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Sastre-Cifuentes, Raúl Esteban; García-Ubaque, Juan Carlos; Palencia-Sánchez,
Francisco

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Building the Universidad Nacional de Colombia Hospital: Reconciling social and academic aspects

*Construyendo el Hospital de la Universidad Nacional de Colombia: conciliando lo social y lo académico*Raúl Esteban Sastre-Cifuentes¹ • Juan Carlos García-Ubaque² • Francisco Palencia-Sánchez³

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¹ Facultad de Medicina Universidad Nacional de Colombia. Bogotá, Colombia.² Instituto de Salud Pública. Facultad de Medicina. Universidad Nacional de Colombia.³ Consultor independiente. Bogotá, Colombia.

Correspondence: Juan Carlos García-Ubaque. Carrera 45 No. 26-85, Instituto de Salud Pública, Facultad de Medicina, Universidad Nacional, Bogotá, Colombia. Telephone: +57 1 3165000. Email: jcgarciau@unal.edu.co.

| Summary |

In the process of building the National University Hospital, an analysis of the changing epidemiological profile of the population of Bogotá was undertaken, which examined the health care needs of the city, the academic needs of the university and institutional possibilities. It was made an analysis of the demographic and epidemiological profile of the population of Bogotá.

It was concluded that there were factors associated with the epidemiological transition of aging, such as a low availability of health services for the elderly and diseases related to that care. Just as in the university, the hospital needs to develop all aspects of patient care to be able to adequately respond to the needs of this demographic from an interdisciplinary perspective, ensuring quality care based on the criteria of timeliness, accessibility, relevance, sufficiency, and continuity.

A proposal is outlined concluding that the first phase of the portfolio of services that the University Hospital offers must be geared towards geriatric care and chronic illnesses, due to the aging of the general population as a result of a decline in fertility and mortality. This care would cater towards so-called permanent conditions that result in disability, or not easily reversible physiopathological conditions that require long-term care, as well as special training in secondary prevention and rehabilitation for the patient and the family.

Keywords: Health Care Epidemiology; Aging of the Population; Chronic Diseases; University Hospitals; Hospital Administration (MeSH).

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Resumen

En la construcción del hospital de la Universidad Nacional se presenta un análisis del cambio del perfil epidemiológico de la población de Bogotá, el cual se compara con las necesidades en prestación de servicios de salud de la ciudad, las necesidades académicas de la universidad y las posibilidades institucionales. Se realizó un análisis de la situación demográfica y epidemiológica de la población de Bogotá.

Se destaca que, en la ciudad, concurren fenómenos de transición epidemiológica, con una muy baja oferta de servicios de salud para adulto mayor y para atención de las patologías relacionadas con este fenómeno. De forma paralela que la Universidad, en sus procesos de formación, tiene necesidades de desarrollo en todos los campos de atención, siendo posible priorizar la respuesta a este grupo poblacional desde una perspectiva interdisciplinar, garantizando criterios de oportunidad, accesibilidad, pertinencia, suficiencia y continuidad.

Se estructura una propuesta en la se concluye que en su primera fase el portafolio de servicios del Hospital Universitario debe estar orientado a la atención del envejecimiento y

las enfermedades crónicas de la población, entendidos como el aumento de la proporción poblacional de adultos mayores, como resultado de la disminución de la fecundidad y la mortalidad y como la presencia de patologías que se caracterizan por ser permanentes, presentar algún nivel de discapacidad, evidenciar una alteración fisiopatológica escasamente reversible y requerir un periodo relativamente extenso de atención, así como niveles de entrenamiento especial del paciente y su familia con fines de prevención secundaria y rehabilitación.

Palabras clave: Epidemiología de los servicios de salud; Envejecimiento de la población; Enfermedad crónica; Hospitales universitarios; Administración hospitalaria (DeCS).

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Introduction

“The hospital should be the most important teaching tool in health care training, which involves proper allocation of hospital resources for teaching alongside patient care to allow appropriate access of services, ensuring that teaching practice is involved in all of the hospital’s activities and allows involvement. This interdisciplinary approach allows other disciplines and expertise to address the processes of wellness and illness in a deeper, more extensive way, ethically combining teaching and primary care” (1).

