



Access to Specialists

Implications in Puerto Rico's Development





Our Focus Today



Present an analysis of a multi-dimensional demographic phenomenon and its potential impact on Puerto Rico (PR) health and societal dynamics by 2030.



An initial attempt at understanding a complex and multidimensional issue, using a robust methodology with local data and information. This is not a final assessment of the situation but an initial data-driven effort to develop a knowledge baseline for further analysis.



To advance an evidenced understanding of the forces and potential consequences of this phenomenon.



Our invitation to you is to engage constructively with the information, avoiding value judgements or prematurely jumping to potential solutions.





Physicians : People Baseline Rates

Considered 2.6 physicians per 1,000 people as the US benchmark and 2.3 per 1,000 for physicians in active patient care. PR baseline estimates for physicians in active care stands between 1.6 - 1.8 per 1,000 people.¹



Study Limitations

Analysis centers on the number of physician specialists expected to be active by 2030, it does not comprehensively answer how many medical specialists are expected to be available to care for the future population in need of specialized care– i.e., access to care and active physician status are not directly proportional.

1. See Assumptions slide, item #1.



Assumptions

- Number of physicians of each analyzed specialty cohort that was expected to be clinically needed by 2030, assuming no major shifts in the current care delivery model in PR.
 - Calculated based on set 'target rates' for specialist per 1,000 people and future medical needs for high-impact chronic condition management by 2030. Modeled incidence per target condition and rising prevalence rates in the island.¹
 - Epidemiologic models accounted for specialists required into the future factoring adjustments for incidence trends, seasonality of medical services utilization, outmigration patterns and other population dynamics, and adjusted mortality rates in the island.



Medical Conditions considered as part of our Future Needs Assessment

- Included: type 2 diabetes mellitus (T2DM), heart failure, pediatric asthma and other prevalent respiratory ailments, immunologic conditions, migraine headache, surgical procedures (e.g., appendicitis and others), breast cancer, colorectal cancer and associated medical procedures, among other high impact diagnoses.

1. See Assumptions slide, item #10.



DRIVERS

The Specialist Retirement Wave

On average, about half of current active physicians in PR from the considered specialties are expected to retire in or before 2030, when they reach 65 years of age.

FINDING #1

By 2030, projections indicate that the number of active medical specialists may be far from optimal to address the care needs of our patient population due mainly to the rate at which specialists are expected to exit the healthcare system vs. the rate at which they are expected to enter the system.

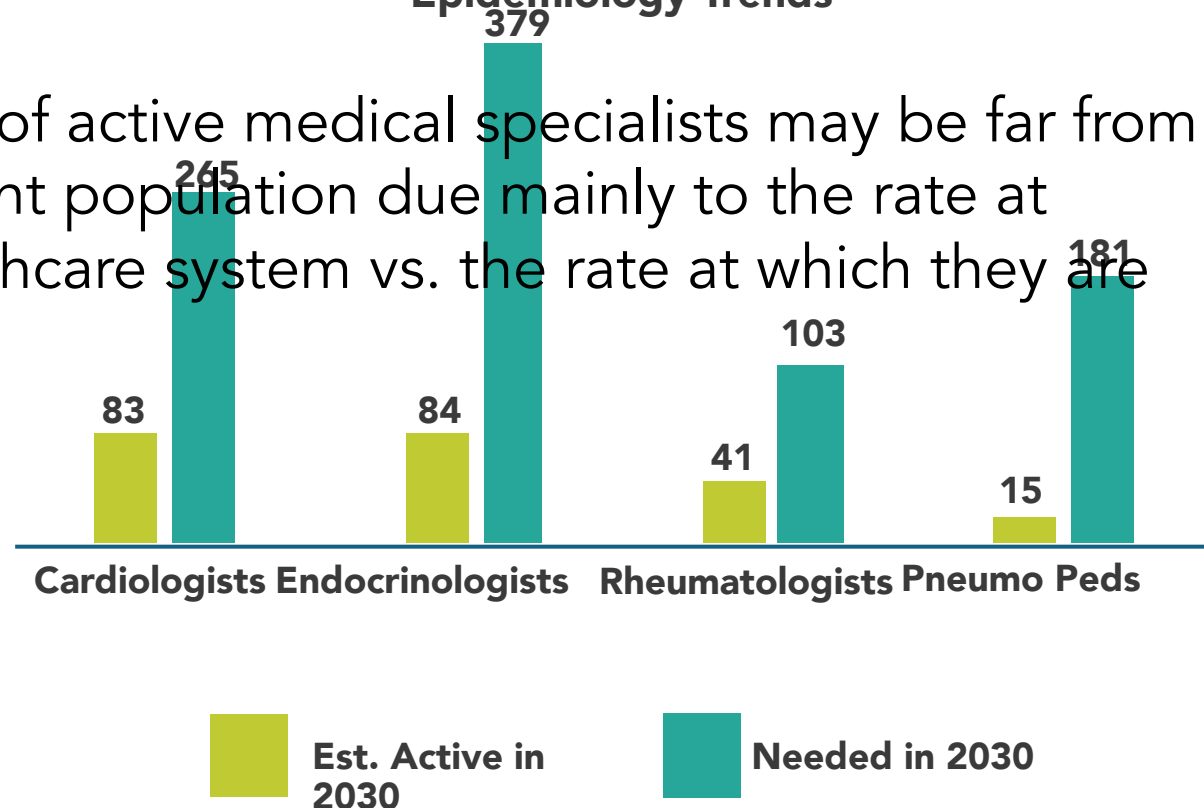
Limited capacity of Graduate Medical Education Training Programs

The current output of specialists from medical residency and fellowship training programs in PR is insufficient to cover the expected care needs of the aging population and the increasing incidence of high impact diagnosis in the island.

