		20	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	/100k	Population
Anesthesiology		125,975	7	5.6	129,065
National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AMA	14.0	18	Deficit:	-11	18
Two Mature HMO	9.7	12	Deficit:	-5	13
Adjusted FTE	9.1	11	Deficit:	-4	12
GMENAC	8.9	11	Deficit:	-4	11
Kaiser Portland	5.9	7	Adequate	0	8
7 Kaiser Plans	3.9	5	Surplus:	2	5
GHC Seattle	9.0	11	Deficit:	-4	12
Three HMOs					
Goodman	7.0	9	Deficit:	-2	9
Hicks & Glenn					
Solucient					
Average Requirement	7.6	10	Deficit:	-3	10

			2	008 Actual		2015 Projected
Physi	Physician Specialty		Population	Physicians	/100k	Population
Cardi	ovascular Diseases		125,975	8	6.4	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	S	Physician Need
	AMA	7.5	9	Deficit:	-1	10
	Two Mature HMO	5.4	7	Surplus:	1	7
	Adjusted FTE	5.0	6	Surplus:	2	6
	GMENAC	3.1	4	Surplus:	4	4
	Kaiser Portland	3.0	4	Surplus:	4	4
	7 Kaiser Plans	1.8	2	Surplus:	6	2
	GHC Seattle	2.9	4	Surplus:	4	4
	Three HMOs					
	Goodman	3.6	5	Surplus:	3	5
	Hicks & Glenn	2.6	3	Surplus:	5	3
	Solucient	4.2	5	Surplus:	3	5
	Average Requirement	3.5	4	Surplus:	4	5

		2	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	/100k	Population
Dermatology		125,975	4	3.2	129,065
National Physiciar Standards*	n Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AMA	3.7	5	Deficit:	-1	5
Two Mature HMO	2.8	4	Adequate	0	4
Adjusted FTE	2.6	3	Surplus:	1	3
GMENAC	2.8	4	Adequate	0	4
Kaiser Portland	2.5	3	Surplus:	1	3
7 Kaiser Plans	2.4	3	Surplus:	1	3
GHC Seattle	2.6	3	Surplus:	1	3
Three HMOs	1.6	2	Surplus:	2	2
Goodman	1.4	2	Surplus:	2	2
Hicks & Glenn	2.1	3	Surplus:	1	3
Solucient	3.1	4	Adequate	0	4
Average Requiren	nent 2.4	3	Surplus:	1	3

			2	008 Actual	2015 Projecte
Physic	cian Specialty		Population	Physicians /100k	Population
Emerg	gency Medicine		125,975	14 11.1	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	Physician Need
	AMA	10.5	13	Surplus: 1	14
	Two Mature HMO	5.5	7	Surplus: 7	7
	Adjusted FTE	5.2	7	Surplus: 7	7
	GMENAC	5.4	7	Surplus: 7	7
	Kaiser Portland	6.7	8	Surplus: 6	9
	7 Kaiser Plans	5.3	7	Surplus: 7	7
	GHC Seattle				
	Three HMOs				
	Goodman	2.7	3	Surplus: 11	3
	Hicks & Glenn				
	Solucient	12.4	16	Deficit: -2	16
	Average Requirement	6.2	8	Surplus: 6	8

		2	008 Actual		2015 Projecte
Physician Specialty		Population	Physicians	/100k	Population
Family Practice		125,975	31	24.6	129,065
National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AMA	31.5	40	Deficit:	-9	41
Two Mature HMO	45.6	57	Deficit:	-26	59
Adjusted FTE	42.6	54	Deficit:	-23	55
GMENAC	25.2	32	Deficit:	-1	33
Kaiser Portland	16.7	21	Surplus:	10	22
7 Kaiser Plans	11.0	14	Surplus:	17	14
GHC Seattle					
Three HMOs	9.2	12	Surplus:	19	12
Goodman					
Hicks & Glenn	16.2	20	Surplus:	11	21
Solucient	22.5	28	Surplus:	3	29
Average Requirement	23.6	30	Surplus:	1	30