After the San Juan de Dios de Bogotá Hospital closed, the National University of Colombia started developing activities designed to recover the training and care center. This provided the conditions to ensure the adequate training of health professionals needed in the country, that also enabled them to achieve the academic, social and scientific goals of the country’s most important post-secondary institution (2-4).

And so, the University has taken up the challenge and is working in two directions: it will continue to search for solutions to recover the San Juan Hospital, and will also use the installations of the Santa Rosa clinic and the old Caja Nacional de Previsión.

This will be developed in two phases: the first will be to recover the existing infrastructure and undertake a structural reinforcement; the second will be the construction of a new building that better responds to the essential needs of the University.

For the first phase, progress has already been made in securing funding through the university’s development plan of the current triennium. This article aims to present reflections on the direction and profile of the institution that are desired in its design.

Demographic profile of health care in Bogotá, Cundinamarca

According to the Health and Social Welfare Ministry, the Cundinamarca-Bogotá region had a population of 10128000 in 2012, with a 9.96% increase from 2005. 48.7% are male and 51.3% are female, showing a decline in the infant population and an increase in the youth and old age categories.

It is estimated that this trend will continue for 2020, as shown in figure 1 (5).

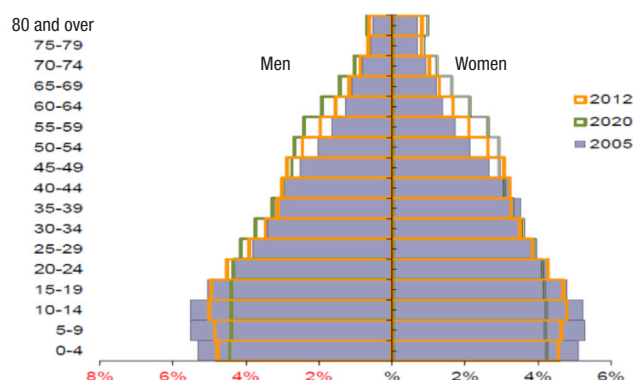


Figure 1. Population pyramid for the Bogotá, Cundinamarca region. Source: (5).

For the 2010-2015 period, the life expectancy of men in the district capital is calculated to reach 75.9 years of age, and 80.2 years of age for women, with an annual rise of 0.28 years for men and 0.21 years of women. Also, it is estimated that 91.4% of the population lives in the urban region and that 86.4% are registered in the public health care system – 21.5% to the subsidized plan, 64.4% to the contributive plan and 0.5% are special cases.

According to the same report, 22.1% of mortality in the country occurred in 2010 (50,871 cases). The principal cause was circulatory diseases, followed by all other diseases and tumors. This data reflects a similar trend in other countries, where there has been an increase in the use of ambulance services and hospitalization of elderly people, mainly due to cardiovascular disease, musculoskeletal disorders, iatrogenic effects, institutionalization and frailty associated with old age (6,7).

Although the aging process is gradual, this has a potential impact on the cost of health care, as evidenced by countries such as the United States, where per-capita health care spending in the over-65 age group is three to five times that of younger people (8). There are at least six factors in the rising cost: the proportion of elderly people in the total population, their general health condition, their use of health services, physical and intellectual activity, income, and living conditions. In countries such as Mexico, a large percentage of the population lacks adequate medical care, so the development of better hospital care programs that promote health and disease prevention are important to favorably impact the quality of life of this age group and lower health care costs (9-11).

Health care services offered in Bogotá

Table 1 summarizes the provision of health care services for adults in the city's hospitals. As indicated, the private network represents 68.5% of beds (though this figure is at 80% for intensive care, and at 78% for intermediate care) and 80.7% of operating rooms, while care for burn victims is only offered by the public network. It is also important to note that the private network does not apply to all levels of care, though empirical evidence shows that these services are concentrated at the higher complexity.

Table 1. Distribution of beds and operating rooms dedicated to adult care in Bogotá by origin and level of care, 2012.

Typology	Public 1	Public 2	Public 3	Private	Total general
Adults	90	495	1367	3835	5787
Adult intensive care		6	145	609	760
Adult intermediate care		31	58	315	404
Adult burn unit			40		40
Psychiatric care	9	17	111	384	521
Acute mental health			6	9	15
Intermediate mental health			13	50	63
Drug addiction			40	77	117
Total beds	99	549	1780	5270	7707
Total operating rooms	0	25	78	432	535

Source: (12) own calculation using capacity database from the Ministry of Health and Social Welfare on October 17th, 2012.

