

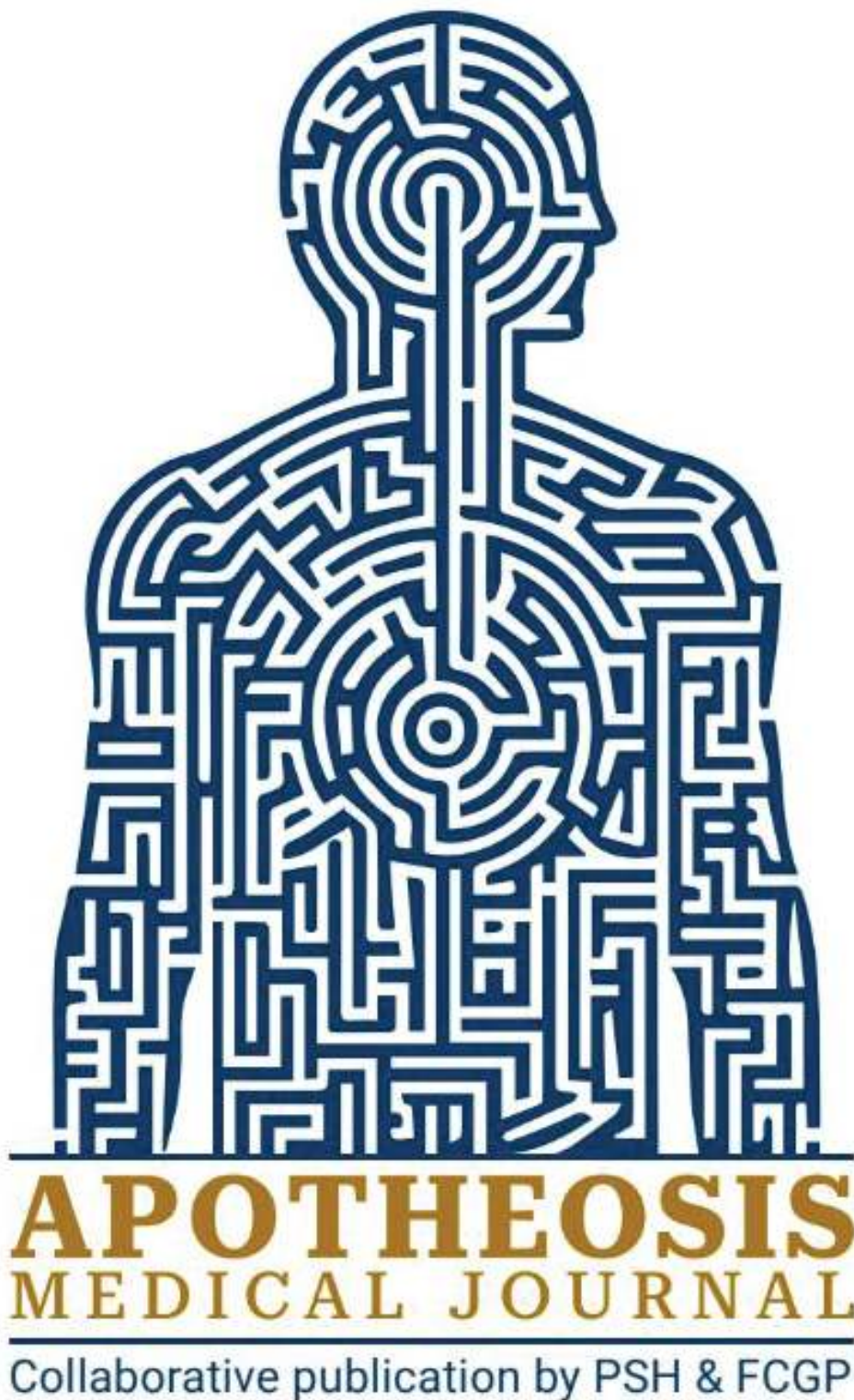
# Article Feature:

- Clinician's Approach to Strep Throat Infection
- Fiji's HIV Surge Stems from a Funding Shortfall
- Sarcopenia: A Growing Concern in General Practice

Volume: **02**

Issue: **02**

Publication Date:  
**15th June 2025**



ISBN: 978-982-101-812-8



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# APOTHEOSIS MEDICAL JOURNAL

Collaborative publication by PSH & FCGP

Volume 2 | Issue 2 | Publication Date: 15th June 2025

ISBN 978-982-101-812-8



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## Editorial

**Author:** Dr. Neil Sharma

### Everyday Medicine, Food, movement & the G.P.'s focus on Prevention.

This addition of Apotheosis Medical Journal brings you some review articles on the subjects outlined, additionally with a thematic configurations. We address the current crisis in NCD, CD and the topical issues surrounding healthcare policy challenges in 2025. A stakeholder review of the Private Hospital Act (1979) is underway.

I am motivated to have receive topical articles from several of my current mentees, of publishable standard. All 29 other mentors, need to take heed of this academic development. This is totally within our scope; others are encouraged to follow suit. These writing experiences with case studies will in time develop the next cadre of GP researchers and publications with flourish their.

The subject matter of this journal encompasses a follow up article on HIV from our colleagues in NZ. Rightly stated that loss of funding grants demonstrates poor coordinated programs at grassroots level. The downside of becoming a middle level Country. We take a clear shot at the management of sore throats, the risks of acute rheumatic fever and sequela of cardiac complications viz rheumatic heart disease. Case studies on PNEU Syndrome and Klebsiella pneumonia are appropriately discussed. Reviews on recent diet management and oral insights by professionals in these arenas are elaborated in this addition. Unfortunately, NCD's in its widest form, is not being addressed in our consultation arenas.

Sarcopenia has received formal recognition as a disease entity and needs to be addressed in those seniors who survive the current onslaught of NCD's.

In our Opinion column we present a report by Dr Shritika Swamy on the subject of "Transform Healthcare- Leadership through Learning and Innovation". Exposing young minds to such workshops will have tangible institutional benefits. A short piece on Ethics as in "DO NOT RESUSCITATE (DNR)" as a human right when compared to the first Medical Principle of "Do No Harm" is portrayed.

Your medico-political column and a letter to the Editor is of continuing interest. We aim high to provoke thoughts. The Annual Conference 2025 was well attended and of an international standard. A success story.

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## Review Article

### Clinician's Approach to Strep Throat Infection

**Author:** Dr. Belois Niumatawala

#### Introduction

A sore throat (or pharyngitis) is one of the most common reasons for patient visits to primary care providers and urgent care centers. It is most often caused by viral infections but can also be due to bacterial infections, environmental factors, or other systemic diseases.

Group A Streptococcus (GAS), or Streptococcus pyogenes, is a common etiologic agent of bacterial pharyngitis, particularly in children aged 5-15

years. Prompt diagnosis and appropriate antimicrobial therapy are essential to prevent complications such as acute rheumatic fever (ARF), suppurative sequelae, and to reduce symptom duration and transmission.

In Fiji, RHD is a large burden of disease. And in our limited settings, diagnosing and treating sore throat effectively is of paramount importance.

## Case

### History of Presenting Complaint:

9-year-old Miss S presented with a 2-day history of dry cough, fever and sore throat. She denied having rhinorrhoea or changes in her voice. She denied any shortness of breath, chest pain or joint pain.

