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Strategies for screening and early diagnosis of neoplasms.

Dermatological procedures in primary and secondary care: an analysis.
Integrative approach to clinical problem-solving and operational management in
Unified Health System

SCREENING STRATEGIES AND EARLY DIAGNOSIS OF DERMATOLOGICAL NEOPLASMS IN PRIMARY AND SECONDARY CARE: AN INTEGRATIVE ANALYSIS OF CLINICAL RESOLVABILITY AND OPERATIONAL MANAGEMENT IN THE UNIFIED HEALTH SYSTEM

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SUMMARY

This scientific article proposes an exhaustive and multidimensional analysis of the strategic importance of general medical practice integrated with outpatient dermatological intervention in the context of Brazilian public health. Through a systematic literature review and critical analysis of clinical protocols in effect up to 2021, it investigates the role of the Primary Health Care (PHC) physician as a key agent in the early detection of skin conditions, with an emphasis on malignant neoplasms (carcinomas and melanomas). The study explores the vital interface between preventive medicine, performed in Basic Health Units, and medium-complexity interventional medicine, performed in strategic philanthropic hospitals (Santa Casas), demonstrating how local resolution through minor dermatological surgeries positively impacts morbidity and mortality and the financial sustainability of the system. It innovatively discusses the relevance of physical fitness tests in Traffic Medicine as underutilized opportunities for opportunistic screening of chronic and dermatological pathologies in economically active populations. It is concluded that technical excellence, combined with a humanistic, longitudinal, and health surveillance approach, constitutes the determining factor for the effectiveness of care in municipal networks.

Keywords: Dermatology in Primary Care, Dermatological Surgery, Public Health, Early Diagnosis, Traffic Medicine.

ABSTRACT

This scientific paper proposes an exhaustive and multidimensional analysis of the strategic importance of general clinical practice integrated with ambulatory dermatological intervention within the context of Brazilian public health. Through a systematic literature review and critical analysis of clinical protocols active up to 2021, it investigates the role of the Primary Health Care (PHC) physician as the fundamental agent in the early detection of skin conditions, with emphasis

on malignant neoplasms (carcinomas and melanomas). The study explores the vital interface between preventive medicine, performed in Basic Health Units, and medium-complexity interventional medicine, executed in strategic philanthropic hospitals (Santa Casas), demonstrating how local resolvability through minor dermatological surgeries positively impacts morbidity, mortality, and the financial sustainability of the system. It discusses, in an innovative manner, the relevance of physical aptitude exams in Traffic Medicine as underutilized opportunities for opportunistic screening of chronic and dermatological pathologies in economically active populations. It concludes that technical excellence, combined with a humanistic, longitudinal, and health surveillance view, constitutes the determining vector for the efficacy of care in municipal networks.

Keywords: Dermatology in Primary Care, Dermatological Surgery, Public Health, Early Diagnosis, Traffic Medicine.

1. INTRODUCTION AND EPIDEMIOLOGICAL CONTEXT

The demographic and epidemiological transition experienced by Brazil in recent decades has imposed extremely complex management and care challenges on the Unified Health System (SUS), characterized by the prevalent and progressive increase in Non-Communicable Chronic Diseases (NCDs) and, notably, oncological dermatological conditions. Skin cancer, in its non-melanoma variants (basal cell and squamous cell carcinoma) and melanoma, remains statistically the most prevalent neoplasm in the country, requiring a structured response that transcends late tertiary treatment and is firmly rooted in Primary Health Care (PHC). Classical and robust medical training, such as that observed in institutions of excellence, is based on the non-negotiable premise that the general practitioner must possess a holistic vision and a refined propaedeutic acuity, capable of identifying, even in incipient stages, subtle skin lesions that could evolve into conditions of high morbidity and high costs. In this challenging scenario, the physician's role at the front line of the system, whether in Basic Health Units in small and medium-sized municipalities or in specialty clinics, becomes the deciding factor between a definitive cure and the debilitating chronicity of the disease.

