

THE BRAIN DRAIN OF PUERTO RICO'S YOUNG HEALTH PROFESSIONALS



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OBJECTIVES

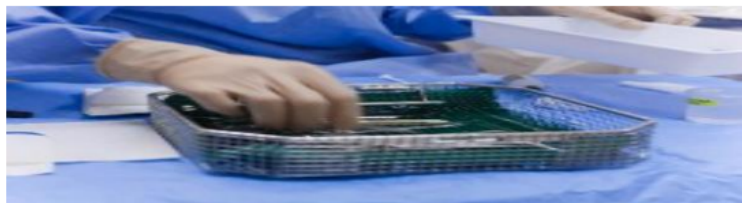
- Take a look at the presumed brain drain of Puerto Rico's young health professionals
- Provoke other considerations and ideas
- Identify plans of action to mitigate the migration, if any
- Identify each sector's role in these plans of action

Alarma la fuga de tecnólogos médicos en Puerto Rico

Exigen aumento salarial para estos profesionales

lunes, 21 de abril de 2014 - 11:42 AM

Por ELNUEVODIA.COM



Según reseña El Nuevo Día en su edición impresa de hoy, de 3,070 tecnólogos médicos que había en Puerto Rico en 2005 según cifras del Departamento del Trabajo, en el año 2012 la cantidad se redujo a 2,150. (Thinkstock)

Por tercera ocasión en los últimos siete años, el Colegio de Tecnólogos Médicos de Puerto Rico defiende un aumento salarial para estos profesionales de la salud ya que, según sus proyecciones, de lo contrario habrá una crisis en los servicios de laboratorio dentro de unos dos a tres años.

Según datos del Departamento del Trabajo, para el 2012 habían 2,150 tecnólogos activos en Puerto Rico, mientras que en el 2005 el número ascendía a 3,070.



Univision Puerto Rico

April 19, 2013 ·

Grave la fuga de médicos de Puerto Rico: <http://ow.ly/keB72>. "No existen especialistas" jm



Crisis en la medicina: En Puerto Rico no queda ni un solo especialista

Caótica la fuga de médicos en la isla. Le puede llegar a costar la vida a un paciente.

[PUERTORICO.UNIVISION.COM](http://puertorico.univision.com)

← Alcalde de Cataño podrá abrir su comité

Reclaman cambios para evitar fuga de médicos a Estados Unidos

09/18/2012 | 12:58 p.m.

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Algunas de las especialidades que dependen de alta tecnología, se ven dramáticamente afectadas.

Un estudio reveló que muchos galenos se van de la Isla para buscar trabajo en Estados Unidos

Una nutrida delegación de miembros del Colegio de Médicos Cirujanos de Puerto Rico visitaron a varios congresistas en el Capitolio Federal para hacerles entrega del primer estudio científico que demuestra la preocupante fuga de médicos hacia Estados Unidos.

DEFINING MIGRATION

Migration is defined as the “**shift of persons** with the intention of **changing residence** from a place of origin to another destiny, passing through some geographical limit generally marked by a political administrative division. This phenomenon implies a shift or spatial movement with the objective of finding **better life opportunities for individuals**, either because in their place of origin or actual establishment there are no such opportunities, or because these don't satisfy all their personal criteria.” Sánchez, 2002 (retrieved by Nelson López and Miriam García)

DEFINING BRAIN DRAIN

Human capital flight is an Economics term equivalent to the Sociology term, brain drain, which refers to the emigration of intelligent, well-educated individuals to somewhere **for better pay or conditions**, causing the place they came from to lose those skilled people, or "brains." <http://www.zmescience.com/tag/brain-drain/>

: a situation in which many educated or professional people leave a particular place or profession and move to another one that gives them **better pay or living conditions** (Merriam- Webster, <http://www.merriam-webster.com/dictionary/brain%20drain>, downloaded March 1st, 2015)

QUESTIONS

1. Is there a brain drain affecting Puerto Rico?
2. In which health specialties or branches is the brain drain more frequent, if any?
3. How are we measuring it?

BRAIN DRAIN?