### Physical examination:

On examination she was not in respiratory distress. Her temperature was 38 degrees Celsius, respiratory rate of 19, saturating at 95% room air. Pulse 98. Weight 35 kg.

Her tonsils were inflamed with exudate noted. Palatal petechiae was also noted. Anterior cervical lymph nodes were also swollen and tender to touch.

Lung fields were clear however, heart sounds normal with no murmur noted.

Extremities had good volume pulses and capillary refill less than 2 seconds.

## Discussion

### Aetiology of Sore Throat

Pharyngitis can be classified as acute or chronic, with acute pharyngitis being the most common clinical presentation. The aetiology can be viral, bacterial, or non-infectious. A detailed history, clinical examination, and sometimes diagnostic tests are required to identify the underlying cause.

- Viral causes (70-90% of cases):
  - Common cold (*rhinovirus, coronavirus*)
  - Influenza
  - Adenovirus
  - Mononucleosis (*Epstein-Barr virus*)
  - Herpes simplex virus
- Bacterial causes (5-15% of cases):
  - Group A *Streptococcus (GAS)* – responsible for strep throat
  - *Neisseria gonorrhoeae*
  - *Corynebacterium diphtheriae* (rare due to vaccination)
- Non-infectious causes:
  - Gastroesophageal reflux disease (*GERD*)
  - Allergic rhinitis
  - Environmental irritants (e.g., smoke, dry air, pollutants)
  - Trauma (e.g., intubation, excessive vocal strain)

### Strep Throat and its Sequelae's

GAS infections if left untreated or inadequately treated, can lead to Acute Rheumatic Fever (ARF), a condition that can eventually progress to Rheumatic Heart Disease (RHD), with potentially serious long-term health consequences.

ARF typically manifests 2-4 weeks after an episode of pharyngitis caused by GAS. The pathogenesis of ARF involves an abnormal immune response where the body's immune system mistakenly attacks healthy tissues, including the heart, joints, skin, and nervous system.

The clinical features of ARF are categorized into major and minor criteria, known as the **Jones Criteria**.

When ARF is not adequately managed, or when the patient experiences recurrent episodes, the inflammation of the heart valves can result in permanent damage. This damage, known as Rheumatic Heart Disease (RHD), occurs primarily in the mitral and aortic valves, leading to valve dysfunction. Over time, the inflammation causes scarring and thickening of the valve tissues, which can lead to mitral stenosis, aortic regurgitation, or both. The long-term effects of RHD can be debilitating, leading to heart failure, arrhythmias, and a decreased quality of life.

The progression from ARF to RHD typically spans many years. After an acute episode of ARF, the patient may appear to recover, but the underlying valve damage can lead to complications decades later. In fact, RHD is a leading cause of heart disease in young adults, especially in resource-limited settings where secondary prophylaxis may be insufficient.

Prevention of ARF centres on the early and effective treatment of GAS pharyngitis.

### Global and local statistics

An estimated 30 million people currently suffer from RHD worldwide, with over 300,000 deaths per year. The prevalence of RHD is estimated to be 8 per 1000 children in Fiji and more than 60 Fijians die of RHD every year. Incidence of first-episode rheumatic fever in children aged 5 to 15 years in Fiji has been estimated to be in the range of 15 to 25 per 100,000. In a prospective study of patients admitted to the Colonial War Memorial Hospital with confirmed acute rheumatic fever, 40% reported a history of sore throat although it is unknown how many of these patients sought care for their sore throat and how many of these cases were caused by Group A *Streptococcus (GAS)*.

### Diagnostic Features of Strep Throat:

Features that increase the likelihood of GAS aetiology include:

- Age five to twelve years
- Sudden onset sore throat
- Fever

- Tonsillo-pharyngeal inflammation with or without exudates
- Tender anterior cervical lymphadenopathy
- Absence of cough

Features suggestive of a viral aetiology include:

- absence of fever, conjunctivitis
- Coryza
- infection of the mouth (stomatitis)
- painful swallowing,
- ulcerative tonsillo-pharyngeal lesions.

Fungal aetiology usually associated with angular cheilitis, and curd like plaques on the tongue.

#### Diagnostic Investigations:

- Rapid Antigen Detection Test (RADT): High specificity (>95%), moderate sensitivity (70-90%). Positive results generally do not require culture confirmation.
- Throat Culture: Gold standard with sensitivity >90%. Recommended in children and adolescents with a negative RADT to rule out false negatives. Not routinely required in adults due to low ARF risk.

Cultures however take at least 24hr and communication of results to patients may be challenging. However, Rapid tests are not available in Fiji. Clinical judgement is the main tool in diagnosing the cause of sore throat in most settings in Fiji, and whether patients need antibiotics or not. To ensure that patients with GAS infection are not missed, and those with viral infections are not unnecessarily treated with antibiotics, evidence-based criteria should be used. Examples of criteria used in other countries are the CENTOR criteria and the Fever PAIN criteria.

#### CENTOR Criteria:

Mnemonic of "STREP"

- S:ens cough (absence) = 1
- T:ender swollen anter or cervical lymph nodes = 1
- R:ight age:
  - o 5-14y = 1
  - o 15-44y = 0
  - o >44y = -1
- E:xudates (tonsillar) = 1
- P:yrexia (temperature > 38 degrees Celsius) = 1

A score more and equal to 3 on RADT test should be done. But clinicians should consider performing RADT for those with scores of 2 if they are paediatric patients, if they are at risk of complications (immunocompromised or frail), or if they appear clinically unwell.

\*Those younger than 3y require backup validation with throat culture regardless of scoring.

#### Fever PAIN scoring system:

- Temperature >38 degrees Celsius for >24hr = 1
- Tonsillar exudates = 1
- Severely inflamed tonsils = 1
- Absence of cough or coryza = 1

Score <= 1: GAS risk 13-18% so don't require antibiotics;

2-3: GAS risk 34-30%, need follow up or delayed prescription;

4: GAS risk 62-65%, need antibiotic treatment.

Routine testing is therefore not indicated for:

- Children <3 years (low risk for ARF)
- Patients with overt viral features (e.g., cough, rhinorrhoea, hoarseness, conjunctivitis)

#### WHO vs Fiji Guidelines- the Clinical Decision Rule:

WHO uses the Clinical Decision Rule, with the criteria of sore throat plus large nodes and exudate. Using the WHO clinical decision rule however has a sensitivity of 1.5% and specificity of 98% meaning that vast majority of children with GAS sore throat are not identified and therefore don't receive treatment while very few children without GAS sore throat are unnecessarily treated with antibiotics.

The Fiji Guidelines use a modified Clinical Decision Rule, which is sore throat plus large nodes and exudate with the added exclusion criteria of no hoarse voice and no runny nose.

With the added Fiji clinical decision rule, a far higher percentage of children with GAS sore throat will be identified (sensitivity 85%) but also a higher percentage will receive antibiotics unnecessarily (29% specificity) compared to if only the WHO clinical decision rule was used.

The Paediatric CSN has determined that the Fiji clinical decision rule will be used both in the national guideline and will replace the WHO clinical decision rule in the IMCI guidelines for Fiji.