Outmigration is a contributing factor but it is not a key driver

Our analysis suggests that even if most physicians who complete graduate medical training stay and open their practices in the island, and do not migrate at any point in their careers, PR would still have fewer active specialists than needed in several relevant disease areas.

Estimate of Specialists Expected to be Active in 2030 vs the Optimal Number Needed Given Population Epidemiology Trends³



3. See Assumptions slide, items #3 - #8.



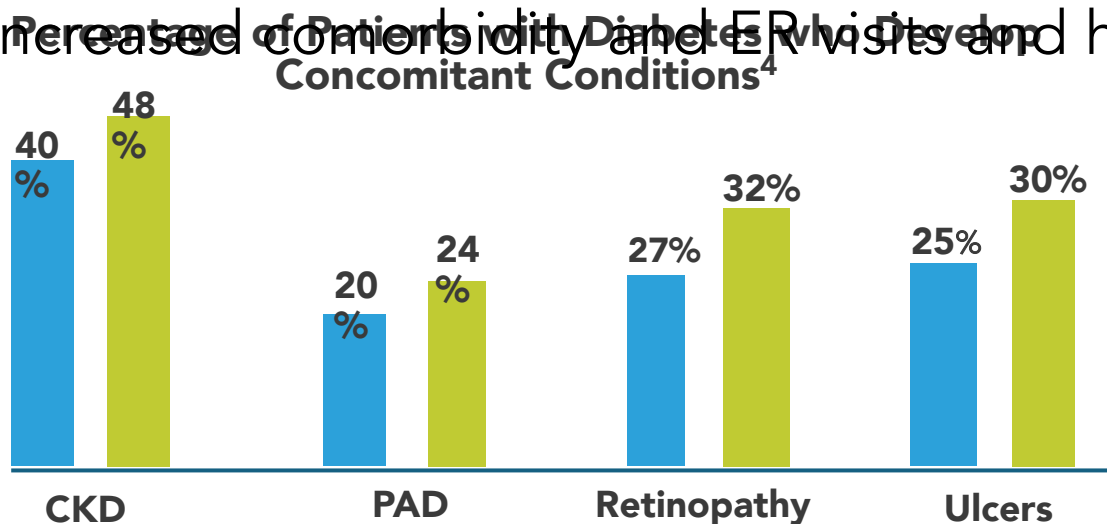
DRIVERS

- Access to Care (Timeliness)
- Quality of Care

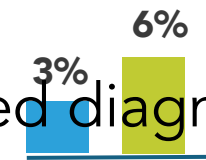
FINDING #2

Management of Complications

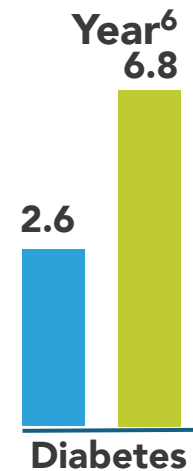
By 2030, the persistent demographic shift in PR may lead to delayed diagnoses and treatment, which in turn may result in diminished health outcomes, accompanied by increased comorbidity and ER visits and higher hospitalization rates and duration.



Percentage of Patients with Hospital Stays or Emergency Room Visits⁵



Average Number of Hospitalizations or Emergency Room Visits per Patient per Year⁶



Today 2030

4. See Additional References slide, item #1.

5. See Additional References slide, item #2.

6. Ibid.

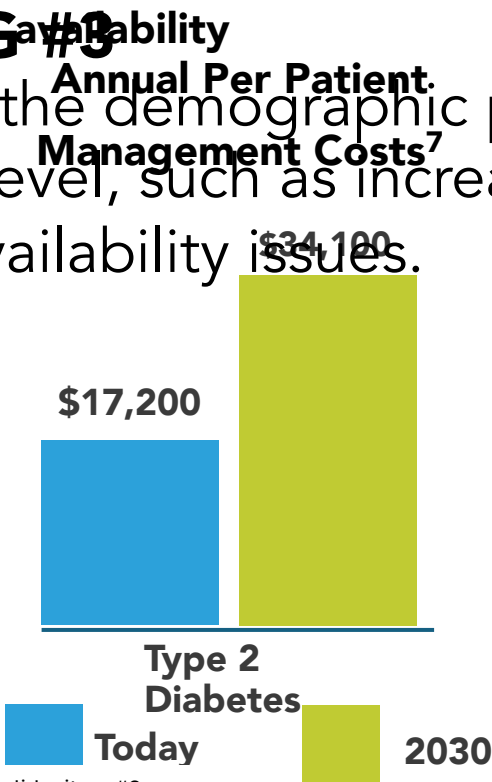


DRIVERS

- Increased per capita patient cost
- Loss of productivity

FINDING #3

By 2030, the demographic phenomenon may generate adverse economic implications at a macro level, such as increased per capita patient care costs, loss of productivity and worker availability issues.



The lost income of type 2 diabetes patients who miss days of work due to their uncontrolled disease state amounts in excess of \$160 million per year for patients who become disabled at approximately \$900 million per year.⁸



If absenteeism and disability rates were to increase by just one percentage point due to the demographic phenomenon, loss of productivity for missed days of work would rise to around **\$6 million per year** and for disability to over **\$40 million per year**.⁹

4. See Additional References slide, item #3.

5. See Additional References slide, item #4.

6. Ibid.



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