Jorge Duany, Director of the Cuban Research Institute and professor of Anthropology:

- More and more members of the Puerto Rican middle class have relocated to the United States since the 1990s, searching for a better **“quality of life” –referring to security, tranquility, health, housing and education. The new emigrants include a considerable amount of teachers, nurses, engineers and doctors, among other professionals.**

Published in El Nuevo Día (December 11, 2013) and retrieved by the Puerto Rico Planning Board

THE BRAIN DRAIN ISSUE ISN'T NEW

Need for bilingual workers attracts Puerto Ricans

By Miranda Leitsinger (AP) [endi.com](#) San Juan – 2006

- A wave of Spanish-speaking professionals and specialized workers are rushing to the United States from Puerto Rico, attracted by better paying jobs but depriving the island of the specialists it needs the most, including doctors.
- Doctor Marisel Velázquez Vicente, president of the Puerto Rico College of Physicians and Surgeons, attributes the brain drain to the growing Hispanic population in the US.
- “Due to the growth of the Hispanic population in the US, they lack bilingual doctors in different specialties, so they are actively recruiting doctors in the island,” Velázquez explained, and added that some Puerto Rican hospitals have an alarming shortage of surgeons.
- **10% of the 9,000 physicians registered in the Puerto Rico College of Physicians and Surgeons work in the US, the same as 5% of the 1,500 dentists members of the Puerto Rico College of Dental Surgeons, according to health authorities.**

Alameda article in 1983

STATISTICS – VARIOUS SOURCES

- It is estimated that more than 3,000 Puerto Ricans leave the island each month. (current)
- During the 2008-2012 period, 45% of Puerto Ricans that emigrated to the United States were 15 to 34 years old. (Puerto Rico Institute of Statistics)
- According to the *Global Competitiveness Report 2013-2014*, Puerto Rico held the 104th position among 148 countries in terms of its capacity for retaining the talent it produced.
- According to a 2012 survey by the Puerto Rico College of Physicians and Surgeons, 60% “had considered” emigrating due to economic factors (differences in fees and the way of charging for services) or quality of life (<http://www.galenusrevista.com/Fuga-de-profesionales-de-la-salud.html>, retrieved on January 6, 2015)

PLANNING BOARD REPORT

- The period from 1990 to 2013 was marked by a profound economic recession and an intense emigration, characterized by the drain of human capital.
- Unlike former years, in which a net migration decrease was observed, in 2011 there was an increase in the amount of people who left Puerto Rico for the United States.
- **2011 Survey**, Statistics Institute, Planning Board
 - 46% of emigrants approximately 17-34 years old
 - 96.6% emigrated to the US
 - 30.5% to Florida, followed by New York, Massachusetts, Connecticut, Georgia, Texas, Pennsylvania

PLANNING BOARD REPORT

In terms of academic preparation, the 2011 Survey's results showed that **75.6%** of emigrants had 12 years or more of school. Specifically,

- **23.5%** had a bachelor's degree,
- **23.1%** had 13 to 15 years of university studies.

This shows that during that fiscal year, the residents surveyed with the most academic preparation were the ones who emigrated the most.

20.7% were professionals or technicians

The principal causes for emigrating were work related: **40.7%** had found jobs and **20.3%** were seeking jobs