Municipal healthcare management faces the logistical and financial challenge of ensuring equitable access to specialized treatments within a hierarchical and regionalized system, where the scarcity of dermatologists in remote areas is a reality. The physician who competently navigates between general diagnostic practice and the execution of surgical dermatological procedures, such as excisions and biopsies, represents an invaluable asset for the decentralization of care and the efficiency of the system. By performing medium-complexity procedures within the municipality itself, often in historical institutions such as the Santa Casa de Misericórdia (charitable hospitals), the need for Out-of-Domicile Treatment is drastically reduced.

(TFD), alleviating patient suffering from exhausting travel and optimizing public financial resources. This local resolution is a key indicator of quality of care that reflects the necessary technical integration between the clinical diagnosis performed at the point of entry and the surgical therapy performed in a safe and controlled hospital environment.

Continuity of care, a fundamental doctrinal principle of the Brazilian Unified Health System (SUS), is embodied in the figure of the medical professional who accompanies the patient from the first nonspecific complaint at the primary care unit to the postoperative surgical period and long-term oncological follow-up. This longitudinal bond establishes a relationship of trust that is therapeutic *per se,* increasing adherence to treatments and preventive photoprotection measures. The ability to perform differential diagnosis between common dermatoses (such as eczema and mycoses) and malignant lesions requires not only up-to-date theoretical knowledge, but also continuous clinical practice and a keen "clinical eye" honed by constant exposure to the nosological diversity of the Brazilian population. The general practitioner with an interventional profile therefore acts as a qualified filter, preventing benign cases from overloading high-complexity centers and ensuring that malignant cases have absolute priority in the regulatory flow.

Beyond direct and curative care, contemporary medical practice encompasses crucial spheres of expert assessment and forensic medicine, such as those observed in physical and mental fitness examinations for drivers at the Departments of Motor Vehicles (Detran). Although often underestimated in its clinical potential by traditional literature, this assessment often constitutes the only formal medical contact that an apparently healthy adult individual has over years or decades. The expert physician, equipped with a preventive and public health perspective, can and should use this regulatory moment to identify visible signs of systemic or dermatological diseases, acting as a high-impact opportunistic screening agent. Undiagnosed hypertension, visual disturbances that impact road safety, and skin lesions in sun-exposed areas—common in professional drivers—can be detected early in this setting.

This study therefore seeks to analyze the strategic convergence of these multiple areas of professional activity—general practice, outpatient dermatological surgery, and traffic medicine—from the perspective of public health and resource management. The central hypothesis is that the technical qualification of the general practitioner in dermatological procedures and their integrated network performance are determining factors for the early diagnosis and effective treatment of skin neoplasms. We will investigate the operational barriers, referral protocols, and outpatient surgical techniques that, when well applied, transform the local health reality. Medicine, understood here as a priesthood of service and science, demands constant updating and an unwavering ethical stance, pillars that support the practice of clinical excellence from academic training to the professional maturity of the physician managing care.

The relevance of this study lies in proposing a model of medical practice that maximizes existing infrastructure in Brazil, valuing medical human capital as the primary health technology. In a country of continental dimensions, relying exclusively on super-specialists concentrated in capital cities is a flawed strategy; strengthening dermatological and surgical competence in primary and secondary care is the logical response to universal access. We will analyze how early intervention not only saves lives by preventing melanoma metastasis but also saves millions of reais for public coffers by avoiding mutilating surgeries, prolonged hospitalizations, and complex chemotherapy treatments, proving that good medicine is, invariably, the most economical and efficient medicine.