**"Treat with antibiotic if a patient presents with a sore throat in the absence of runny nose or a hoarse voice. If the patient has a runny nose or a hoarse voice, this suggests a viral infection that does not require antibiotic treatment."**

Fiji guidelines recommend that the clinical decision rule be applied in all cases to aid diagnosis and to confirm the need for testing (where available) and/or antibiotic treatment.

24 hours of isolation at home is recommended after starting antibiotic treatment.

### Treatment

Antibiotics are prescribed to eradicate GAS, shorten symptom duration (by <1-2 days if started early), prevent transmission, and reduce the risk of complications. Benzathine Penicillin G is the recommended first-line regimen for GAS sore throat. For less than 30kg: 600,000U given intramuscular injection as a single dose. More than 30kg: 1,200,000U given IM as a single dose. Alternate oral antibiotic is Penicillin V/Phenoxymethylpenicillin V <10yr: 250mg PO BD for 10 days; >10yr: 500mg PO BD for 10 days. 2<sup>nd</sup> line oral antibiotic is Cephalexin 20mg/kg/dose BD (max 1g/dose) for 10 days. Erythromycin 20 mg/kg/dose BD for 10 days for anaphylaxis to penicillin/cephalosporins (max paed. dose 500mg and adult dose 1000mg/ day)

### Case Assessment & Management

When asked on throat swab, parent refused due to costs and unable to bring patient for a review consultation.

From the patient's symptoms, bacterial pharyngitis was diagnosed, and patient was given 1.2 Mega Units Benzathine Penicillin intramuscularly.

Patient was given prescription for Cephalexin suspension 700mg PO twice daily for 10 days if sore throat didn't improve in 2 days. Paracetamol and soothing cough elixir were prescribed.

### Conclusion

Sore throat is a common illness that clinicians are faced with every day. Group A Streptococcus is a major cause of sore throat and has deadly consequences if inadequately treated.

Diagnosing GAS infection with cultures are not always possible.

Therefore, using evidence-based criteria, clinicians can more accurately diagnose and treat the cause of sore throat irrespective of access to cultures, and help bring down the burden of ARF and RHD.

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CDC: Strep Throat Information

American Academy of Otolaryngology-Head and Neck Surgery (AAO-HNS). *Pharyngitis and Strep Throat Management*. AAO-HNS offers clinical recommendations on the treatment of tonsillitis, pharyngitis, and related conditions, including diagnostic approaches, management, and indications for tonsillectomy.

AAO-HNS: Tonsil and Strep Throat

JpToData. A comprehensive clinical reference that discusses the etiology, diagnosis, and treatment of sore throat, including viral and bacterial causes (strep throat, mono, etc), as well as recommendations on symptomatic relief and antimicrobial therapy.

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MMWR. *Children with Sore Throat*.

Tip Guidelines for Sore Throat and Strep Disease

Full list of reference available upon request.

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## Review Article

### Fiji's HIV Surge Stems from a Funding Shortfall

**Authors:** Sharon McLennan, Aveline Rokoduro & Alisi Rawana

#### Brief

HIV/AIDS is surging in Fiji, with a 260 per cent increase in new infections between 2020 and 2022. The rise partly stems from rising illegal drug use but must be viewed in the context of a significant decline in funding for prevention and awareness initiatives since the end of the Regional Response Fund in 2013. Although a recent agreement has been made to provide some financial support, much more funding is needed to effectively

tackle the worsening crisis and address the alarming rise in HIV infections.

In 2024, HIV/AIDS seems to be well and truly back in Fiji. Estimated new infections had been increasing slowly over the past two decades but rose by 260 per cent from 2020–2022 with a record 415 new cases recorded in 2023. This has risen by a further 502 from January to June of 2024. According to UNAIDS, this spike in newly reported

HIV cases makes the severity of this epidemic second only to the Philippines in the Asia Pacific.

The Fijian Health Ministry has attributed this increase to a surge in illegal drug usage. In particular, two extremely unsafe practices have been blamed for the increase in HIV infections in Fiji — ‘bluetoothing’ and ‘chem-sex’. But contrary to the assumption that the surge is the result of the drug crisis, a precipitous drop off in funding and research has also been a significant contributor. It is critical to better understand policies, programs and funding developments between 2010 and 2023 in order to explain and respond to the current crisis.

Before 2012, the used a combination prevention approach to HIV. Funding had ramped up in 2008 through the HIV and STIs Regional Response Fund, an agreement between AusAID and the Secretariat of the Pacific Community (SPC) to address HIV and AIDS in the Pacific. The fund supported the SPC-coordinated combined regional HIV and STIs response to ‘support the scale up of the response to HIV and STIs in the Pacific ... [to support] effective implementation of regional and national HIV & STI plans, including the capacity building needs identified in those plans’.

This funding enabled the use of the joint technical expertise of national, regional and international partners, enforced relevant HIV policies including the 2011 Fiji HIV decree, identified at-risk populations and risky behaviours and funded HIV awareness and response activities. The HIV, AIDS and STI agenda was very visible within the country during this period.

In 2013, the HIV Regional Response funding ended. All recipients were informed of this well in advance and were informed of regional and national strategies for next steps including transitional funds to continue existing activities. Every country was informed of the 2014 grant round of the Global Fund to Fight AIDS, Tuberculosis and Malaria, where Fiji was to submit its own single-country application.

But in 2012 Fiji graduated from lower middle-income to upper middle-income status. This was to have damaging repercussions for its HIV/AIDS national response. The immediate consequence was that Fiji became ineligible to apply to the Global Fund for HIV/AIDS and STI prevention activities, and the single-country application had to be dropped. This led to a drastic decline in HIV/AIDS funding from US\$2.3 million in 2011 to US\$0.1 million in 2012.

Though a combination of international and domestic sources increased HIV funding to US\$0.67 million by 2016, the funding never fully recovered. This drop in funding led to drastic budget reductions for HIV/AIDS prevention activities. Media coverage of health promotion and HIV awareness efforts ceased. Services targeting at-risk populations and prevention activities fell off priority lists.

In the years since, the country has faced multiple natural disasters, ongoing political instability, chronic under-

resourcing of health services and the COVID-19 pandemic, resulting in the degradation of health infrastructure and workforce stress and further limiting the response. By 2021 it was evident that there were gaps in sexual health knowledge, with only 30 per cent of women and 26 per cent of men aged 15–24 years knowledgeable about HIV prevention.

As media and politicians have noted, the past decade has also seen an exponential increase in drug trafficking in the region, with trafficking to Australia and New Zealand via Fiji and Vanuatu contributing to both organised crime and an upsurge in drug consumption. This has clearly resulted in a significant rise in intravenous drug use, sexual violence, transactional sex and other high-risk sexual activity.

But this is simply the spark that lit a waiting fuse. Years of underfunding and the deterioration of HIV/AIDS services had left a population unprepared for the storm.

Fiji’s country data to February 2024 also illustrates a weak national response to the epidemic so far. The available statistics do not present a clear picture of the current national status, while other critical data to guide the HIV/AIDS national response have not been updated since 2012 when the Regional Response Fund ended. Despite the anecdotal and often sensationalised evidence of the impact of the drug crisis, studies to estimate population sizes and risky behaviours were last conducted in 2004–2006, 2011–12 and 2017. There is not sufficient evidence to inform Fiji’s HIV response in 2024.