An important element in the provision of health services by the city is its distribution, but as indicated in figure 2, it is not homogeneous. In fact, while the city has recently expanded to the west, services remain concentrated in the eastern part of the city; geographical access creates difficulties for coverage because of the time and cost required to access specialized services.

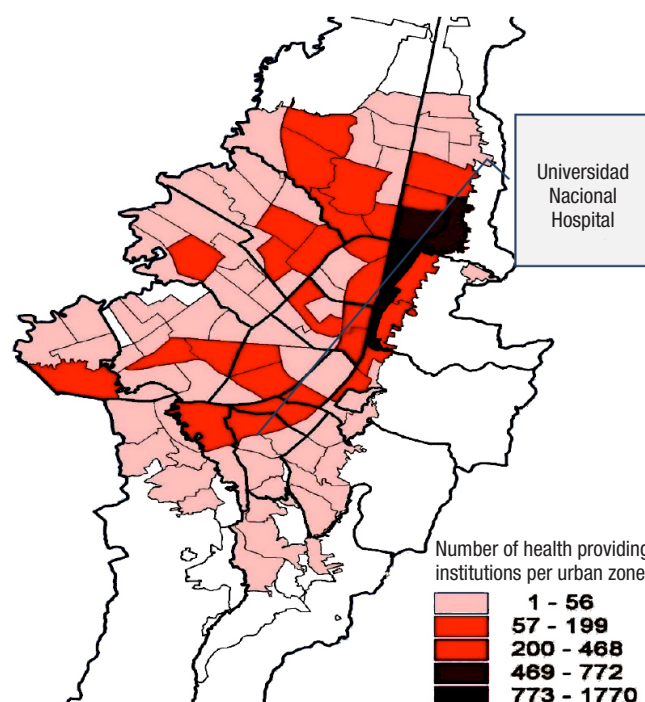


Figure 2. Distribution of health services offered in Bogotá. Source: (13).

Based on these figures, it should be noted that the number of beds and their uneven distribution does not adequately meet the requirements of the city, and has not improved in the past 14 years (14).

The academic needs of the Universidad Nacional

In the area of health sciences, it is not enough to simply teach the theory, it is essential to have a training field where students and teachers can put to use and perfect their knowledge in a “school” that turns both graduate and undergraduate students into qualified health care professionals (15).

Unfortunately, the fact that students do their internships at a wide range of institutions has yielded poor results. As shown in figure 3, there is a declining tendency in the results of medical students' final exams.