Tabla 1: Empleo por ocupación

Puerto Rico, 2003 y 2012

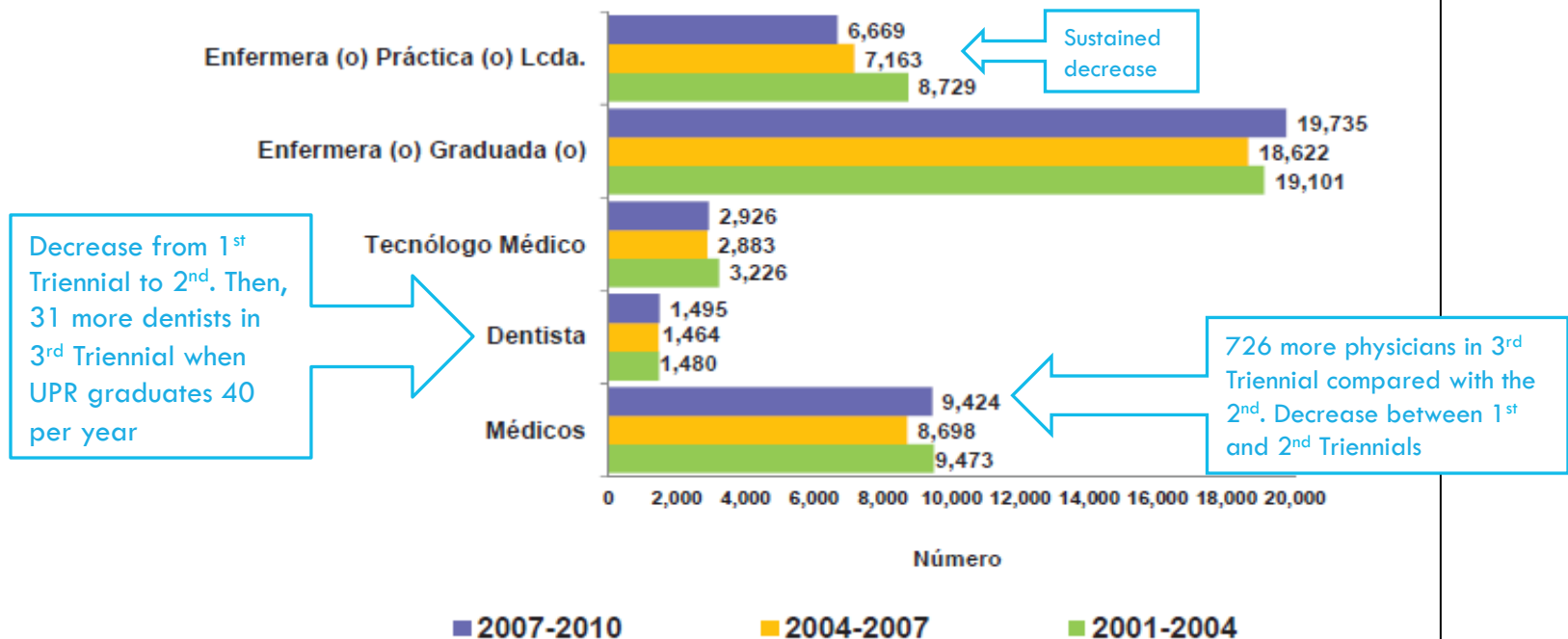
Ocupaciones seleccionadas	Total de empleos		Cambio absoluto	Cambio porcentual
	2003	2012	2003 y 2012	2003 y 2012
Maestros de preescolar, excepto la enseñanza especia	1,270	140	(1,130)	-89.0%
Nuevos vendedores de cuentas	1,820	270	(1,550)	-85.2%
Auxiliares de docentes de postgrado	510	80	(430)	-84.3%
Profesores de química postsecundaria	250	50	(200)	-80.0%
Optómetras	150	40	(110)	-73.3%
Profesores de matemática postsecundaria	380	120	(260)	-68.4%
Pintores, contrucción y mantenimiento	1,970	770	(1,200)	-60.9%
Ingenieros de ventas	120	50	(70)	-58.3%
Ayudante de carpintero	2,460	1,160	(1,300)	-52.8%
Profesores de biología postsecundaria	390	190	(200)	-51.3%
Técnico de psiquiatría	180	90	(90)	-50.0%
Telefonistas	740	390	(350)	-47.3%
Enfermeras prácticas licenciadas y vocacionales licenciadas	7,850	4,320	(3,530)	-45.0%
Ingenieros ambientales	290	160	(130)	-44.8%
Economistas	160	90	(70)	-43.8%
Jueces, los jueces magistrados y magistrados	810	460	(350)	-43.2%
Ingenieros de salud y seguridad, excepto ingenieros de seguridad	140	80	(60)	-42.9%
Carpinteros	6,600	3,930	(2,670)	-40.5%
Gerente de recursos humanos	1,530	940	(590)	-38.6%
Agrimensores	290	180	(110)	-37.9%
Químicos	2,390	1,520	(870)	-36.4%
Ayudantes de salud en el hogar	4,010	2,600	(1,410)	-35.2%
Secretarias ejecutivas y asistentes administrativos	13,460	9,220	(4,240)	-31.5%
Programadores de computadoras	1,770	1,290	(480)	-27.1%
Microbiólogos	280	210	(70)	-25.0%
Electricistas	3,610	2,770	(840)	-23.3%
Cajeros	4,700	3,680	(1,020)	-21.7%
Oficiales correccionales y carceleros	7,350	5,830	(1,520)	-20.7%
Ingenieros químicos	150	120	(30)	-20.0%
Mecánicos e instaladores de calefacción, aire acondicionado y	1,440	1,170	(270)	-18.8%
Oficinista generales	27,850	22,640	(5,210)	-18.7%