In July 2024 the UN Development Programme and Fiji’s Ministry of Health and Medical Services signed an agreement for 5.7 million Fiji dollars (US\$2.7 million) from the Global Fund to jointly address HIV, STIs, hepatitis B and tuberculosis in Fiji. But based on a rapid review of HIV funding from 2008–2016, Fiji would need at least US\$10 million to revive, restore and strengthen multi-partner programs, expand services to their peak performance levels and address the 260 per cent increase in HIV.

Funding support would assist in awareness and training, monitoring, follow-up, contact tracing and treatment. The government and international partners must work closely with all relevant stakeholders, including health professionals, community health workers, communities, youth, the government and NGOs using Fijian cultural values and beliefs (Vanua) to halt the alarming rise in HIV infections in Fiji.

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<https://doi.org/10.59425/eabc.1725616800>

# Review Article

## Sarcopenia: A Growing Concern in General Practice

**Author:** Dr. Neil Sharma

### Abstract

Sarcopenia, the age-related loss of skeletal muscle mass and strength, is increasingly recognized as a significant contributor to frailty, disability and reduced quality of life among older adults. As frontline providers of care, general practitioners (GPs) are crucial in the early detection, diagnosis, and management of sarcopenia. This article reviews the clinical features, diagnostic criteria, and current strategies for managing sarcopenia, emphasizing the importance of a multidisciplinary and proactive approach.

### Introduction

Sarcopenia, derived from the Greek words "sarx" (flesh) and "penia" (loss), refers to the progressive and generalized loss of skeletal muscle mass, strength, and function associated with aging. First recognized as a condition in the late 20th century, sarcopenia is now acknowledged by the World Health Organization and classified under ICD-10 (M62.84)<sup>1</sup>.

Its clinical relevance lies not only in its prevalence which increases with age and affects up to 50% of individuals over 80 years<sup>2</sup>, but also in its association with adverse outcomes including falls, fractures, hospitalization, and mortality<sup>3</sup>. Despite its impact, sarcopenia remains underdiagnosed and undertreated, especially in primary care settings.

### Signs and Symptoms

The onset of sarcopenia is insidious and often overlooked. Early signs may include:

- Progressive muscle weakness
- Decreased stamina and exercise tolerance
- Unintentional weight loss (primarily muscle mass)
- Balance difficulties and gait disturbances
- Difficulty performing daily tasks such as climbing stairs or rising from a chair

As sarcopenia progresses, patients may experience increased risk of:

- Falls and related injuries<sup>4</sup>
- Frailty syndrome<sup>5</sup>
- Physical disability and dependence<sup>6</sup>
- Reduced quality of life<sup>7</sup>

### Diagnostic Criteria

The European Working Group on Sarcopenia in Older People (EWGSOP2) provides a widely accepted diagnostic framework<sup>8</sup>:

#### 1. Probable Sarcopenia

- Low muscle strength (e.g., handgrip strength <27 kg for men, <16 kg for women)

#### 2. Confirmed Sarcopenia

- Low strength plus low muscle mass (measured via DXA, BIA, or imaging)

#### 3. Severe Sarcopenia

- Confirmed sarcopenia plus impaired physical performance (e.g., gait speed <0.8 m/s)

### Clinical Management

#### 1. Exercise Interventions

- Resistance training has been shown to improve muscle strength and mass<sup>9</sup>.

#### 2. Nutritional Support

- Adequate protein intake (1.2–1.5 g/kg/day) is essential<sup>10</sup>.
- Vitamin D supplementation improves muscle function in deficient individuals<sup>11</sup>.

#### 3. Pharmacological Approaches

- While no treatments are yet approved specifically for sarcopenia, studies are evaluating agents such as myostatin inhibitors and SARMs<sup>12</sup>.

#### 4. Multidisciplinary Care

- Collaboration with physiotherapists, dietitians, and geriatricians improves patient outcomes<sup>13</sup>.

### Conclusion

Sarcopenia is a highly prevalent and impactful condition in older adults. Early detection and personalized intervention can improve physical function, reduce disability, and enhance quality of life. General practitioners are pivotal in screening, diagnosis, and management, and should incorporate sarcopenia assessment into routine geriatric evaluations.

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## Review Article

### Healthy Nutrition in Modern Clinical Practice: Trends in Intermittent Diets, Weight Loss Strategies, and the Enduring Relevance of the Mediterranean Paradigm

**Author:** Ms. Anjali Mishra

Nutrition has long been at the forefront of preventive medicine, yet in recent years, the landscape has shifted dramatically. For general medical practitioners (GPs), staying informed on evolving dietary paradigms is essential, not only for patient education but also for addressing the global epidemics of obesity, type 2 diabetes, and metabolic syndrome. This narrative explores the most current trends in healthy nutrition with a critical eye toward intermittent diets, structured weight loss programs, and scheduled feeding regimens, concluding with a comparative assessment of the Mediterranean diet—a gold standard in nutritional science.

**The Changing Face of Dietary Recommendations**  
Over the past two decades, public understanding of nutrition has moved beyond the simplistic dichotomy of "good" and "bad" foods. The focus has shifted to when, how, and how much people eat, in addition to what they consume. This evolution is driven by advances in metabolic research, chronic nutrition, and behavioural psychology.

In this context, intermittent fasting (IF) and time-restricted eating (TRE) have gained traction, not merely as dietary fads but as interventions with emerging scientific support. Coupled with new iterations of weight loss programs and the reorganization of traditional eating schedules, these approaches offer promise—but also complexity—for clinical integration.

#### Intermittent Fasting: A Reconsideration of Meal Timing

**Intermittent fasting (IF)** encompasses various patterns of eating that alternate between periods of fasting and feeding. It is a way of reducing the amount of calorie intake, helping to cut back on unhealthy foods or snacks and disciplining on self to reduced portion intake hence hoping to achieve weight loss. One must be ready to figure out what would work best for them and how it would fit the lifestyle. It is not simply a one-size-fits-all approach. There are various types of intermittent fasting to

explore. Explained are some of the most popular methods.

### 1. **Time restricted eating (the 16/8 and 14/10 method)**

*With this option there is a fixed fasting and eating periods. For instance, fasting for 16 hours of the day and eating for the next 8 hours. This method is particularly easy or more so convenient since sleeping covers most of the fasting period, breakfast is skipped and eating begins from lunch period. Some common time periods for 16/8 are only eating from 10am to 6pm and 12pm to 8pm; time period for 14/10 is only eating from 9am to 4pm. Might take a few days to figure out if this pattern suits, especially if a person is very active and or gets hungry early in the morning.*

### 2. **Twice-a-week method (5/2 method)**

*This method focuses on providing only 500 kcal for two days of the week. On the other five days consumption of healthy meals is recommended. The two days of fasting need to be in between non fasting days. Care should be taken when consuming 500kcal meals on the fasting days, focusing on high fibre and high protein meals mostly.*

### 3. **Alternate day fasting**

*With this type of fasting, every other day calories are reduced by 25% of the normal consumption of food. There is a strict variation to this diet to include 0 calories on alternate days instead of the reduction of 25% of the normal intake.*

### 4. **The 24-HR fast (or eat: stop: eat: method)**

*This method is done once or twice a week where a full 24 hour fast is done either from breakfast to breakfast or lunch to lunch. The side effects for this version can be extreme such as headaches, irritability, hunger and low energy.*

## **Clinical Evidence and Mechanisms**

Studies suggest that IF may induce weight loss, improve insulin sensitivity, and modulate markers of inflammation and oxidative stress. The proposed mechanisms include:

- *Enhanced lipolysis and ketogenesis during fasting periods*
- *Improved mitochondrial function and autophagy*
- *Synchronization with circadian biology, potentially improving metabolic outcomes*

However, GMPs must remain cautious. Evidence is largely drawn from short-term studies, many in overweight or obese individuals. Adherence over the long term remains a challenge, and benefits beyond caloric restriction are still debated. Till date, majority of studies done are short run and have mostly been tried on animals, hence protocols to manage weight loss long term is poorly understood with intermittent fasting.