			2	008 Actual		2015 Projected
Physic	cian Specialty		Population	Physicians	/100k	Population
Gastr	oenterology		125,975	1	0.8	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	s	Physician Need
	AMA	4.2	5	Deficit:	-4	5
	Two Mature HMO	3.1	4	Deficit:	-3	4
	Adjusted FTE					
	GMENAC	3.2	4	Deficit:	-3	4
	Kaiser Portland	1.7	2	Deficit:	-1	2
	7 Kaiser Plans	1.7	2	Deficit:	-1	2
	GHC Seattle					
	Three HMOs					
	Goodman	1.3	2	Deficit:	-1	2
	Hicks & Glenn					
	Solucient	3.5	4	Deficit:	-3	5
	Average Requirement	2.4	3	Deficit:	-2	3

		20	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	s /100k	Population 129,065
Infectious Disease		125,975	3	2.4	
National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	i	Physician Need
AMA	2.2	3	Adequate	0	3
Two Mature HMO	0.7	1	Surplus:	2	1
Adjusted FTE	0.6	1	Surplus:	2	1
GMENAC	0.9	1	Surplus:	2	1
Kaiser Portland	1.2	2	Surplus:	1	2
7 Kaiser Plans	0.7	1	Surplus:	2	1
GHC Seattle	0.6	1	Surplus:	2	1
Three HMOs					
Goodman					
Hicks & Glenn					
Solucient					
Average Requirement	0.8	1	Surplus:	2	1

			2	008 Actual		2015 Projected
Physic	cian Specialty		Population	Physicians	/100k	Population
Intern	al Medicine		125,975	33	26.2	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	S	Physician Need
	AMA	53.1	67	Deficit:	-34	69
	Two Mature HMO	21.4	27	Surplus:	6	28
	Adjusted FTE	20.0	25	Surplus:	8	26
	GMENAC	28.8	36	Deficit:	-3	37
	Kaiser Portland	28.1	35	Deficit:	-2	36
	7 Kaiser Plans	30.3	38	Deficit:	-5	39
	GHC Seattle					
	Three HMOs	16.7	21	Surplus:	12	22
	Goodman					
	Hicks & Glenn	11.3	14	Surplus:	19	15
	Solucient	19.0	24	Surplus:	9	25
	Average Requirement	22.0	28	Surplus:	5	28

		20	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	/100k	Population
Nephrology		125,975	5	4.0	129,065
National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AMA	2.6	3	Surplus:	2	3
Two Mature HMO	1.4	2	Surplus:	3	2
Adjusted FTE	1.3	2	Surplus:	3	2
GMENAC	1.1	1	Surplus:	4	1
Kaiser Portland	0.8	1	Surplus:	4	1
7 Kaiser Plans	0.7	1	Surplus:	4	1
GHC Seattle	0.9	1	Surplus:	4	1
Three HMOs					
Goodman					
Hicks & Glenn					
Solucient	0.7	1	Surplus:	4	1
Average Requirement	1.0	1	Surplus:	4	1

			2	008 Actual		2015 Projected
Physic	cian Specialty		Population	Physicians	/100k	Population
Neuro	ology		125,975	2	1.6	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	S	Physician Need
	AMA	5.0	6	Deficit:	-4	6
	Two Mature HMO	2.4	3	Deficit:	-1	3
	Adjusted FTE	2.3	3	Deficit:	-1	3
	GMENAC	3.3	4	Deficit:	-2	4
	Kaiser Portland	1.3	2	Adequate	0	2
	7 Kaiser Plans	1.7	2	Adequate	0	2
	GHC Seattle	1.2	2	Adequate	0	2
	Three HMOs					
	Goodman	2.1	3	Deficit:	-1	3
	Hicks & Glenn	1.4	2	Adequate	0	2
	Solucient	1.8	2	Adequate	0	2
	Average Requirement	1.9	2	Adequate	0	2