	Tecnólogo y técnicos cardiocirculatorios	200	500	50	11.0%
	Ingenieros industriales	1,870	2,220	350	18.7%
	Farmacéuticos auxiliares	2,080	2,470	390	18.8%
	Ingenieros de aplicaciones de software	320	390	70	21.9%
→	Terapistas ocupacionales	210	260	50	23.8%
	Terapistas respiratorio	410	510	100	24.4%
	Administrador de la Educación, Programa preescolar y centro de	160	200	40	25.0%
→	Ingenieros civiles	1,640	2,150	510	31.1%
→	Psicólogos clínicos, consejería y de la escuela	180	250	70	38.9%
	Técnicos en ingeniería ambiental	120	170	50	41.7%
	Bibliotecarios	1,590	2,280	690	43.4%
→	Epidemiólogos	40	60	20	50.0%
	Terapistas recreativos	50	80	30	60.0%
→	Jefe Ejecutivos	1,310	2,120	810	61.8%
→	Internistas, generalistas	110	180	70	63.6%
	Tecnólogo de medicina nuclear	110	180	70	63.6%
→	Analista financiero	600	1,010	410	68.3%
→	Obstetras y ginecólogos	40	70	30	75.0%
	Ingenieros mecánicos	450	840	390	86.7%
	Especialistas de apoyo de computadoras	1,410	2,920	1,510	107.1%
→	Médicos auxiliares	310	650	340	109.7%
→	Pediatras generalistas	80	190	110	137.5%
	Técnico de farmacia	1,210	3,390	2,180	180.2%
→	Ingenieros de sistemas de software	190	550	360	189.5%
→	Científicos médicos, excepto epidemiólogos	30	120	90	300.0%

JOSÉ L. VÉLEZ

PLANNING BOARD REPORT

Gráfica 1: Profesionales de la Salud Activos Seleccionados
Puerto Rico: periodos 2001-2004, 2004-2007 y 2007-2010



¿A dónde se han ido los profesionales de la salud?

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Este artículo evalúa distintos factores económicos y demográficos que inciden en la localización de los profesionales de la salud en los municipios de Puerto Rico. Se estudiaron cuatro categorías de profesionales

2,060 (23.6 por ciento) registros, respectivamente. Este fenómeno también se puede observar en las estadísticas de empleo por ocupación del Negociado de Estadísticas Laborales de los Estados Unidos (BLS, por sus siglas en inglés). Por ejemplo, en el período de 2003 a 2012 también se registró una reducción en los tecnólogos médicos y las enfermeras prácticas licenciadas de 90 (4.0 por ciento) y 3,530 (45.0 por ciento) empleos, respectivamente.

Si bien la migración de profesionales pudiera ser un componente importante en los cambios en la

Las únicas profesiones de la salud con marcado descenso desde el 2001 al 2007 fueron enfermeras prácticas y tecnólogos médicos

SCHOOL OF MEDICINE STATISTICS

Three out of four students graduating from the UPR School of Medicine continue their graduate medical education training in [Puerto Rican Residency Programs](#).

UPR School of Medicine students admitted to Residency Programs

- Puerto Rico 73.5%
- USA 26.5%

This is important given the alleged premise that once you leave the island, even for training, you may not want to come back



STRENGTHS OF THE UPR SCHOOL OF MEDICINE RESIDENCY PROGRAMS

Of the 38 programs sponsored by the School of Medicine, 20 are unique in Puerto Rico.

The 2014-2015 academic year saw the start of the combined Medicine/Pediatrics Program, the only accredited one in Puerto Rico.

During their training, residents significantly contribute to services offered to medically indigent patients





GRADUATE MEDICAL EDUCATION

All the programs are accredited by the Accreditation Council for Graduate Medical Education, ACGME.

Academic Year	Admitted Residents	Total Residents
2011-2012	95	414
2012-2013	95	425
2013-2014	99	438

ACCREDITED MEDICAL SPECIALTIES

Specialty	# positions
Anesthesia	12
Surgery	43
Dermatology	8
Emergency Medicine	30
Family Medicine	24
Physical Medicine	12
Internal Medicine	49
Nuclear Medicine	6
Neurology	12
Urology	9

Specialty	# positions
Neurosurgery	11
Obstetrics/ Gynecology	20
Ophthalmology	12
Orthopedics	20
Otolaryngology	8
Pathology	11
Pediatrics	39
Psychiatry	24
Diagnostic Radiology	16

ACCREDITED SUBSPECIALTIES

Program	# positions
Allergy	2
Cardiology	12
Endocrinology	4
Geriatrics Internal Medicine	3
Geriatrics Family Medicine	3
Gastroenterology	9
Hematology/ Oncology	6
Infectious	4
Nephrology	3

Program	# positions
Rheumatology	4
Neuromuscular	1
Pediatric Neurology	3
Sports Medicine	1
Neonatal-Perinatal	5
Pediatric Critical Care	3
Psychiatry Children and Adolescents	4
Forensic Pathology	1
Transitional	4