## **Risks and Contraindications**

For patients with eating disorders, type 1 diabetes, or those on medications affecting glucose metabolism (e.g., insulin, sulfonylureas), IF may pose risks.

Additionally, fasting-induced hypoglycaemia and nutritional inadequacy can be concerns, particularly in older adults or those with comorbidities.

## **Time-Restricted Eating and Scheduled Feeding**

Closely related to IF is **time-restricted eating (TRE)**, which aligns food intake with circadian rhythms by limiting eating to specific hours of the day (typical y a 6–10 hour window, usually starting in the morning).

## **The Circadian Connection**

Human metabolism follows a circadian rhythm, with insulin sensitivity, glucose tolerance, and digestive efficiency peaking earlier in the day. TRE that favours early feeding (e.g., 7 AM–3 PM) appears more beneficial than late TRE (e.g., 12 PM–8 PM).

## **Evidence Base**

Recent trials, including randomized controlled studies, show that early TRE:

- *Reduces postprandial glucose and insulin levels*
- *Decreases appetite and evening cortisol*
- *Supports weight loss without explicit calorie restriction*

However, patient compliance with early TRE is limited due to social and occupational factors. Educating patients on the synergy between **meal timing and hormonal rhythms** may improve adherence.

## **Weight Loss Programs: From Prescriptive to Personalized**

Traditional weight loss programs like calorie counting plans and commercial diet systems (e.g., Weight Watchers, Jenny Craig) continue to serve certain populations. Yet, the trend is shifting toward **personalized nutrition**, which tailors recommendations based on genetic markers, microbiome profiles, and lifestyle factors.

## **Popular Commercial Programs and Their Evolution**

Many modern programs now incorporate digital tools, behavioural coaching, and food quality scoring systems. For example:

- *Noom leverages cognitive behavioural therapy (CBT) to promote sustainable changes in eating behaviour.*
- *WW (formerly Weight Watchers) has restructured its program to focus on overall wellness and mental health, not just weight loss.*

## **Evidence Review**

Meta-analyses show modest but clinically significant weight loss from structured programs, particularly when combined with behavioural support. However, no single program has proven superior across all populations.

### Cautions for GPs

Patients often ask about trending diets – ketogenic, low FODMAP, plant based, carnivore – and it falls on the GP to interpret the evidence. Fad diets may yield rapid results, but long-term sustainability, nutritional adequacy, and safety should always be assessed.

### Scheduled Feeding and the Psychology of Eating

Beyond *what* and *when*, *how* often people eat also affects health outcomes. Modern eating patterns involve frequent grazing, often driven by external cues rather than physiological hunger.

### The Case for Scheduled Feeding

Restricting meals to set times after three structured meals per day may restore normal hunger/satiety cycles and reduce impulsive snacking. Some programs even include “**metabolic resets**” with regulated macronutrient distribution across meals.

### Behavioural Outcomes

Regular meal timing is associated with:

- Improved glycaemic control in type 2 diabetics
- Better satiety regulation
- Lower incidence of night-eating syndrome and binge eating

This approach aligns with **chrono-nutrition**, an emerging field that merges nutritional science with circadian biology.

### The Mediterranean Diet: A Benchmark in Healthy Eating

In contrast to newer and often more restrictive dietary approaches, the **Mediterranean diet (MD)** remains a time-tested, evidence-based model of nutritional health.

### Core Components

- High intake of fruits, vegetables, legumes, whole grains, and olive oil
- Moderate consumption of fish and poultry
- Low intake of red meats and sweets
- Regular but moderate alcohol consumption, particularly red wine

### Health Outcomes

The MD is associated with reduced incidence of:

- Cardiovascular disease
- Type 2 diabetes
- Cognitive decline
- Certain cancers

Notably, the **PREDIMED study** demonstrated a 30% relative risk reduction in major cardiovascular events among individuals following a Mediterranean diet supplemented with nuts or extra virgin olive oil.

### Why It Works

The MD's benefits stem not only from its nutrient density but also from:

- **Anti-inflammatory effects of polyphenols and omega-3 fatty acids**
- **Improved lipid profiles** (increased HDL, reduced LDL)
- **Favourable gut microbiota modulation**

Unlike restrictive diets, the MD promotes **flexibility and enjoyment**, enhancing long-term adherence and overall quality of life.

### Clinical Implications for General Practitioners

In clinical practice, one-size-fits-all advice is increasingly obsolete. GPs must assess each patient's medical history, preferences, cultural context, and psychosocial factors before recommending a diet plan.

### Key Considerations:

- **Assess Readiness.** Motivational interviewing can help determine a patient's stage of change.
- **Set Realistic Goals.** Weight loss of 5–10% can significantly improve metabolic parameters.
- **Encourage Sustainability.** Diet methods that fit or suit best into a patient's lifestyle are more likely to succeed.
- **Address Misconceptions.** Patients may overestimate the value of “superfoods” or fall for pseudoscientific diets.
- **Monitor and Adjust.** Ongoing assessment of weight, labs, and mental health is essential.

### A Balanced Message

Rather than promoting a specific trend, GPs can emphasize foundational principles:

- **Nutrient-dense, minimally processed foods** (lean toward home-prepared meals)
- **Mindful eating practices**
- **Consistent meal timing**
- **Adequate hydration and sleep**
- **Physical activity** (promote NEAT – Non-exercise activity thermogenesis) and stress management

### Conclusion

As nutritional science advances, so must our approach to dietary counselling. Intermittent fasting, time-restricted eating, and structured weight loss programs offer new avenues for intervention, but their success hinges on personalization, education, and behavioural support. In contrast, the Mediterranean diet remains a robust, sustainable model with decades of empirical support.

For general medical practitioners, the goal is not to prescribe a diet but to **empower and provide patients with the tools, knowledge, and motivation** with consistent support to make

enduring lifestyle changes. In doing so, we not only treat and prevent disease but promote wellness—a mission and a challenge central to the practice of modern medicine.

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## Review Article

### Diabetes and Oral Health in Fiji: Understanding the Two-Way Connection

**Author:** Dr. Minkwon Jung

Diabetes mellitus is one of the most pressing public health challenges facing Fiji today, and its implications extend far beyond blood sugar levels. Increasingly, medical and dental professionals recognize the strong two-way relationship between diabetes and oral health. In Fiji, where the prevalence of diabetes ranks among the highest in the world, this connection has significant consequences not only for individuals living with the disease but also for the healthcare system as a whole. This article explores how diabetes and oral health influence each other, examines the current data and trends within Fiji, and proposes integrated strategies to tackle these interconnected health issues.