			2	008 Actual		2015 Projecte
Physician	Specialty		Population	Physicians	/100k	Population
OB/GYN			125,975	14	11.1	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	6	Physician Need
•	AMA	14.1	18	Deficit:	-4	18
-	Two Mature HMO	12.1	15	Deficit:	-1	16
-	Adjusted FTE	11.3	14	Adequate	0	15
-	GMENAC	9.9	12	Surplus:	2	13
-	Kaiser Portland	11.6	15	Deficit:	-1	15
-	7 Kaiser Plans	11.5	14	Adequate	0	15
-	GHC Seattle	10.0	13	Surplus:	1	13
-	Three HMOs	8.8	11	Surplus:	3	11
-	Goodman	8.4	11	Surplus:	3	11
-	Hicks & Glenn	8.0	10	Surplus:	4	10
-	Solucient	10.2	13	Surplus:	1	13
-	Average Requirement	10.2	13	Surplus:	1	13

			20	008 Actual		2015 Projected
Physic	cian Specialty		Population	Physicians	/100k	Population
Optha	almology		125,975	7	5.6	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	S	Physician Need
	AMA	6.0	8	Deficit:	-1	8
	Two Mature HMO	5.9	7	Adequate	0	8
	Adjusted FTE	5.5	7	Adequate	0	7
	GMENAC	4.6	6	Surplus:	1	6
	Kaiser Portland	2.4	3	Surplus:	4	3
	7 Kaiser Plans	3.1	4	Surplus:	3	4
	GHC Seattle	5.0	6	Surplus:	1	6
	Three HMOs					
	Goodman	3.5	4	Surplus:	3	5
	Hicks & Glenn	3.2	4	Surplus:	3	4
	Solucient	4.7	6	Surplus:	1	6
	Average Requirement	4.2	5	Surplus:	2	5

			2	008 Actual		2015 Projecte
Physic	Physician Specialty			Physicians	/100k	Population
Ortho	pedic Surgery		125,975	11	8.7	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	6	Physician Need
	AMA	8.3	10	Surplus:	1	11
	Two Mature HMO	6.8	9	Surplus:	2	9
	Adjusted FTE	6.4	8	Surplus:	3	8
	GMENAC	6.0	8	Surplus:	3	8
	Kaiser Portland	5.9	7	Surplus:	4	8
	7 Kaiser Plans	4.2	5	Surplus:	6	5
	GHC Seattle	6.7	8	Surplus:	3	9
	Three HMOs	3.0	4	Surplus:	7	4
	Goodman	5.9	7	Surplus:	4	8
	Hicks & Glenn	4.2	5	Surplus:	6	5
	Solucient	6.1	8	Surplus:	3	8
	Average Requirement	5.5	7	Surplus:	4	7

			2	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	/100k	Population	
Otola	ryngology		125,975	3	2.4	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	s	Physician Need
	AMA	3.4	4	Deficit:	-1	4
	Two Mature HMO	3.2	4	Deficit:	-1	4
	Adjusted FTE					
	GMENAC	3.2	4	Deficit:	-1	4
	Kaiser Portland	3.4	4	Deficit:	-1	4
	7 Kaiser Plans	2.4	3	Adequate	0	3
	GHC Seattle	3.0	4	Deficit:	-1	4
	Three HMOs					
	Goodman					
	Hicks & Glenn					
	Solucient					
	Average Requirement	3.0	4	Deficit:	-1	4

			20	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	/100k	Population	
Pathology	Pathology		125,975	4	3.2	129,065
	ational Physician andards*	Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AN	MA	6.3	8	Deficit:	-4	8
Tv	vo Mature HMO	1.9	2	Surplus:	2	2
Ac	djusted FTE	1.8	2	Surplus:	2	2
GI	MENAC	6.4	8	Deficit:	-4	8
Ka	aiser Portland	3.3	4	Adequate	0	4
7	Kaiser Plans	1.8	2	Surplus:	2	2
GI	HC Seattle					
Th	ree HMOs					
Go	oodman	4.1	5	Deficit:	-1	5
Hi	cks & Glenn					
Sc	olucient					
Av	verage Requirement	3.2	4	Adequate	0	4