Finally, the introduction of this topic sets the stage for an in-depth discussion on the social responsibility of physicians. Professionals working at the interface between clinical practice, surgery, and forensics possess a privileged power of observation over the health of the population. They witness the consequences of occupational sun exposure, the difficulties in accessing medications, and the impact of chronic diseases on work capacity. Transforming this observation into data, diagnoses, and effective treatments is the core of excellent medical practice, which will be detailed in subsequent sections of this article, providing a roadmap for the implementation of more assertive and evidence-based health policies.

2. PRIMARY CARE AND ACTIVE SCREENING FOR NEOPLASMS

The epidemiology of dermatological diseases in Brazil reveals a worrying scenario where chronic and occupational sun exposure, typical of a tropical country with a strong agrarian economic base, acts as the main cumulative environmental carcinogen. In municipalities in the interior of the states of São Paulo and Paraná, where the economy often revolves around agriculture, livestock farming, and open-air industry, the population is at high epidemiological risk for the development of severe photodermatoses and skin cancer. Therefore, physicians working in the municipal health network play an indispensable and active role in epidemiological surveillar Unlike a specialist who receives the patient with a specific complaint already identified, a general practitioner has the unique opportunity to examine the patient holistically during consultations for other clinical reasons—such as managing hypertension, diabetes, or child care.

This thorough and meticulous physical examination, which includes the intentional inspection of the skin in exposed and unexposed areas, is the most powerful and cost-effective screening tool *available* in the public health system. It allows for the detection of pre-malignant lesions, such as actinic keratoses, and carcinomas in early stages, before their transformation into invasive or metastatic lesions. The technical training of primary care physicians to recognize basic dermatoscopic patterns and clinical signs of malignancy—applying methodologies such as the ABCDE rule (Asymmetry, Borders, Color, Diameter, and Evolution) for melanomas—is fundamental to avoiding dangerous underdiagnosis or unnecessary referrals that only generate queues and anxiety. The medical literature reviewed up to 2021 consistently emphasizes this.

The diagnostic sensitivity of a general practitioner increases exponentially with accumulated clinical experience and continuing education.

In healthcare units that function as the gateway to the system, qualified triage is the mechanism that separates benign and self-limiting conditions from those requiring immediate and priority surgical intervention. This qualified filter is essential for the financial and logistical sustainability of the Brazilian Unified Health System (SUS), ensuring that scarce high-complexity resources are strictly reserved for cases that truly need them, while the vast majority of dermatological demands are resolved within the community or at the local support hospital. The concept of "longitudinality" in care, one of the essential attributes of Primary Care defined by Barbara Starfield, allows the physician to monitor the dynamic evolution of skin lesions over time, comparing the current state with previous records and observing subtle changes that might go unnoticed in one-off consultations.

A hypertensive or diabetic patient who visits the primary care unit monthly for prescription renewal and vital sign checks offers the general practitioner twelve annual opportunities for preventive and educational intervention. In this privileged context, the physician's role goes far beyond simple pharmacological prescription; it involves a robust health education process, guiding on the importance of daily photoprotection, performing self-examination of the skin, and changing harmful lifestyle habits. The doctor-patient relationship, solidly built over years of interaction in smaller communities, greatly favors adherence to preventive guidelines. The physician becomes a reference of technical authority and personal trust, which is crucial to convincing a rural worker, for example, to adopt sun protection measures (wearing hats, long-sleeved shirts, sunscreen) that may be culturally neglected or seen as unnecessary.

The seamless integration between primary and secondary care (specialty outpatient clinics and minor surgeries) should function like a system of interconnected vessels, free from bureaucratic obstructions. When a physician at the Primary Health Care Unit (PHCU) identifies a suspicious lesion, the speed of referral for diagnostic excision and biopsy is the most important prognostic factor for patient survival. In municipalities where the same professional works at the primary care level and in the hospital setting—as frequently occurs in management models where physicians from the public network also make up the clinical staff of the Santa Casa hospitals—integration becomes organic, immediate, and highly efficient. The bureaucracy of blind referrals is eliminated, since the professional who suspected the lesion is the same, -, that or a close colleague on the team, as the one who will perform the surgical treatment.

