Arbona System Reengineered In The Garcia-Ariz Model: A National Health Reform Plan From An Orthopedics Program Perspective

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ABSTRACT

During the 1950's the healthcare system of Puerto Rico was maintained exclusively by the local government. The Arbona system, as it came to be known, although it provided health care professionals on the island with multiple educational experiences, presented substantial costs for the government. In the early 1990's a program of privatization known as "La Reforma" was implemented with the ultimate goal of providing a universal coverage system for the poor and the needy. At present this program has brought other issues regarding the quality of medical services and loss of academic centers. This is a preliminary report that analyzes various aspects of both systems through the search and analysis of background resources and literature, interviews, and physician/patient satisfaction surveys (on working conditions and quality of services). The main purpose of this report is to create a model that proves to be efficient and coherent with the island's idiosyncrasies.

Index words: *Arbona, health, reform, orthopedics, program*

Background

From the beginning of the island's commonwealth status in 1952, Puerto Rico's medically indigent population has relied exclusively on local government for their healthcare needs. Originally the government maintained several hospitals, emergency centers, and free clinics, including the Rio Piedras Medical Center. The Arbona system, (as it came to be known) named after its developer divided the island into sectors. Each sector has its own tier system where patients in need of medical assistance would be screened into different area hospitals depending on need and complexity of their problem.[1] However, this system at the time, presented substantial costs to the government while generating increasing criticism from the public and media citing a sluggish bureaucracy and poor services from poorly motivated, and lowly paid government workers and hospital staff. On the positive side this system also provided a rich environment for the island's health care professionals to receive a full-bodied education and numerous enriching experiences. In 1992, then governor elect of Puerto Rico Pedro Rosselló proposed and implemented the privatization of the public health system, without first undertaking a trial pilot program, under the name of "La Reforma". The privatization plan consisted of selling the previously government-owned hospitals and medical centers to both local and American investors and then implementing a universal coverage system based on a set of primary care incentives plan for the poor and needy island citizens. The main idea behind this plan was that private companies could better manage each institution, increasing overall efficiency traditionally lost in government "red-tape" or bureaucracy.[2] Today "La Reforma" has assumed the cost of caring for every sick, high risk patient in our population, 8% of which is unreimbursed (not insured by it because they do not qualify). The group that is not covered includes illegal immigrants, the under-privileged, and people with income above $15,000 but unable to pay for private insurance. The old Arbona system still presently takes care of this 8% of the population.[3]

In essence the government shifted from being a health care provider in the old Arbona system, to being a health care facilitator by paying capitation to insurance companies that would channel HMO capitation to the primary care provider.

Subsequent to 1992, all government hospital and medical centers were sold to private companies and investors, including local medical groups and companies composed mostly of general practitioners.2 In retrospect, some groups were more in tune with the business side of the endeavor and would not honor it's noble origins (as would be evident in future legal action against some of these physicians for corrupt acts within the system). The only exceptions to the privatization plan were the Rio Piedras Medical Center, Carolina Medical Center, and the Bayamon Regional Medical Center, which the Commonwealth Government presently continues to run. In essence, these institutions were left with the responsibility of filling in the gap that the privatized institutions did not want, despite receiving the funds to do so. These beacons, or remnants of the old Arbona system, continue to serve the medical indigent population in Puerto Rico while running parallel to the health reform system. These Medical Centers have become the safety net, or working horse, to which the government and population fall when it confronts the problems or inequities of the health care reform. They also provide the only and much needed source of postgraduate education programs that fill the future needs of trained certified health care professionals on the island.

Having the opportunity to watch the system work from its inner core (Centro Médico de Puerto Rico) gives the authors of this article a unique opportunity to analyze the system and brainstorm solutions to its problems. The "Arbona Reengineered", or García-Ariz Model, provides long-term solutions to the problems facing healthcare today in a low cost, effective, and safe manner.

It is a notable aspect of Puerto Rico, the isolation and distance from outside sources (read - mainland USA), which provides an ideal ground for research projects of this kind. We expect to provide the US Government vital insight into different health care reform programs and possible solutions.

The Old Arbona System

The Arbona System suffered from several fundamental defects. First it lacked basic salaries from which to compete for graduate school talent and attending physicians. Secondly, because of this lack of basic salary only part-time faculties were employed. This same faculty would work part-time jobs at private institutions, where their real daily effort was spent in pursuit of a higher overall salary and income bracket, severely affecting the quality of health care being provided at these institutions. Third, a lack of government spending, budget cuts and rationing of materials made practicing medicine nearly impossible.