			2	008 Actual		2015 Projected
Physicia	Physician Specialty		Population	Physicians	/100k	Population
Pediatr	ics		125,975	17	13.5	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	s	Physician Need
	AMA	24.9	31	Deficit:	-14	32
	Two Mature HMO	16.6	21	Deficit:	-4	21
	Adjusted FTE	15.5	20	Deficit:	-3	20
	GMENAC	12.4	16	Surplus:	1	16
	Kaiser Portland	11.9	15	Surplus:	2	15
	7 Kaiser Plans	16.0	20	Deficit:	-3	21
	GHC Seattle					
	Three HMOs	9.8	12	Surplus:	5	13
	Goodman					
	Hicks & Glenn	7.6	10	Surplus:	7	10
	Solucient	13.9	18	Deficit:	-1	18
	Average Requirement	13.0	16	Surplus:	1	17

		20	008 Actual		2015 Projected
Physician Specialty	Physician Specialty			/100k	Population
Psychiatry	Psychiatry		9	7.1	129,065
National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AMA	13.6	17	Deficit:	-8	18
Two Mature HMO	7.7	10	Deficit:	-1	10
Adjusted FTE	7.2	9	Adequate	0	9
GMENAC	15.4	19	Deficit:	-10	20
Kaiser Portland	5.2	7	Surplus:	2	7
7 Kaiser Plans	4.1	5	Surplus:	4	5
GHC Seattle					
Three HMOs					
Goodman	7.2	9	Adequate	0	9
Hicks & Glenn	3.9	5	Surplus:	4	5
Solucient	5.7	7	Surplus:	2	7
Average Requirement	7.1	9	Adequate	0	9

			2	008 Actual		2015 Projected
Physic	ian Specialty	Population	Physicians	/100k	Population	
Pulmo	Pulmonary Diseases		125,975	4	3.2	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	S	Physician Need
	AMA	3.5	4	Adequate	0	5
	Two Mature HMO	2.0	3	Surplus:	1	3
	Adjusted FTE	1.9	2	Surplus:	2	2
	GMENAC	1.4	2	Surplus:	2	2
	Kaiser Portland	1.4	2	Surplus:	2	2
	7 Kaiser Plans	1.0	1	Surplus:	3	1
	GHC Seattle	1.4	2	Surplus:	2	2
	Three HMOs					
	Goodman	1.4	2	Surplus:	2	2
	Hicks & Glenn					
	Solucient	1.3	2	Surplus:	2	2
	Average Requirement	1.5	2	Surplus:	2	2

		2	008 Actual		2015 Projected
Physician Specialty	Population	Physicians	/100k	Population	
Radiology		125,975	9	7.1	129,065
National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	3	Physician Need
AMA	11.4	14	Deficit:	-5	15
Two Mature HMO	13.6	17	Deficit:	-8	18
Adjusted FTE	13.7	17	Deficit:	-8	18
GMENAC	7.7	10	Deficit:	-1	10
Kaiser Portland	8.5	11	Deficit:	-2	11
7 Kaiser Plans	4.7	6	Surplus:	3	6
GHC Seattle	7.7	10	Deficit:	-1	10
Three HMOs					
Goodman	8.0	10	Deficit:	-1	10
Hicks & Glenn					
Solucient					
Average Requirement	9.1	11	Deficit:	-2	12

