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### CLINICAL CONDITIONS PRESENTING TO DERMATOLOGY CLINIC IN 2022 PROVINCIAL GENERAL (TEACHING) HOSPITAL BADULLA; SRI LANKA

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#### INTRODUCTION

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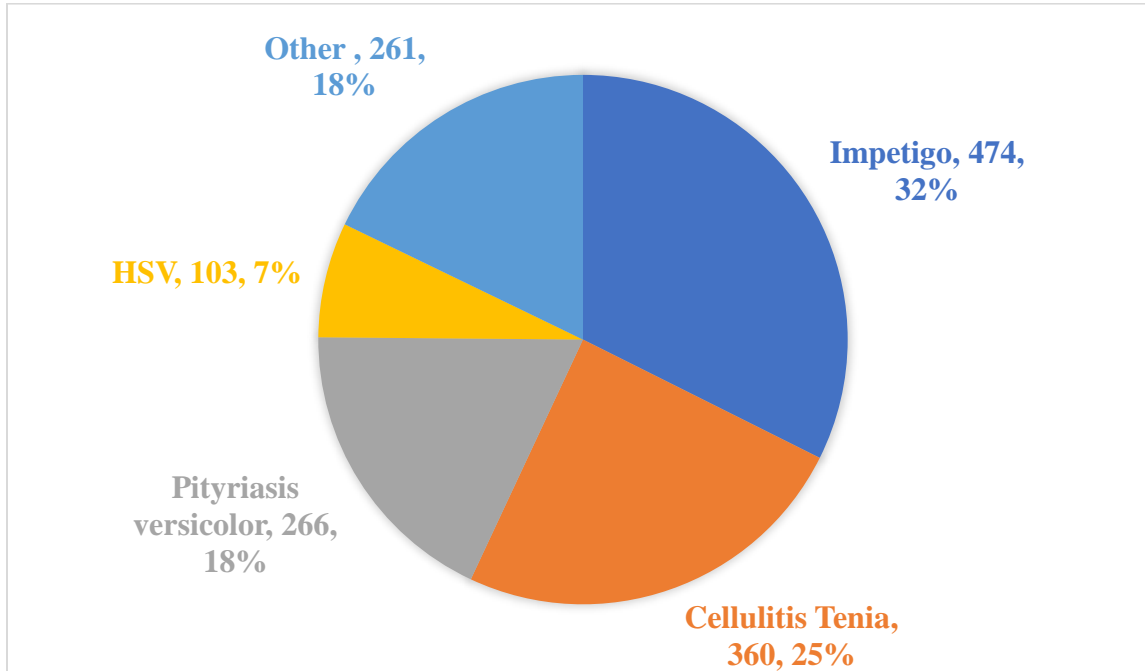
The Dermatology Clinic at Badulla General Hospital in Sri Lanka provides specialized care for a variety of skin, hair, and nail conditions. As part of one of the key hospitals in the Uva Province, the clinic serves a diverse patient population from the surrounding rural areas. Staffed by experienced dermatologists, nurses, and support personnel, the clinic offers treatments for common dermatological issues such as eczema, psoriasis, acne, and fungal infections, as well as more complex cases like autoimmune skin disorders and skin cancers. The clinic also provides treatments for hair loss conditions, including alopecia areata, and offers advanced therapies such as corticosteroid injections, phototherapy, and biologics when necessary. With its role in a general hospital setting, the Dermatology Clinic collaborates closely with other departments to provide comprehensive care for patients with dermatological manifestations of systemic diseases.