Public health campaigns focused on dermatology, such as "Orange December," achieve far greater reach and effectiveness when led by doctors who are already integrated into the community and know the population. Mobilization for skin cancer prevention drives should not be an isolated or media-driven event, but the culmination of continuous work.

and silent awareness campaigns conducted daily in municipal clinics. The meticulous registration and mandatory reporting of confirmed skin cancer cases are also inalienable medical responsibilities that feed national databases (such as INCA), allowing for the design of more assertive public policies and the correct allocation of oncology resources.

Finally, epidemiology in primary care demands a careful and compassionate approach to vulnerable and often invisible populations. Bedridden elderly individuals, patients with multiple comorbidities, people with disabilities, and immunocompromised individuals present a specific dermatological profile and a significantly higher risk for the development of ulcers and tumors. Home visits and continued care allow for the early identification of pressure ulcers, chronic vascular lesions, and opportunistic infections that require complex management. The physician working in the municipal network must, therefore, be a true manager of care, coordinating the nursing team and community health workers to ensure that no patient is left without assistance, applying the principle of equity in the daily practice of public medicine.

3. The Surgical Interface in Charitable Hospitals: Efficiency and Cost-EFFECTIVENESS

The Santa Casas de Misericórdia (Holy Houses of Mercy) historically and strategically represent the backbone of hospital care in the interior of Brazil, absorbing the demand for medium-complexity care generated by primary care and serving as a vital link in the regional health network. For general practitioners with a surgical profile who work in both the primary care network and the Santa Casa hospital environment, continuity of care is facilitated by an infrastructure that allows for the safe performance of diagnostic and therapeutic procedures. Outpatient dermatological surgery, performed in these local referral centers, is a classic example of a highly cost-effective procedure that prevents the unnecessary overload of tertiary hospitals in large urban centers, which should be focused on high-complexity cases. The technical capacity to perform incisional and excisional biopsies, electrocoagulations, cryosurgeries, and complete excisions locally democratizes access to quality specialized healthcare.

Surgical techniques applied to dermatology require precise anatomical knowledge of superficial and deep structures, as well as mastery of the pathophysiology of wound healing and tissue repair. The physician must plan the excision of the tumor lesion considering not only oncological cure (obtaining disease-free margins), but also the functional and aesthetic outcome, essential for the patient's quality of life and self-esteem. In anatomically sensitive and visible regions such as the face, neck, and hands, knowledge of skin tension lines (Langer's lines) and the ability to perform rotation/advancement flaps and skin grafts are competencies that distinguish excellent care. Working at Santa Casa allows physicians to have access to an environment with rigorous infection control, support from a qualified nursing team, and appropriate materials.

The management of non-melanoma skin cancers, such as Basal Cell Carcinoma (BCC) and Squamous Cell Carcinoma (SCC), is primarily surgical and curative in their early stages.
Early identification in primary care, followed by prompt surgical removal at Santa Casa hospitals, constitutes the international "gold standard" of treatment for these pathologies. Bureaucratic delays in this process can lead to the development of advanced and infiltrative lesions, requiring mutilating surgeries, complex reconstructions, or adjuvant radiotherapy, dramatically increasing the human cost for the patient and the financial cost for the healthcare system.
The physician who masters this comprehensive care approach acts as a guardian of the patient's physical integrity, preventing irreversible sequelae.

Beyond technical execution, the correct and protocolled submission of biological material for anatomopathological analysis and the appropriate clinical interpretation of the subsequent histopathological report are crucial steps that define the need for surgical margin expansion or observational clinical follow-up. Medical ethics and professionalism permeate all actions within a philanthropic institution like Santa Casa, which primarily serves patients of the Brazilian public health system (SUS). Caring for patients in situations of social vulnerability demands from the physician an attitude of acceptance, empathy, and solidarity—values that are pillars of humanistic medical training. Performing dermatological surgeries on these patients is not merely an isolated technical act, but an act of restoring citizenship and dignity.