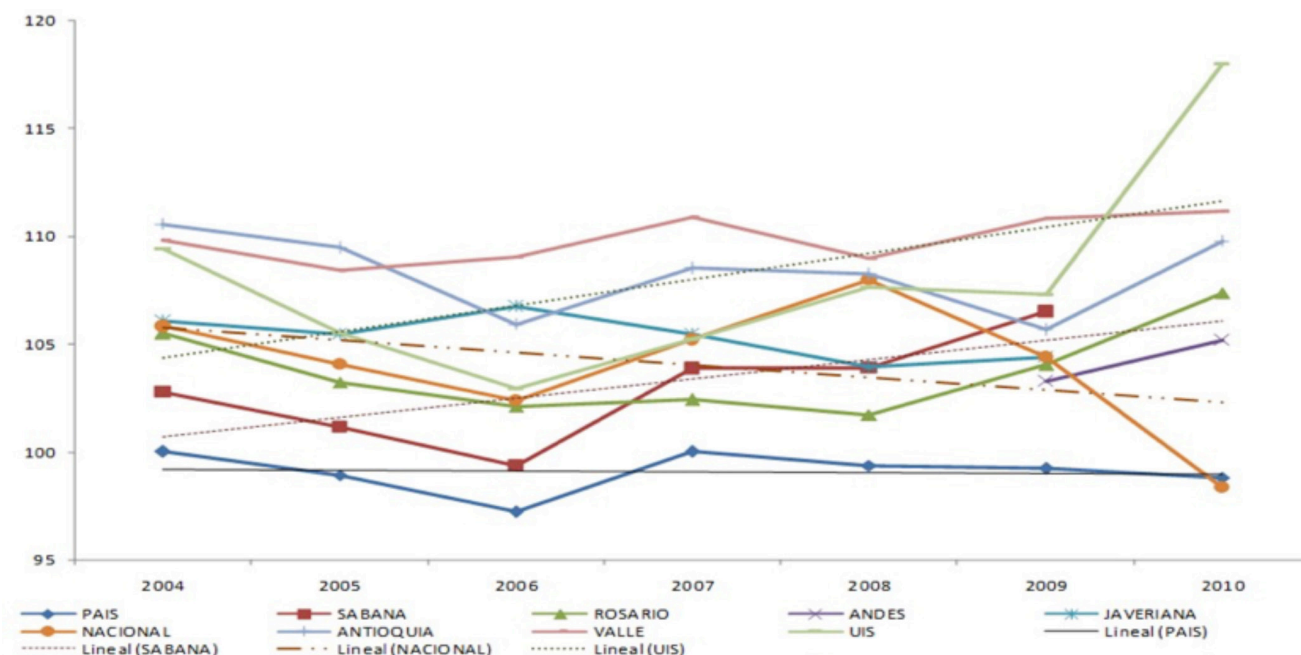


Figure 3. Comparative results ECAES-Saber Pro for Medicine, years 2004-2010. Source: (16).

The idea of the hospital as a training field can only be achieved when the university has the scientific direction of the institution at its disposal, which requires certain conditions.

The criteria, with regards to how care should be provided to individuals and the general population, should clearly correspond to the criteria discussed and taught by the academic faculties: control of processes and care procedures.

The teacher-service provider relationship is defined by the academic and research interests of the university, while also upholding the ethical and legal responsibilities of patient care. These installations provide students and teachers with a common meeting point, which they can access at any time, and as such, can undertake research as well as deliver care with the adequate resources.

At the moment the university has three faculties that specialize in health care: medicine, dentistry and nursing. The sciences, social sciences and arts faculties also provide programs directly or indirectly related to the provision and management of health care services, such as pharmacy, social work, psychology, engineering, economics, and law, whose expertise is often required by the health sector.

The Faculty of Medicine in particular offers five undergraduate programs, two PhD programs, and thirteen Masters programs. It also offers more than thirty diverse clinical specialities and subspecialties as well as three

specializations, which comprise in total around 500 teaching staff and 3000 students. This is why the hospital will provide a wide offering, from the human life cycle to the specific field of action, and offer a varying degree of complexity for the level of care in which these learning services take place.

Description of proposed services for the University Hospital

With the intention of reconciling the social needs for healthcare with the academic priorities of universities, we are proposing an institutional model focused on the patient (Figure 4), which addresses the problems involved in aging and the increase in chronic diseases. It takes an interdisciplinary approach, making use of clinics in particular, and ensures quality using the evaluation criteria of opportunity, accessibility, relevance, sufficiency, and continuity. This model also generates new knowledge which is reflected in innovations to better deal with changing social realities through the development, implementation and evaluation of public policies.

However, it is evident that to ensure an adequate quality of life for the elderly, it is not enough to simply provide hospital care, it is also important to consider a patient's entire health and the determinants that govern it, in particular, risk factors for diseases and disabilities. It is also important to consider social and family welfare. It is also important to consider social and family welfare and the patients' need for economic

