\_3-2/?report=objectonly](https://www.ncbi.nlm.nih.gov/books/NBK248024/figure/fig_3-2/?report=objectonly)



# Appendix D

## Federally-Designated or State-designated HPSA / MUA / MUP Areas in Hawai'i Where JABSOM graduates practice (partial listing)



HPSA = Health Professional Shortage Area, MUA = Medically Underserved Area, MUP = Medically Underserved Population  
 \* = visiting from Oahu or via telemedicine  
 October 17, 2017  
 Map data © OpenStreetMap contributors, CC-BY-SA

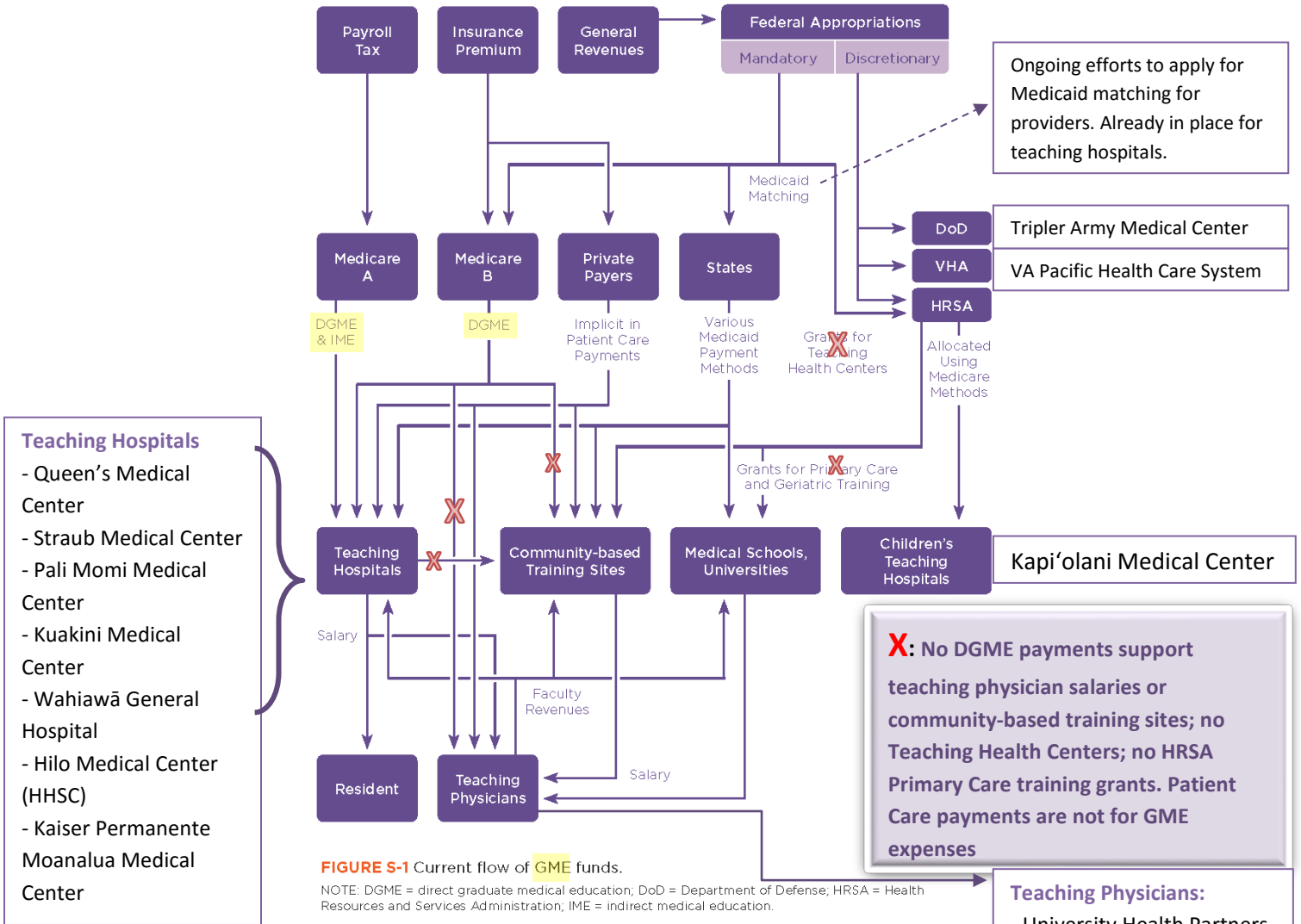
## Appendix E

### Current flow of GME funds from 2014 Institute of Medicine Report, “Graduate Medical Education That Meets the Nation’s Health Needs” Annotations reflect the **GME** funding sources in Hawai‘i

Graduate Medical Education That Meets the Nation's Health Needs

4

GRADUATE MEDICAL EDUCATION



**FIGURE S-1** Current flow of GME funds.

NOTE: DGME = direct graduate medical education; DoD = Department of Defense; HRSA = Health Resources and Services Administration; IME = indirect medical education.

SOURCE: Adapted from Wynn, 2012 (Committee of Interns and Residents Policy and Education Initiative White Paper, “Implementing the 2009 Institute of Medicine recommendations on resident physician work hours, supervision, and safety”).