#### METHODS and RESULTS

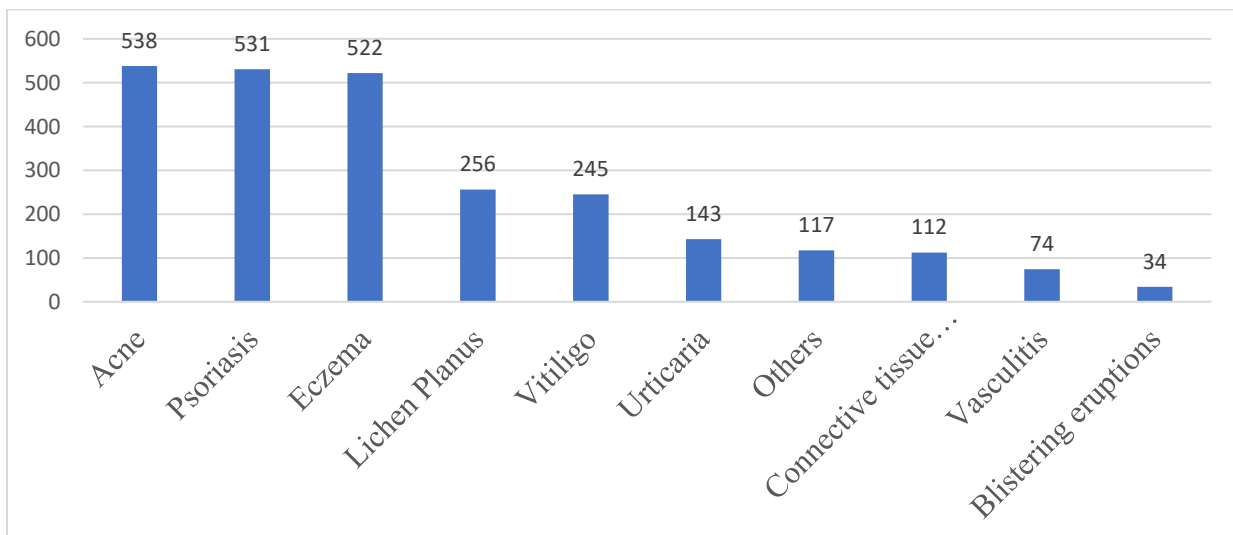
All patients presented to dermatology clinic, Provincial general hospital (Teaching) Badulla was descriptively analyzed. In the year 2023, a total of 5,210 new patients were reported to the dermatology clinic, while 20,601 patients were followed up. Among the new patients, 68.1% (n=3547) were adults. Of these, 1,464 patients presented with infectious

dermatological conditions (Figure 1). Additionally, 2,572 patients (49.3%) were reported to have inflammatory dermatological conditions (Figure 2).

**Figure 1: Distribution of Infectious dermatological conditions**



**Figure 2 : Distribution of Inflammatory dermatological conditions**



Majority of clinical conditions were inflammatory dermatological conditions. This implies that most patients or cases in the study suffered from skin conditions characterized by inflammation. Inflammatory dermatological conditions include a wide variety of disorders such as acne, psoriasis, eczema, and dermatitis. These conditions often present with symptoms like redness, swelling, heat, and pain, which are signs of inflammation. Around 30% of the dermatological conditions were infections, which could include bacterial, viral, fungal, or parasitic skin infections. Common examples might be cellulitis, impetigo, fungal infections like tinea, or viral infections such as herpes or warts. This suggests that infections were less prevalent than inflammatory conditions in the patient population. Acne, a common inflammatory skin condition, was the most frequently observed inflammatory condition in the study. Acne can be associated with several factors, including hormonal changes, bacteria, and excessive oil production, and it can be influenced by lifestyle and genetics. Psoriasis and eczema, two other significant inflammatory skin conditions, were also commonly reported. Psoriasis is a chronic autoimmune condition that causes the rapid buildup of skin cells, leading to scaling on the skin's surface. Eczema (also called atopic dermatitis) is characterized by itchy, red, and inflamed skin. It often starts in childhood and may be triggered by allergens, irritants, or stress. The distribution shows that inflammatory skin diseases, particularly acne, psoriasis, and eczema, were more common than infections in the patient cohort, with infections being reported in a smaller but significant portion (30%).