TRAINING HOSPITALS FOR RESIDENCY PROGRAMS

SCHOOL OF MEDICINE, MEDICAL SCIENCES CAMPUS

Senatorial District and demographic regions
Puerto Rico Department of Health

San Juan

- Hospital Universitario Adultos
- ASEM
- Hospital de la Capital
- Hospital Pediátrico
- Hospital de Trauma (ASEM)
- Hospital de Veteranos
- Hospital Cardiovascular
- Hospital Oncológico
- Healthsouth Rehabilitation Hospital
- Hospital Estatal de Siquiatría
- Hospital Pavía Hato Rey
- Hospital Pavía Santurce
- Hospital San Jorge
- Instituto Ciencias Forenses
- Hospital Auxilio Mutuo
- Hospital Del Maestro
- Clínica Las Américas
- Hospital Dr. Ramón Fernández Marina
- First Hospital Pan Americano
- CLETS
- CT Radiology Complex and MRI Institute
- Hato Rey Pathology Associates, Inc.
- SENOS PR
- La Fondita de Jesús
- Reliable Ambulatory Center (RASC)





GRADUATE RESIDENTS THAT PRACTICE MEDICINE IN PUERTO RICO

Program	% in PR
Anesthesia	80%
Dermatology	74%
Emergency Medicine	59%
Family Medicine	56%
Internal Medicine	79%
Obstetrics/Gynecology	58%
Ophthalmology	89%
Pathology	76%
Pediatrics	70%

Program	% in PR
General Surgery	60%
Neurosurgery	71%
Orthopedics	70%
Otolaryngology	76%
Urology	79%
General Psychiatry	78%
Psychiatry Children and Adolescents	96%
Diagnostic Radiology	85%
Physical Medicine	81%

THE BRAIN DRAIN IS NOT NECESSARILY NEGATIVE WHEN...

- Health professionals train in the United States and return to practice in Puerto Rico – this is beneficial since it brings new techniques, approaches and enriches the academia (no inbreeding)
- They acquire experience and recognition, and return to offer that earned talent to Puerto Rico
- They are successful and bring recognition to Puerto Rico, they offer their support as alumni, or contribute to universal knowledge through scientific research

POSSIBLE FACTOR: “ARTIFICIAL” SHORTAGE

- The immunity from professional responsibility enjoyed by physicians and other health professionals in the UPR, “Centro Médico” and state hospitals moves the most complicated or “risky” cases to these institutions
- Example: alleged shortage of orthopedics for traumas in private hospitals

AREAS IDENTIFIED AS CRITICAL BY VARIOUS FACULTY MEMBERS AT MSC

- Primary medicine (has lowest remuneration)
- General surgeons and subspecialties such as pediatrics, trauma, cardiovascular...
- Oncologists
- Nurses
- Health Professions (Nutritionists or Health Educators that are not remunerated by health insurance plans)
- According to data from the Medical Sciences Campus' Auxiliary Deanship of Graduate Medical Education, 30% to 40% of alumni from the following School of Medicine residency programs emigrate from Puerto Rico: Family Medicine, Emergency Medicine, Pediatrics, Gynecology & Obstetrics, and General Surgery

MOST QUOTED MIGRATION REASONS

- Ease of geographical mobility
- Income decrease in general limits the demand for services
- Search for cultural and ethnic diversity in the United States
- Family and friends already established in the United States who encourage migration
- Flow of information between graduates and companies/universities in the United States
- Difference in salary
- Quality of life
- Market saturation (over 500 thousand people with university degrees in Puerto Rico)

STUDY DEBT FACTOR

In the case of the Medical Sciences Campus, medicine students on average graduate with a debt ranging from \$60,000 to \$70,000. For students graduating from private medical schools in and outside of Puerto Rico, the debt can surpass \$200,000.

Senate Project 1030 seeks to address the issue with contributive incentives for principal payment of student debt, if working for the public sector or nonprofit sectors.

POSSIBLE SOLUTIONS

- Demand emigrants payment of state's cost of education
- Years of public service
- Promote recruitment of students for high necessity fields through guarantees of admission, commitment in advance
- Promote return to Puerto Rico through academic or contributive incentives
- Require equal payment of fees in Puerto Rico
- Cultivate entrepreneurship abilities in health professions
- Attractive recruitment in the public system of certain specialists
- Housing bonuses for people with graduate studies
- It's necessary to study the issue more in depth and with scientific rigor
- Others

ACKNOWLEDGEMENTS

I'd like to thank the Medical Sciences Campus' Deans for the data, in particular Dr. Jorge Falcón, Auxiliary Dean of Graduate Medical Education at the School of Medicine

THANK YOU





**BRAIN DRAIN OR NO
BRAIN DRAIN?**

What do you
think?