Fiji's struggle with diabetes is well-documented and growing. According to the International Diabetes Federation (IDF), as of 2021, around 17.7% of Fijian adults live with diabetes, equating to nearly 100,000 people<sup>[1]</sup>. Alarmingly, the rates are even higher among adults aged 40 and over, with some studies suggesting a prevalence of 44.85%<sup>[2]</sup>. This has placed a significant burden on the nation's healthcare infrastructure. One of the most visible and tragic outcomes of poorly

controlled diabetes in Fiji is the high rate of amputations. The Colonial War Memorial Hospital in Suva recorded 938 amputations between 2010 and 2012, and by 2017, the annual number had surged to 475, including 185 cases of below-knee amputation<sup>[3]</sup>. This data illustrates not only the gravity of the diabetes epidemic in Fiji but also its complications and how they drastically reduce quality of life and life expectancy.

While diabetes is typically associated with systemic complications such as kidney failure, cardiovascular disease, and neuropathy, one area that often receives less attention is oral health. Yet dental and periodontal diseases are now being recognized as both consequences and contributors to poor diabetes control<sup>[4]</sup>. The relationship is bidirectional: diabetes increases the risk of oral health issues, and poor oral health can in turn worsen diabetes outcomes. In Fiji, where oral diseases are also prevalent, this reciprocal relationship presents a unique and urgent challenge.

Oral health in Fiji mirrors many of the issues seen in low- and middle-income countries. A 2004 national oral

health survey revealed that 88% of six-year-olds had signs of dental caries in their primary teeth, and 85% had untreated decay<sup>20</sup>. These figures remain high in more recent studies. Among urban schoolchildren aged 6 to 8 in Tiji, the prevalence of caries in primary teeth stood at 87.6%, while 46.7% were affected in permanent teeth<sup>21</sup>. Common risk factors include frequent consumption of sugary foods and drinks, poor oral hygiene practices, limited access to dental services, especially in rural areas, and low awareness of oral health prevention.

For individuals living with diabetes, the consequences of poor oral health are more pronounced. Periodontal disease, an inflammatory condition affecting the gums and supporting tissues of the teeth, is one of the most common oral health problems linked to diabetes. It is now considered the "sixth complication" of diabetes<sup>22</sup>. In a study conducted in Suva, 45% of patients with periodontal disease were also diagnosed with diabetes<sup>23</sup>. This figure strongly supports the hypothesis that high blood sugar levels impair the body's ability to fight off bacterial infections, including those in the mouth.

Diabetes also affects saliva production, leading to xerostomia, or dry mouth, which increases the risk of cavities and fungal infections like oral candidiasis<sup>24</sup>. High glucose levels in the saliva of diabetic patients create a favorable environment for pathogenic microorganisms. Additionally, individuals with poorly managed diabetes often experience slower healing after dental extractions or surgeries, increasing their vulnerability to complications. Oral infections, if left untreated, can contribute to systemic inflammation, exacerbating other complications related to diabetes.

Conversely, poor oral health can negatively impact diabetes control. Periodontal disease, being a chronic infection, stimulates the release of inflammatory markers like cytokines, which interfere with insulin sensitivity<sup>25</sup>. This biological response increases blood sugar levels, making glycemic control more difficult. In clinical settings, diabetic patients with untreated periodontal disease often require more medication. Conversely, successful periodontal treatment has been shown to improve glycemic control, reducing HbA1c levels by 0.4% to 0.6%<sup>26</sup>.

The implications of this bidirectional relationship are profound. It means that addressing only one side of the equation—either diabetes or oral health—is insufficient. In Tiji, where both conditions are widespread and often co-existing, an integrated approach is essential.

Several organizations in Tiji have started to recognize this need. Diabetes Tiji, with support from the World Diabetes Foundation, has trained over 200 nurses in

diabetic foot care, established diabetic foot clinics, and screened nearly 40,000 people<sup>27</sup>. However, oral health is not yet a standardized part of diabetes screening or management protocols in most clinics.

On the oral health front, the Tiji Ministry of Health and Medical Services has implemented public education campaigns promoting tooth brushing, sugar reduction, and routine dental check-ups. Mobile dental services and school-based programs have helped to reach rural and underserved populations<sup>28</sup>. Nevertheless, oral health remains a relatively low priority in the broader public health agenda.

One of the challenges in Tiji is the gap between medical and dental services. Physicians and dentists often work in silos, making it difficult to manage patients holistically. Integrating oral health into diabetes care requires systemic changes: training healthcare providers to recognize oral symptoms, standardizing oral screenings in diabetic clinics, and encouraging medical-dental referrals<sup>29</sup>.

Another barrier is cultural and social context. In many Tijian communities, traditional remedies coexist with modern practices. Some may delay seeking professional care in favor of spiritual or herbal approaches. Additionally, communal dietary habits, including feasting and sugary drinks, contribute to both diabetes and dental caries<sup>30</sup>. Health education campaigns must be culturally sensitive and involve community leaders.

Health literacy is another concern. Many Tijians, particularly in rural areas, lack understanding of the link between oral and systemic diseases. Education must be multilingual (English, Tjijian, and Hindi) and use simple language and visual tools.

To address the dual burden, an integrated healthcare model is needed: joint screenings, shared records, and cross-trained healthcare workers. Community outreach and school programs can educate children and families alike. Policymakers must incorporate oral health into national NCD strategies, and schools should adopt interdisciplinary curricula<sup>31</sup>.

Research must continue to guide these efforts. More local studies are needed, beyond Suva, especially in rural and maritime regions, to measure the impact of integrated interventions over time.

In conclusion, the relationship between diabetes and oral health is not only scientifically established but deeply relevant to Tiji. Recognizing this interactive allows healthcare professionals and communities to implement holistic and effective strategies. The fight against diabetes cannot succeed without addressing oral health—and vice versa.

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## Case Study

### Risk Factors for Klebsiella Pneumoniae Pneumonia

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#### Abstract

Commonly, Klebsiella Pneumoniae is an important cause of community-acquired pneumonia. However, in US, people with alcoholism are the main population at risk and they constitute 62% of people affected by this disease. Mortality rates are as high as 50% & approach 100% in people with alcoholism and bacteraemia. Studies conducted in Japan and Malaysia estimate the incidence rate in elderly person to be 15–10% which is equal to that of Hemophilus influenza.

The genus Klebsiella belongs to the tribe Klebsiella, a member of the family Enterobacteriaceae. Klebsiella are non-motile, rod-shaped, gram-negative bacteria with a prominent polysaccharide capsule. The capsule encases the entire cell surface, accounts for the large appearance of the organism on the gram stain and provides resistance against many host defence mechanisms.

#### Case Details

**LS**, a 37-year-old female presented to the hospital with complaints of cough and right-sided chest pain over the preceding two days prior to assessment.

#### History of Present Illness

According to patient, she developed dry cough 2 days prior to presentation which was associated with

intermittent fever at home. On the second day she developed a wet cough and fever continued despite regular 6 hourly paracetamol. She reported reduced appetite and right-sided chest pain which worsens when she coughed. Chest pain had remarkably worsened over the preceding 24 hours. She denied experiencing shortness of breath, fatigue, chills and rigors.