"Que nos pasa Puerto Rico": The Problem with

Health Care Reform

Present day medical centers are overcrowded and because of this, the quality of care has suffered dramatically at these tertiary centers that were not made for such volume of patients. In these settings, on average, a patient at the Medical Center emergency room may spend over 24 hours waiting to receive proper definitive medical care and treatment potentially increasing co-morbidities. The problems created by the overcrowding at these medical centers include the usage of the limited number of beds which were intended for supra-tertiary level of care, and shortage of trained personnel which include resident nurses and anesthesia operating room technicians. There is a high cost to treat all the patients that are referred to the medical centers instead of being treated at "lower tier" facilities. Since 1992 the payer systems shifted in favor of patients covered by the Universal Health Reform (HMO). However, the Medical Centers are not reimbursed by the government for the cost of treating uninsured patients (no Health Reform plan). The budget deficits for the medical centers have increased yearly and, as it stands today, are unable to pay many of their suppliers. These suppliers in turn have stopped providing vital services to some of these medical centers, consequently decreasing overall quality of care due to lack of available resources.

"La Reforma" almost killed the medical education system, effectively abolished practically all of the academic centers that offered post graduate medical education. Hence removing the actual source of health care providers: nursing staff, technicians, and even physicians.[4] The new changes in health care of the García-Ariz model should ensure this "cadre" or constant influx of new health care professionals for the island's future benefit. This model would provide an ever replenishing pool or influx of health professionals, instead of what we currently are experiencing which is a group of physicians that is slowly emigrating to better medical practice opportunities in the mainland United States.

The actual Health Care Reform works in a manner similar to incentives for primary care providers. Each patient is allotted a fixed amount

yearly for their health care visits. This covers all visits to primary care providers (PCP), tests, and specialty visits or consultations.2 The gatekeepers, sort-of-speak, are the primary care providers. They are in charge of their patients being referred for special tests, labs, or specialty consults like surgery or orthopaedics. This in part was put in to curtail excessive spending on behalf of the patients, but has only worked against the best interests of them.5 The more referrals the PCP gives for labs, or specialty evaluations, the fewer funds he earns at the end of the day (fewer capitations). So in fact, there is an incentive system in place working against the patient when it comes to seeking assistance outside of that which can be provided by a PCP. In essence a "Universal HMO" was created in place of the old Arbona system, were every patient had access to health care without reservations.

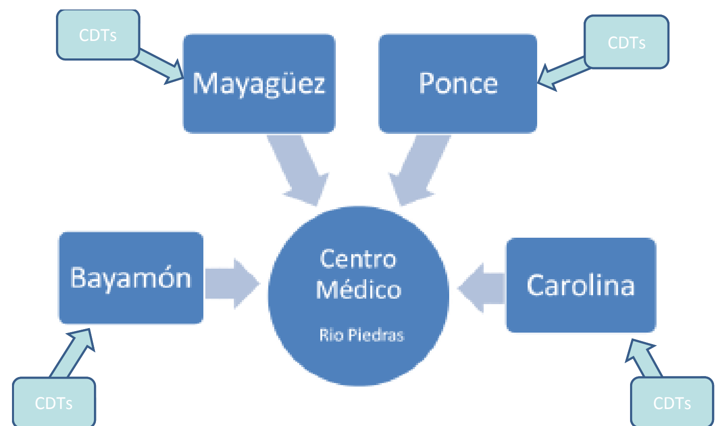
Some of the main ideals of "La Reforma" are still being met, but at a price. The system in place puts a premium on time. The patient at all points in time must return to PCP prior to obtaining or searching for additional medical services. For example; if an orthopaedic surgeon orders x-rays, the patient must return to his PCP to receive approval for these studies. It may take weeks for a patient to receive an appointment, delaying treatment protocol that may negatively affect patient care and outcomes. The primary care physician effectively becomes another employee of the medical insurance company or, in this case, the system. Therefore, even in theory, La Reforma could increases overall disease morbidity across the board.

The issue of lack of access to health care extends to the availability of specialist. What good is the ability to access any doctor at any point, one of their main selling points, when most specialists do not accept the government provided medical insurance? Historically, La Reforma has sustained a poor track record when reimbursing physicians, or even general medical supplies and studies, for services rendered. Most of the reimbursement occurs late and incomplete, pushing medical care providers into a corner where they eventually abandon the system out of necessity or frustration.6 This puts at premium healthcare providers that have embraced the system, and accessibility to said professionals as the main issue to be confronted, coming full circle to the crowded ER and clinic waiting areas aforementioned in what was left of the old Arbona System (i.e.: medical centers).

The García-Ariz (GA) theorem

The García-Ariz Orthopaedic model would bring forth these ever so needed changes and address Arbona's and "La Reforma" fundamental defects.