Efficient management of material and human resources within the outpatient surgical center is another managerial skill developed by physicians working in this challenging setting. Optimizing the use of supplies such as suture threads, local anesthetics, and operating room time is necessary to ensure the financial sustainability of the philanthropic institution, which frequently operates with restricted budgets and outdated reimbursement schedules. Operational efficiency, sought without compromising technical quality or safety, is a constant challenge that demands leadership and commitment from the medical team. The physician acts as a natural leader and process manager, guiding the nursing team in pre- and post-operative care, essential to prevent complications such as surgical site infections.

Interconsultation and discussion of complex cases with other specialists at Santa Casa (such as general surgeons, plastic surgeons, and pathologists) or via telemedicine tools enrich clinical practice and ensure that the patient receives the best available evidence-based treatment.
In cases of advanced melanomas or rare and aggressive tumors, the local physician is responsible for initial stabilization, histopathological diagnosis, and responsible and regulated referral to high-complexity oncology centers (UNACONs/CACONs), remaining the local point of contact for shared follow-up and family support. This integration into a hierarchical network is fundamental so that the patient does not feel abandoned in the bureaucratic labyrinth of the healthcare system.

In conclusion, this section shows that medical practice in the Santa Casa de Misericórdia hospitals, specifically in the area of surgical and outpatient dermatology, is an irreplaceable and strategic component of the Brazilian public health network. It fills the existing gap in care between basic consultations at primary health care units and complex tertiary hospitalization, resolving the vast majority of the population's dermatological needs quickly and locally. The physician's dedication to this institution reflects a profound commitment to community health and to maintaining a historical legacy of care that, for centuries, has served the most needy with technical excellence and human compassion.

4. Traffic Medicine: An Innovative Paradigm for Opportunistic Tracking

Traffic medicine, often associated in popular and professional imagination only with the bureaucratic and regulatory aspects of obtaining a National Driver's License (CNH), has a robust, preventive, and still underexplored public health dimension. The physical and mental fitness examination constitutes, for a vast portion of the economically active population—
Especially for men of working age, this is the only time for a mandatory and formal medical evaluation every five or ten years. The medical expert at the Department of Motor Vehicles (Detran), when conducting this evaluation, has a unique and strategic opportunity to perform what the scientific literature calls "opportunistic screening" of latent and undiagnosed health conditions. Traffic legislation requires the evaluation of cardiovascular, neurological, and ophthalmological systems, but the trained clinical eye of a physician with a holistic vision is not limited to the bureaucratic checklist; it observes the patient as a whole biopsychosocial being.

In a specifically dermatological context, the forensic physical examination, which requires the assessment of mobility and strength, naturally exposes areas of the body frequently neglected in self-examination, such as the face, cervical region, neck, and upper limbs—zones of very high cumulative sun exposure and, consequently, predisposed to the development of skin cancer. Professional drivers (truck drivers, taxi drivers, ride-hailing drivers, agricultural and road machinery operators), who spend long daily hours exposed to ultraviolet radiation (UVA/UVB) through vehicle windows (which often do not adequately filter UVA), constitute a very high occupational risk group for photodamage, premature aging, and skin neoplasms.

The medical expert, upon identifying a suspicious lesion (such as a non-healing wound, a pearly nodule, or an irregular spot) during the visual inspection of the candidate, performs an invaluable public health intervention by advising the driver to seek immediate specialized medical assistance. This guidance, coming from a medical authority invested with state power at a time of official evaluation, has a psychological weight and an adherence rate far superior to informal advice. The expert act thus transforms into an act of qualified oncological screening. Furthermore, a rigorous ophthalmological and auditory evaluation is also necessary.

The test performed during the traffic examination serves as a secondary screening for systemic degenerative and metabolic diseases that may have repercussions on driving.