#### Past Medical History/ Drug history

Unremarkable for any known medical conditions and allergies.

#### Social history

She is a smoker whereby she smoked at least 4 cigarette rolls per day for the past 15 years which makes it 13 pack year. Mrs LS consumed some alcohol and kava socially.

#### Physical Examination

**General:** Sick looking, middle-aged female. However nil obvious respiratory distress and conversing in full sentences.

**Vital Signs:** BP-115/74, HR-117, RR-9, T-37.1 & SpO<sub>2</sub>-99% in room air.

**HEENT:** mild pallor of conjunctiva noted.

**Respiratory:** crepitation heard on the right side of chest with dullness to percussion on right mid to lower zone. Chest expansion remained equal.

**Cardiovascular:** Heart sounds were regular with no murmurs.

**Extremities:** no clubbing noted. Well perfused extremities.

**Diagnostic Test (Relevant result):**

**Chest X-ray** revealed right sided middle lobe consolidation with fissure bulge sign indicative of **K. Pneumoniae Pneumonia**.

**FBC-WBC-12,400, Hb-125g/L, PLT-288k/L**

**CRP-155 mg/L**

**Sputum-**unable to obtain good quality sputum sample.

**Blood Culture-**no growth noted in 48 hours.

**Renal/ Liver/ Electrolyte** test remained within normal range.

### Diagnosis

In light of the chest x-ray finding with history of smoking she was diagnosed as having Community Acquired Pneumonia with high suspicion of *K. Pneumoniae*.

### Management Plan

**Antibiotic therapy** a broad-spectrum antibiotic ceftriaxone 2g IV twice daily was initiated with doxycycline 100mg oral twice daily. Since sputum was not collected due to poor collection, the patient continued with above antibiotics.

**Supportive care-**Hydration was ensured with frequent review of electrolyte, CRP, renal and LFT. Chest physiotherapy was also involved in patient care to enhance airway clearance as needed.

One patient was clinically stable with repeat chest x-ray showing improvement, she was discharged on oral Augmentin for 5 more days and had review post completion of antibiotics.

### Discussion

This case highlights the role of risk factors- chronic smoker and chronic alcoholism that predispose patients to *Klebsiella pneumoniae* infections.

Infection with *Klebsiella* organisms occur in the lungs, where they cause destructive changes. Necrosis, inflammation and haemorrhage occur within lung tissue, sometimes producing a thick bloody mucoid sputum. In radiography, *K. Pneumoniae* often produces a lobar pneumonia that is similar to *Streptococcus pneumoniae*. However, there is predilection for involvement of posterior segment of the right upper lobe with bowing of the fissure downward due to intense consolidation which leads to the bulging fissure sign.

The rate of infection with *Klebsiella Pneumoniae* increases in individuals with impaired host defenses example diabetes mellitus, malignancy, people undergoing chemotherapy, long term antibiotic use, hepatobiliary disease, chronic obstructive pulmonary disease, glucocorticoid therapy and renal failure. Additionally, lifestyle factors such as alcohol consumption and chronic smoking are also considered as one of the rising risk factors for *K. Pneumoniae*.

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## Case Study

### A Case Report of PNES in a Young Female: Diagnostic and Management Challenges

**Author:** Dr. Anushka Prasad

#### INTRODUCTION

Psychogenic nonepileptic seizures (PNES), also known as functional or dissociative seizures, are episodes that mimic epileptic seizures but are not associated with abnormal electrical activity in the brain. They are a form of functional neurological disorder and often arise in response to psychological stress.

PNES is most commonly seen in adolescents and young adults, especially females, and can be difficult to distinguish from true epileptic seizures—particularly in acute or unfamiliar settings where access to neurological diagnostics is limited. Misdiagnosis may lead to unnecessary treatment with antiepileptic drugs and increased emotional distress.

This report discusses a case of a 16-year-old European female who developed seizure-like activity while on a school trip to rural Fiji. The unfamiliar environment, sudden onset of symptoms, and limited diagnostic tools posed unique challenges in distinguishing between epileptic and psychogenic events. This case highlights the importance of a thorough clinical evaluation, cultural sensitivity, and the role of contextual stressors in the manifestation of PNES.

## PATIENT INFORMATION

**Age:** 16 years  
**Gender:** Female  
**Ethnicity:** European

**Medical History:** No known medical comorbidities; no previous neurological, psychiatric, or systemic illnesses.

**Travel History:** Travelled from Europe to Fiji for a school cultural immersion trip; had been residing in a remote Fijian village for one week prior to presentation.

**Chief Complaint:** Sudden onset of seizure-like activity (abnormal shaking and eye rolling) within a span of 1 hour.

**Duration of Symptoms:** 1 day of prodrome (weakness, headache and reduced appetite), followed by multiple episodes of abnormal movements.

### Systemic Examination

**General Appearance:** Alert and oriented between episodes

**Vitals:** Stable; within normal range for age

### Neurological Examination:

- Cranial nerves: Intact

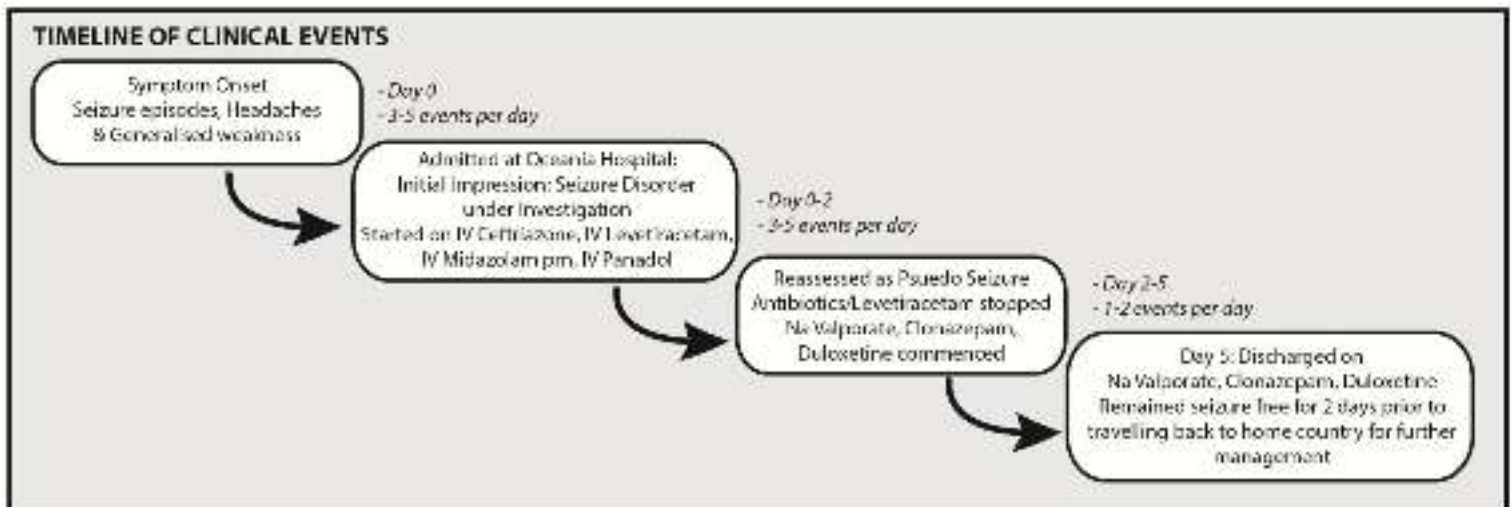
- Motor and sensory systems: Normal tone, power 5/5, reflexes normal
- Coordination and gait: Normal
- No signs of meningism or focal neurological deficit
- Other Systems: Cardiovascular, respiratory, and gastrointestinal examinations unremarkable