At the core of this change is a fulltime faculty, with a competitive base salary. To this base salary a simple flexible billing system is added to provide economic incentive for faculty to guarantee its own salaries within the University practice scheme, thus expanding their patient pool, a model already in place at the Intramural Practice Plan of the University of Puerto Rico. This expanding body of fulltime faculty members would bring forth diversity of medical specialties, and serve as the foundation for future residency programs. As stated previously, quality in healthy care is a big issue confronting the island's health delivery. Unlike previous healthcare models, the new system should guarantee quality of care to the medically indigent population through accredited full-time attending physicians and residency programs that would staff Arbona's re-engineered multi-tier system. These would assure a low level of cost-effectiveness through an academic system of residency training programs (residents = workforce) and accredited university-centered system that would provide its own system of checks and balances for educational services. This would address both main problems faced today: access to quality health care, and the constant flux of future medical professionals. Residencies offer real solutions to the problems of quality control and quality health care previously seen in the old Arbona model.



Who would want to form part of the new system and Why?

Everyone. The new system would provide a sense of great esteem for doctors, being part of the solution to their island's longtime medical needs, making this option appeal on the basis of moral integrity. It would also provide an extensive supportive system through the play of numerous full time physicians and medical residents staffed at the hospital, permitting a broader practice in

medicine and patient pool, along with practicing evidence-based medicine and research opportunities. Full-time physicians in the new system would ensure quality of care for patients, as well as provide a stable paycheck to physicians, medical malpractice premium relief, in addition to other incentive programs that would be set in place to reinforce patient care as a priority. This is taking place at the Medical Center, Orthopaedic Clinics today and it is on what the authors of this article base their ideals.

In theory, the GA system should improve on the malpractice crisis and rise in insurance premiums due to an improved product in the practice of medicine and an overall higher approval rate amongst the patient population due to the improved quality of care. These centers would enjoy malpractice caps, self-insurable for their errors, and being the forerunners of tort reform (no fault). The costly idea of defensive medicine would cease to be a problem, decreasing the overall cost of health care. This by no means would represent a call for socialized medicine. On the contrary, a place for the private enterprise would still comprise a large sector of the population that would be looking for a high quality of care in these new regional centers. Along the same line, it would do justice to the University driven sector that now shares a high burden for unreimbursed medical care of underprivileged population which they are called to treat within their ER's at University-like settings.

Stages for implementation of the GA System

Stage I: Academics (1-2 years)

-Establish fulltime faculty in each of the primary medical disciplines: Internal medicine, Pediatrics, Obstetrics and Gynecology, General Surgery, and Family Medicine.

-Government legislation to support a budget to obtain salaries for full-time board-certified faculty with the promise to serve and provide academic teachings.

-Take advantage of the economic crisis and buy back regional hospitals, each hospital becoming a regional medical center (i.e.: Mayaguez and Ponce).

-Ensure an affiliated accredited medical school to provide guidance in academic affairs, and prepare for accreditation status of future residency-internship programs.

-Assignment of the medically indigent population (by region) to each academic medical center, successfully decreasing the overcrowded state and overall load seen at our public hospitals today with the old Arbona system that is left operational.

Stage II: Seeking Accreditation (2 years)

-The fulfillment of full accreditation to the medical disciplines and the commencement of residency training in internal medicine, general surgery, pediatrics and OB/Gyn. Residents equal a work force with emphasis on learning their craft, and quality of health care.

-Attainment of approximately two thirds fiscal autonomy of each center, thus decreasing dependency on commonwealth funds.

-Establish, or in some instances re-establish, schools of nursing, OR technicians, anesthesiology technicians, radiology technicians, and physician assistants. All of which should be associated with aforementioned medical schools, thus solving the severe deficit of such staff that exists today.

-Mandatory service. In exchange for highly-affordable schooling (in the many different health care professions) the students promise to provide service for two years at the start of their careers, a pledge similar to those scholarship programs offered by the armed forces today.

Stage III: The Population

-This highly organized system will serve as a national registry to further conduct clinical research and epidemiology for advancement of the public health system.

-These regional hospitals would serve mainly the indigent population but as efficiency and reputation progresses it will attract the private sector patients. This would provide hospitals with private funds and decrease government contributions, making these hospitals more self-sufficient budget-wise.

-These hospitals would provide vast opportunities for emerging local talent in a variety of health care professions to practice their chosen discipline, in an environment not available today, thus avoiding emigration of medical professionals.