Vascular changes detected during a fundus examination may suggest severe undiagnosed or poorly controlled diabetic or hypertensive retinopathy; the presence of xanthelasma (fatty deposits) on the eyelids may be a cutaneous indicator of severe familial dyslipidemias with a high cardiovascular risk. The examining physician thus acts as an advanced sentinel of the healthcare system, identifying systemic signs that can compromise not only road safety (due to the increased risk of sudden illness while driving), but also the individual's life and longevity in the long term. The intelligent integration of these expert findings with guidance for follow-up within the primary healthcare network completes the virtuous cycle of primary and secondary prevention.

Mental and neurological health, which are mandatory assessments in the context of driving fitness, also touch upon important dermatological aspects. Conditions such as chronic stress, anxiety disorders, substance abuse, or untreated psychiatric pathologies can have visible skin manifestations, such as psychogenic excoriations, trichotillomania (hair pulling), severe onychophagia, or exacerbation of psoriasis and seborrheic dermatitis. An attentive and sensitive physician perceives these indirect signs of psychological distress on the candidate's skin and can perform brief interventions, counseling, or referrals that go beyond mere driving fitness, contributing to the overall health and well-being of the driver and their family.

The ethical and social responsibility of a traffic physician is immense and complex. They must balance, with wisdom and technical rigor, the individual right to drive and the freedom of movement with the collective safety of the society that shares public roads. When detecting a medical condition that temporarily or permanently disables a driver, the physician performs an act of protection for the life of the driver and others. Similarly, when approving a driver, they formally attest that the individual possesses the physiological and cognitive conditions to operate a potentially lethal machine. The technical competence to discern between a compensable physical limitation and an unacceptable risk is based on a deep knowledge of human physiology, medical pathology, and the updated guidelines of the Brazilian Association of Traffic Medicine (ABRAMET).

The technological modernization of state traffic systems, with the implementation of electronic medical records and the integration of intersectoral data, allows us to envision a future where there will be longitudinal monitoring of the health conditions of the driver population.
Anonymized epidemiological data generated from these millions of annual examinations can support robust public policies for occupational health and road safety. The medical expert is, therefore, a first-rate generator of public health data. Their rigorous work directly contributes to the reduction of traffic accidents, which are one of the main causes of mortality and morbidity in the country, impacting the costs of the SUS (Brazilian Public Health System) related to trauma and rehabilitation.

In short, Traffic Medicine, when practiced with excellence, is a vital intersection specialty for national preventive health.

5. Clinical Management of Chronic Diseases: The Skin as a Systemic Signaling Carrier

The clinical management of chronic non-communicable diseases, such as systemic arterial hypertension (SAH), type 2 diabetes mellitus (DM), and dyslipidemias, constitutes the operational and care-related core of medical practice in Primary Health Care. Medical experience accumulated in municipal health networks in the interior of Brazil reveals that success in the longitudinal control of these pathologies depends less on the availability of cutting-edge diagnostic technologies and much more on efficient, empathetic, and humanized clinical management. The chronically ill patient, often elderly and on multiple medications, requires close and continuous monitoring, where the trust established in the attending physician and easy access to health services are the determining factors for long-term therapeutic adherence.

Early identification of lesions in target organs is one of the main goals of monitoring chronic patients—and here we include the skin as a vital organ signaling decompensated systemic diseases. Signs such as acanthosis nigricans (an indicator of insulin resistance), diabetic dermopathy, necrobiosis lipoidica, venous or arterial stasis ulcers, and recurrent fungal infections are "red flags" that the skin offers to the attentive general practitioner.
The ability to recognize and treat these skin manifestations, while simultaneously adjusting the underlying systemic treatment (glycemic, blood pressure, or lipid control), is the essence of comprehensive clinical medicine. In this context, the skin is not an inert envelope, but a visible biological monitor of the patient's internal health.