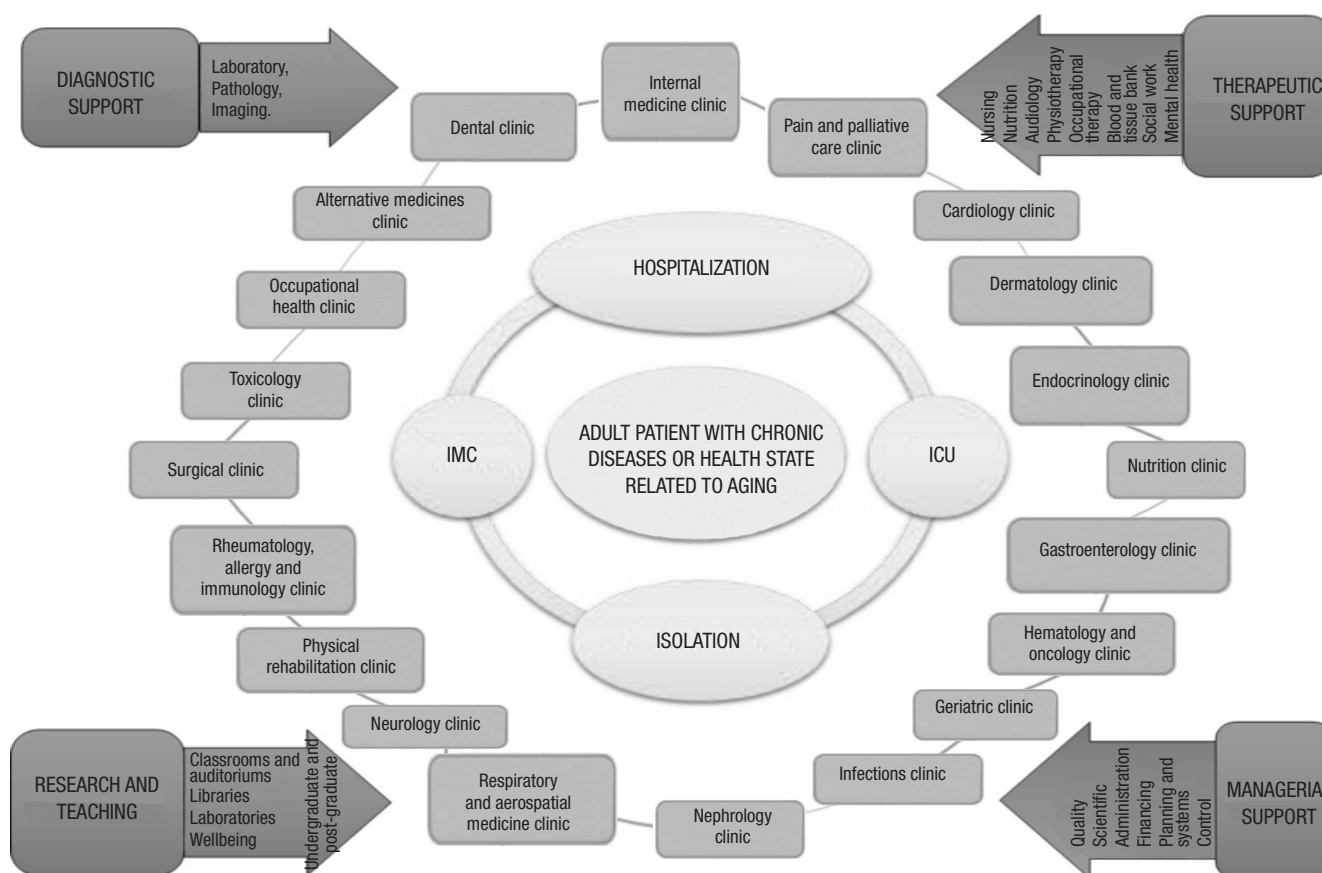


Figure 4. Functional organization proposal for the University Hospital. Source: (17).

and material security, as well as an active social life and recognition from society in various aspects of daily life (18).

Conclusions

Latin America and the Caribbean is a region of the developing world that is aging at an unprecedented rate, and an evaluation of health problems and disability shows that the elderly are aging with more functional limitations and poorer health than their peers in developed countries. Furthermore, family networks are rapidly changing and are less able to supply the missing social and institutional protection (19).

Thus, a proposal for the first phase of the University Hospital, in the Santa Rosa campus of the CAN, will be an institution that has the infrastructure, personnel and state-of-the-art technology to adequately treat chronic diseases and equip the city with the tools it requires to deal with an aging population.

It will be able to undertake research, innovation and teaching, while also creating and evaluating public policies in this field.

The hospital will have the following essential roles: chronic disease and aging research; development of scientific and technological innovation to deal with health problems related to chronic illnesses and aging; technical and scientific support for the creation, development, implementation and evaluation of public policies related to aging and chronic illnesses; the development of programs and training activities for health professionals involved in chronic illnesses and aging; and the provision of essential health services for health promotion and prevention, diagnosis, treatment and rehabilitation of chronic diseases and conditions related to aging.

Conflict of interest

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