METHODOLOGY

1. Interview with former Puerto Rico's Health Care Department director Dr. Johnny Rullán:

a. Arbona operational costs (pre 1992)

b. Health Care "Reforma" operational costs (post 1992)

c. Puerto Rico Medical Center operational costs during Arbona

d. Puerto Rico Medical Center operational costs during "Reforma"

2. Analyze ASEM's patient statistics:

a. Number of patients seen at ER pre 1992

b. Number of patients seen at ER post 1992

c. Operational costs pre and post 1992

3. Patient Survey

a. Assess quality of medical services

b. Difficulty in obtaining necessary referrals

c. Availability of quality medical services

d. Out of pocket expenses even with the health care reform

e. Assess patient satisfaction

f. Assess delay of service due to "paper work"

g. Frequency of visits to the ER

4. Physician survey

a. Patient volume

b. Time per patient

c. Waiting time

d. Complexity of patients

e. Paper work before and after health care reform

f. Is disease prevention possible with current system

CONCLUSION

All of the above mentioned problems of our current healthcare system call for immediate action to find new solutions by reengineering proven systems, like the Arbona System. The stage of the García-Ariz model provides a short term and long term benchmarks grouped in a structured system. The new system should provide an extensive support system through the interaction of numerous full time physicians and medical residents staffed at the hospitals, permitting a broader practice of medicine and patient mix along with the opportunity of practicing evidence based medicine and research opportunities. Being a full-time physician in the new academic practice system would provide a stable paycheck, medical malpractice premium relief, along with other incentive programs that would be set in place rewarding physicians for the number of patients seen (evaluated). All of these ideas, in theory, should improve the malpractice crisis and curtail a rise in insurance premiums due to a safer environment in the practice of medicine and overall higher approval rate among the patient population due to the improved quality of care. These centers would enjoy, in our model, the best of both worlds: private and public enterprise working alongside each other. The quality of care at these systems would eventually attract the private sector (insured patients) and shift the hospitals' budget in favor of fiscal autonomy and less government contribution. The new system would provide a sense of great esteem for doctors, making them part of the solution to their regional long term medical needs.

The Arbona bottom line: a wheel that needed no to be changed or discarded, but needed to be oiled in accordance with the changing needs of society. Reform is not synonymous with total change. At times it may only mean changing a spoke. In this case of Arbona's wheel.

Addendum

What could this model contribute to the health care crisis in the USA?

1. This model is not made for doctors, lawyers or insurance companies; it is made for the people who are without coverage.

2. This model will lower the cost by decreasing defensive medicine at university government run hospitals on those who participate that will benefit to run under a malpractice cap. Would benefit also to run a pilot program for tort reform. (The last reporting data shows the cost of defensive medicine of approximately between 100 to 178 billion dollars a year overall in the U.S.7)

3. Pharmaceutical equipment companies who participate in this program must cut prices to share the burden of these services rendered. They could enjoy tax benefit deductions as an incentive for participating.

4. University government run hospitals are the ones that right now are taking the burden of the unreimbursed care of the population. Also they are on the position to receive reimbursement to cover cost and continue providing quality care. They

would benefit by increasing the educational side of having this population to treat, creating new future health professionals.

5. Registry control of this very sick population (epidemiologically has high risk of chronic illnesses), data recording and evidence based medicine.

6. There is no need to socialize medicine to solve the problem. What we need to do is improve the system of Medicaid by reengineering it. Universal health coverage is insane!

7. All of the above items will create a healthy climate for all involved. Specially, buffering the liability medico legal crisis by avoiding defective measures in these university settings. This will establish early preventive education measures based on evidence to care for this high risk population and cost control by involving the private sector in the logistic with tax incentives; i.e. pharmaceuticals and technologic advances companies which will get the incentives when they sell their equipment. Thus guaranteeing quality health care education with a continuous influx of patients that at the present the private sector does not want and can not handle financially.

8. The creation of a plan to work for all those involved such as: doctors, nurses, physician assistants, technicians, where they enjoy the respect and job security incentive of working in this structured university setting. The private sector that is interested to work under this structure will also be welcomed.

9. It does not burn any bridges; the system is already in place. The university academic settings are already partially taking care of the unreimbursed patient population right now.

10. It also gives time to continue to find new ideas to make the system better. The other system really burns a big bridge of socialized medicine forever.

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RESUMEN

Durante los años cincuenta el sistema de salud de Puerto Rico era mantenido exclusivamente por el gobierno local. El Sistema de Arbona, como se llego a conocer por el nombre de su fundador, aunque proveía a los profesionales de la salud con múltiples experiencias educativas y académicas llego a presentar grandes costos para el gobierno. Para la época de principio de los años noventa un programa piloto de privatización conocido como “La Reforma” fue implementado con la meta de proveer un sistema de cubierta de salud universal para la población medico indigente. En el presente este sistema ha dado a lugar una serie de vicisitudes con respecto a la calidad de los servicios médicos y la merma de instituciones académicas para la educación medica de la isla. En este reporte preliminar se analizara varios aspectos de ambos sistemas a través de revisión de la literatura, entrevistas a funcionarios públicos y encuestas satisfacción personal a pacientes y doctores con respecto a las condiciones de trabajo y calidad de servicios médicos en el sistema actual. El propósito final es crear un modelo de salud que demuestre ser eficiente y a tono con la identidad de la población de Puerto Rico.