Skin malignancies, pigmentary disorders, metabolic and systemic diseases-related skin manifestations, and occupational dermatosis presented among patients. These include cancers of the skin such as melanoma, basal cell carcinoma, and squamous cell carcinoma. Patients presenting with skin malignancies may require prompt diagnosis and treatment, as early detection is crucial for positive outcomes. Conditions like vitiligo, melasma, and hyperpigmentation, which cause changes in skin color, are common among patients. These disorders may have cosmetic or psychological impacts, making them a key concern for dermatological care. Many systemic diseases, such as diabetes, thyroid disorders, and liver or kidney disease, can manifest in the skin. These skin signs often help clinicians detect underlying systemic conditions early. These are skin disorders caused or aggravated by workplace exposures. Contact dermatitis, often resulting from repeated exposure to irritants or allergens in the workplace, is a common example. These conditions can impact workers' productivity and quality of life, leading to occupational health concerns.

A small but significant portion of patients visiting dermatology clinics are those who have undergone organ transplantation or are on long-term immunosuppressive therapies. These patients are at higher risk for skin-related issues, such as infections, drug-induced reactions, and skin cancers, due to their weakened immune systems. Regular skin check-ups for these patients are critical to monitor for malignancies and infections, which they are particularly vulnerable to. In addition to patients presenting with medical conditions, some patients

come in for routine skin evaluations as part of occupational health protocols. Certain industries, such as construction, chemical manufacturing, or outdoor work, expose employees to hazards that can lead to skin conditions, including irritant contact dermatitis, UV-related skin damage, or exposure to toxic substances. These check-ups are likely aimed at early detection and prevention of occupational skin diseases.

Overall, this patient population presents with a wide variety of dermatological needs, including routine screenings related to occupational health and the specific challenges faced by individuals undergoing immunosuppressive therapy or organ transplantation.

## DISCUSSION

### Healthcare Infrastructure and Accessibility:

- **Sri Lanka's Free Healthcare System:** The country provides universal free healthcare to its citizens, funded by the government. This system ensures that dermatology services are accessible to all socio-economic groups, reducing barriers to care that might exist in private healthcare models. However, the availability of resources such as specialists, equipment, and medications can be uneven across regions, leading to disparities in access to dermatological care.
- **Comparative Analysis:** In contrast to wealthier countries with privatized healthcare options, where specialized dermatology services are often more readily available, Sri Lanka's public hospitals may face constraints in offering advanced dermatological care due to limited budgets, insufficient staffing, and overcrowding. However, the provision of free services aligns with the broader goal of equitable healthcare distribution, even though quality and speed of care may be affected by systemic limitations.

### 2. Staffing and Expertise:

- **Challenges in Staffing:** Sri Lanka has a shortage of dermatologists relative to its population. The few available specialists tend to be concentrated in major urban centers, such as Colombo, which leaves rural populations underserved. This shortage creates long waiting times for dermatology consultations and limits the ability of clinics to address non-urgent conditions.
- **Comparative Perspective:** In developed countries, dermatology clinics often have access to a wider pool of specialists and support staff (nurse practitioners, dermatopathologists, estheticians). Teledermatology is also used to bridge gaps between urban and rural areas. Sri Lanka, although making strides in telemedicine,

may not yet have the digital infrastructure required for widespread tele dermatology implementation. Further investment in training dermatologists and adopting telehealth services could alleviate these challenges.

### 3. Resource Allocation and Equipment:

- **Limited Resources in Public Hospitals:** Dermatology clinics in Sri Lanka's government hospitals might lack advanced diagnostic tools, such as dermatoscopes, laser treatments, or phototherapy equipment, that are standard in private settings or wealthier countries. This limitation affects the quality of care, especially in diagnosing and treating complex or chronic conditions like skin cancers, severe psoriasis, or autoimmune skin diseases.
- **Comparative Analysis:** Hospitals in high-income countries generally have greater financial flexibility to invest in the latest dermatological technology and treatments. In contrast, Sri Lanka's public sector must often prioritize essential services over specialized care, which can slow down the adoption of cutting-edge dermatological treatments. Budget constraints might lead to delays in care, impacting outcomes for conditions requiring immediate intervention (e.g., melanoma).