The rational and evidence-based request for complementary tests and the critical interpretation of laboratory results are essential skills to avoid wasting limited public resources and iatrogenic harm (harm caused by treatment). Well-established clinical protocols from the Ministry of Health and Specialty Societies guide practice, but applying these cold protocols to the complex and individual reality of each patient requires ethical clinical discernment, known philosophically as *phronesis* (practical wisdom). The physician must assess not only numerical levels of glucose or blood pressure, but also the social context, the patient's cognitive capacity, the available family support, and the economic viability of the proposed treatment.

Referral to specialist physicians and the return of the patient to primary care with guidance (counter-referral) unfortunately constitute one of the biggest logistical and communication bottlenecks in the Brazilian Unified Health System (SUS). Frequently, clinical information is lost between levels of care, hindering continuity of care. A general practitioner with broader knowledge and additional skills—for example, in clinical and surgical dermatology—can resolve these issues.

Within the unit itself, cases that would otherwise enter the immense state regulatory queue, waiting months or years for a simple specialist consultation, are handled. This prompt resolution not only decongests the tertiary system but also offers dignity and immediate treatment to the patient.

The routine performance of preventive *check-ups* and programmatic health actions, such as screening for cervical cancer (Pap smear), breast cancer (mammography), and prostate cancer, is integrated into the routine of physicians in the family health strategy. The systematic incorporation of skin examinations into these preventive routines is a zero-cost measure with a very high epidemiological impact. Health education conducted during these consultations empowers the patient for self-care and autonomy. The identification of modifiable behavioral risk factors, such as smoking, alcoholism, sedentary lifestyle, and unprotected sun exposure, allows for brief and motivational interventions that can drastically alter the natural course of chronic and neoplastic diseases.

Polypharmacy and dangerous drug interactions are constant challenges in geriatric and chronic care practice. The general practitioner must act as the "conductor" of prescriptions, periodically reviewing all medications in use (medication reconciliation), deprescribing unnecessary or redundant drugs, and actively monitoring for the emergence of adverse effects—many of which manifest dermatologically as drug eruptions, rashes, itching, or photosensitivity. Pharmacological surveillance is an integral and inseparable part of patient safety in primary care. Effective and proactive clinical management has been shown to reduce hospitalizations for Primary Care Sensitive Conditions (PCSC), one of the most important quality indicators of a public health system.

In conclusion, managing chronically ill patients in the public healthcare system is a highly complex intellectual and human endeavor, demanding multidisciplinary technical competence, assertive communication skills, and professional resilience. Physicians working on the front lines face daily structural limitations and resource scarcity, but overcome these through clinical dedication, creativity, and unwavering commitment to the community they serve. The integration of knowledge from various medical fields (cardiology, endocrinology, dermatology), combined with practical experience accumulated over years of public service, forges a well-rounded professional capable of making a real difference in people's lives and in the macroeconomic health indicators of the Brazilian population.

6. CONCLUSION

The in-depth and integrated analysis of medical practice presented throughout this scientific study reaffirms, based on theoretical and practical evidence, the irreplaceable centrality of the physician with solid training, a humanist approach, and a generalist-interventionist profile in maintaining and ensuring the sustainability of the Brazilian Unified Health System (SUS). Medicine practiced at the strategic interface between Primary Health Care, Traffic Medicine, and medium-complexity hospital and outpatient care—

exemplified by the synergistic action in municipal networks and Santa Casas de Misericórdia (charitable hospitals) — This constitutes the most efficient, resilient, and economical model of care for the vast majority of the health needs of the Brazilian population. The capacity of a health system to diagnose early, treat locally, and provide longitudinal follow-up for clinical and surgical pathologies within the patient's own territory is a powerful vector for humanization, citizenship, and state economic efficiency.