			20	008 Actual		2015 Projected
Physician Specialty		Population	Physicians	/100k	Population	
Genera	al Surgery		125,975	6	4.8	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Statu	S	Physician Need
	AMA	12.5	16	Deficit:	-10	16
	Two Mature HMO	9.4	12	Deficit:	-6	12
	Adjusted FTE	8.8	11	Deficit:	-5	11
	GMENAC	9.7	12	Deficit:	-6	13
	Kaiser Portland	7.0	9	Deficit:	-3	9
	7 Kaiser Plans	6.2	8	Deficit:	-2	8
	GHC Seattle	5.9	7	Deficit:	-1	8
	Three HMOs	4.2	5	Surplus:	1	5
	Goodman	9.7	12	Deficit:	-6	13
	Hicks & Glenn	4.1	5	Surplus:	1	5
	Solucient	6.0	8	Deficit:	-2	8
	Average Requirement	7.1	9	Deficit:	-3	9

Included Counties: Houston

			2	008 Actual		2015 Projected
Physician	Physician Specialty			Physicians	/100k	Population
Urology			125,975	2	1.6	129,065
	National Physician Standards*	Standard Phys/100,000 Pop.	Physician Need	Status	S	Physician Need
•	AMA	3.5	4	Deficit:	-2	5
	Two Mature HMO	3.5	4	Deficit:	-2	5
	Adjusted FTE	3.3	4	Deficit:	-2	4
•	GMENAC	3.1	4	Deficit:	-2	4
	Kaiser Portland	3.3	4	Deficit:	-2	4
•	7 Kaiser Plans	2.3	3	Deficit:	-1	3
	GHC Seattle	2.9	4	Deficit:	-2	4
	Three HMOs					
•	Goodman	2.6	3	Deficit:	-1	3
	Hicks & Glenn	1.9	2	Adequate	0	2
	Solucient	2.9	4	Deficit:	-2	4
	Average Requirement	2.9	4	Deficit:	-2	4

Report created by Georgia Board for Physician Workforce, State of Georgia

- (1) McClendon, B., R.Polizer, E. Christain, and E. Fernandez. 1997. Downsizing the Physician Workforce. Public Health Reports. May/June 112:231-239.
- (2) Graduate Medical Education National Advisory Committee Summary Report. 1981. Pub. No. (HRA) 81-651. Washington: Government Printing Office.
- (3) American Medical Association, 1996. Physician Characteristics and Distribution in the US: 1995/1996. Chicago.
- (4) American Osteopathic Association. 1993. 1994 Yearbook and Directory of Osteopathic Physicians. Chicago.
- (5) Hart, L., E. Wagner, J. Parzada, A.Nelson, and R.Rosenblah. 1997. Physician Staffing Ratios in Staff- Model HMO's: A Cautionary Tale, Health Affairs 16, no. 1:55-70.
- (6) Weiner, J.P. 1994 Forecasting the Effects of Health Reform on U.S. Physician Workforce Requirement. JAMA 272, no. 3:222-230.
- (7) Steinwachs, D., J.P. Weiner, S. Shapiro, et al. 1986. A Comparison of the Requirements for Primary Care Physicians in with Projections Made by the Graduate Medical National Advisory Committee. New England Journal of Medicine 314:217-222.
- (8) Kronick, R., D.C. Goodman, J. Wennberg, and E.Wagner. 1993. The Marketplace in Health Care Reform: The Demographic Limitations of Managed Competition. New England Journal of Medicine 328:1480152. See also, related NAPS Document 04998.
- (9) Vansdow, N.A. The Physician Workforce: Issues for Academic Medical Centers. Forum on the Future of Academic Medicine. December 2, 1996.
- (10) Forte, G.J., Dionne, M., Beaulieu, M., and Salsberg, E. Profile of New York State Physicians. Rensselaer, NY: Center for Health Workforce Studies, School of Public Health, SUNY Albany. April 2001.
- (11) A Review of Physician-to-Population Ratios. Merritt Hawkins & Associates. GMENAC, Goodman (Dec. 11, 1996 JAMA), Hicks & Glenn (1989 Journal of Health Care Management), Solucient (2003).
- (12) American Medical Association. Physician Characteristics and Distribution in the US, 2010 Edition; 2010.

^{*}Standards are presented as rates per 100,000 population