### 4. Burden of Dermatological Diseases:

- **Prevalence and Patterns:** Sri Lanka, like many tropical countries, faces a unique dermatological burden, including fungal infections, tropical dermatoses, and occupational skin diseases, such as contact dermatitis from agricultural chemicals. Skin cancers, pigmentary disorders, and systemic diseases manifesting in the skin also add to the clinical load. This diversity in dermatological conditions requires tailored approaches in diagnosis and treatment, which a public clinic may struggle to consistently provide due to limited capacity.
- **Comparative Global Perspective:** In wealthier, temperate countries, dermatological clinics might focus more on conditions like melanoma, autoimmune diseases, or cosmetic concerns. While Sri Lanka's dermatology clinics have to focus on a broader spectrum of infectious and inflammatory conditions, the free healthcare model allows widespread access to care. However, ensuring the availability of treatments, including topical medications, antifungals, immunomodulators, and biologics for chronic skin diseases, can be a significant challenge.

### 5. Occupational and Preventative Dermatology:

- **Importance of Occupational Dermatology:** A significant portion of the Sri Lankan population is engaged in agriculture, construction, and other manual labor industries, exposing them to chemicals, allergens, and the sun. The dermatology clinics must,

therefore, address occupational dermatoses and provide regular check-ups for workers. However, integrating preventative care within the system—such as education on sun safety, occupational hazard mitigation, and regular skin check-ups—is not always prioritized in a resource-limited healthcare setting.

- **Comparative Context:** In countries with more robust occupational health systems, dermatology clinics often collaborate closely with workplace health services, providing comprehensive care and monitoring for skin conditions caused by occupational exposures. Sri Lanka's focus on free healthcare is beneficial in theory, but more structured collaboration between dermatology clinics and occupational health services could enhance early detection and treatment of occupational skin conditions.

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#### 6. Role of Technology and Telemedicine:

- **Telemedicine and Outreach:** Sri Lanka's digital healthcare initiatives, while still developing, offer potential for expanding access to dermatological care, particularly in rural areas. Teledermatology could help address the shortage of specialists by enabling remote consultations and diagnosis. However, this requires investment in digital infrastructure and training for healthcare workers.
- **Comparative Analysis:** Teledermatology has been widely adopted in many developed countries, allowing patients in remote or underserved areas to access specialist care. Sri Lanka can learn from these models by implementing teledermatology programs in its free healthcare system, helping bridge the gap in specialist access. However, the country's current telemedicine infrastructure needs significant improvement to achieve widespread implementation.

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#### 7. Affordability and Sustainability of Free Services:

- **Cost of Services:** While dermatology services are free in public hospitals, the sustainability of providing comprehensive care remains a challenge. Medications, especially for chronic conditions like psoriasis, can be expensive, and public hospitals may not have access to the latest biologic therapies or advanced treatments. In such cases, patients may need to turn to private care, where costs can become prohibitive.
- **Comparative Perspective:** In countries with a blend of public and private healthcare, patients often have more flexibility to choose advanced treatment options if they can afford them. In Sri Lanka, while free services provide essential care, the limitation in treatment options could affect patient outcomes, especially for those requiring long-term management.

## **CONCLUSION**

Implementing dermatology clinics within Sri Lanka's free healthcare system is a significant step toward equitable healthcare access, particularly in addressing common inflammatory and infectious skin conditions. However, the system faces challenges related to resource limitations, specialist shortages, and the ability to provide cutting-edge care for complex cases. Expanding telemedicine, improving occupational health integration, and ensuring more comprehensive resource allocation could enhance the impact of dermatological care in Sri Lanka's public health system.