The emphasis given in this study to Clinical Dermatology and outpatient Dermatological Surgery clearly demonstrates how technical specialization, when democratized and integrated into a public health vision, expands access and reduces regional health inequities. Early diagnosis of skin neoplasms (melanomas and carcinomas), performed by a physician who is physically and culturally close to the patient, who knows their occupational reality, their environmental risks, and their social context, is demonstrably the most effective strategy for reducing mortality from skin cancer and for decreasing functional and aesthetic sequelae. The refined surgical technique, applied in local philanthropic hospitals, ensures that curative treatment is performed safely, quickly, and with high quality, eliminating the physical and emotional distress of traveling to large, overcrowded urban centers.

The experience analyzed in the field of Traffic Medicine adds an innovative layer of health surveillance and injury prevention, intelligently connecting individual fitness assessment to collective safety and occupational health. The medical expert, by transcending the bureaucratic role, acts as a true agent of the state and public health, using the mandatory legal examination as a golden opportunity for the opportunistic screening of chronic and dermatological conditions frequently neglected by the economically active male population. This expanded and preventive vision of medical expertise values the medical act, contributes to the reduction of violence and accidents in traffic, and actively promotes worker health, generating vital epidemiological data for state planning.

The clinical management of chronic diseases and frontline work in public health demand, above any technical competence, an unwavering ethical, moral, and social commitment. Excellent medical training, initiated in rigorous academic institutions and continuously improved through daily practice and continuing education, provides the indispensable foundation for this complex role. Addressing the contemporary challenges of the Brazilian Unified Health System (SUS) — such as population aging and epidemiological transition — requires leading professionals who combine the best available scientific evidence with the human sensitivity necessary to empathize with the suffering of others, capable of adapting global protocols to the restricted local reality and tirelessly advocating for the best interests of vulnerable patients.

The fluid and intelligent integration between the various spheres of medical practice addressed—the primary care clinic, the surgical center of the Santa Casa hospital, and the examination room of the Department of Transportation—creates a robust social protection network around the citizen. The doctor who has the

The ability and opportunity to move through these different institutional spaces provides a privileged and systemic view of the gaps and potential of the health system. This holistic view is fundamental for proposing improvements in work processes, in the management of municipal health, and in the formulation of public policies that are truly effective and centered on the real needs of people, and not just on cold production statistics.

The future of Brazilian medicine and the sustainability of the SUS (Unified Health System) crucially depend on valuing and multiplying this hybrid professional profile: technically competent in procedures, effective in clinical practice, and deeply rooted in the social reality of their patients. Digital technology, telemedicine, and artificial intelligence are important supporting tools, but they will never replace the careful anamnesis, the detailed physical examination, the therapeutic touch, and the sharp clinical reasoning of a committed physician. Medicine is, ultimately, the human encounter between fragile trust and a prepared technical awareness, and preserving this encounter is the duty of the entire health system.

In conclusion, the professional trajectory outlined and the strategies discussed in this article exemplify the practical and successful application of the constitutional principles of comprehensiveness, universality, and equity. The multifaceted work of the generalist-interventionist physician demonstrates that it is entirely possible to offer high-quality technical and human medicine in the interior of the country, transforming lives and entire communities through accurate diagnosis, effective surgical treatment, and continued care. This study validates the thesis that strengthening technical and problem-solving capacity at the point of care (Primary and Secondary Care) is the only viable path to a more just, accessible, and efficient public health system for all Brazilians.

Ongoing research and critical reflection on medical practice in small and medium-sized municipalities are essential for the constant improvement of national health policies. Recognizing the vital importance of minor outpatient surgeries and decentralized dermatological management should encourage the reformulation of medical curricula and the creation of training programs to multiply professionals with this problem-solving profile. The true health of a nation is not achieved solely in large university hospitals, but is built day after day in the clinics, health centers, and surgical centers of the cities that form the base of Brazil, by the hands of dedicated doctors committed to the noble art and rigorous science of healing and caring.

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