## Diagnostic Assessment

**Initial Impression:** Seizure disorder under investigation

### Available Diagnostics:

- Basic Bloods Normal CBC, electrolytes, minerals, sugar levels
- CSF Analysis: Normal
- EEG: Not available; recommended upon return to home country
- MRI Brain: Normal
- Urine Drug Test: Normal
- Observational Clues Suggesting PNES:
  - Episodes occurred in a high-stress environment (away from home, cultural dislocation)
  - No postictal confusion
  - Preserved consciousness in some episodes
  - Closed eyes during events
  - Lack of response to typical seizure-provoking stimuli (e.g., pain stimulus, calling name)
  - Neurological exam completely normal



### Therapeutic Intervention

- **Acute Management:** *Initially treated at Ocsana Hospital with intravenous medications including ceftriaxone (empiric antibiotic), levetiracetam (antiepileptic), midazolam as needed for acute episodes, and IV paracetamol for headache relief.*
- **Supportive Care:** *Reassurance and environmental control were maintained, patient closely observed.*
- **Psychological Support:** *Supportive conversations were held with the patient.*
- **Plan:** *Travel back to home country for further evaluation. EEG to make a definitive diagnosis of PNES vs others.*

### Outcome:

At the time of discharge, the patient's condition has significantly improved with no recurrence of episodes. Emotional support and reassurance appeared to have a therapeutic effect.

### Discussion

PNES often presents in adolescents under psychosocial stress, and this case underscores the complex interplay between psychological factors and physical manifestations. The patient's exposure to a new cultural environment, separation from family, and the rigors of travel likely served as emotional triggers.

The diagnostic process in PNES relies heavily on detailed clinical evaluation, particularly when advanced investigations are not available. Recognition of hallmark features—such as absence of postictal confusion, atypical motor patterns, and preserved awareness—can help differentiate PNES from epileptic seizures.

Management of PNES centres around education, reassurance, and addressing underlying psychological factors. Inappropriate use of antiepileptic drugs or repeated emergency interventions can exacerbate patient anxiety and delay recovery. A multidisciplinary approach involving neurology and mental health services is ideal for long-term care.

This case also highlights the importance of cultural sensitivity and awareness of how environmental stressors can influence adolescent health, particularly during travel. Effective communication and supportive care in a safe environment led to resolution without pharmacologic intervention.

### Clinical Peculiarities

- Presentation in a setting without access to EEG or imaging.
- First seizure-like episode occurring in a foreign environment, suggesting a strong psychosocial trigger.
- Absence of prior medical history, making the event alarming to caregivers and staff.
- Rapid improvement with simple supportive care and psychological reassurance.
- Importance of non-pharmacologic management and education of caregiver.

### CONCLUSION

This case highlights the diagnostic and therapeutic challenges of managing PNES in adolescents, particularly in remote or unfamiliar settings. A calm, supportive environment and a strong clinical acumen are crucial in making the diagnosis and avoiding unnecessary interventions. Early identification and referral for psychological support can lead to excellent outcomes, as seen in this patient. Greater awareness among healthcare providers, educators, and caregivers is essential to effectively manage such presentations and reduce the stigma associated with functional neurological disorders.

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# Report

## Transform Healthcare-Leadership through Learning and Innovation

**Author:** *Dr. Shritika Swami*

The healthcare sector faces increasing pressure to deliver high quality, patient centred care while managing costs, staff shortage and rapid technological changes. In this environment transformative leadership rooted in continuous learning and innovation is essential. The 3 day course by Fiji National University in collaboration with The Royal Children's Hospital Melbourne and The University of Melbourne explored how healthcare organizations can evolve through strategic leadership, embracing innovation and a culture of learning to improve outcomes and efficiency.

The first day of the course highlighted leadership goals and role. Leadership is more than just a position of authority, it is an art of motivating, influencing and guiding individuals or group towards achieving shared goals. The 5 practices of leadership include the following:

- *Model the way*
- *Inspire a shared vision*
- *Challenge the process*
- *Enable others to act*
- *Encourage the heart*

Effective leaders not only follow above but promotes clear communication, mutual respect and “knows” the team to achieve a shared vision. It is imperative to be aware that a team can be made of different nature of people, it can be a combination of relater, builder, adventurer and/or planner. Regardless of each having its own qualities and setbacks, the team can still succeed in achieving the goal.

Additionally, being a leader in change (Leading change) is hard because in every change someone will be at a loss. Leading the change process involves initiating a change, developing a strategy and executing the change. A change is effective when a leader practices above and has good communication and commitment.

Continuous learning in healthcare is essential as it ensures that one stays current with best practices,

reduce errors and improve outcomes. The 4 pillars enabling learning include:

- **Feedback**- constructive information shared about performance or behaviour aimed at improvement.
- **Coaching** a structured supportive process that helps individuals develop skills, reach goals and enhance performance.
- **Reflective practise** critically analysing one's action and decisions to learn and improve.
- **Debriefing** a guided discussion after an event, simulation or procedure to review actions, outcomes and areas for improvement.

Together, feedback, coaching, reflective practise and debriefing create a powerful framework for both individual and team development. They cultivate a culture of openness, accountability and continuous learning which is the key ingredient for excellence in healthcare, education, leadership and beyond.

Healthcare leaders with clear vision and strategic thinking are essential for identifying areas of improvement and setting achievable goals. Once the improvement area is identified, the healthcare professionals are motivated to embrace the change and to contribute ideas. Empowered teams are more likely to adopt new practises and sustain innovation, hence the need to practise good leadership skills.

In conclusion, good leadership skills and a commitment to learning are not optional in healthcare, they are rather essential. Together, they shape a health system that is responsive, resilient and capable of continuous improvement. By cultivating visionary collaborative and learning focused leaders, health system can drive meaningful, lasting change for patients, staff and society.

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# Opinion / Update

## Ethical Review: DNR

**Author:** Dr. Neil Sharma

End-of-life care presents profound ethical challenges, particularly concerning decisions around Do Not Resuscitate (DNR) orders, euthanasia, and life support. These issues involve balancing patient autonomy, medical ethics, cultural values, and legal frameworks.

### Do Not Resuscitate (DNR)

DNR orders are directives to withhold cardiopulmonary resuscitation (CPR) in the event of cardiac or respiratory arrest. They respect patient autonomy, allowing individuals to decline aggressive interventions that may not improve quality of life. However, ethical dilemmas arise when patients cannot communicate their wishes, leading to reliance on advance directives or surrogate decision makers. Healthcare providers may also struggle with the emotional and moral implications of honouring DNR orders, especially when family members disagree with the decision.

### Euthanasia and Physician-Assisted Suicide (PAS)

Euthanasia involves intentionally ending a patient's life to alleviate suffering, while PAS provides the means for patients to end their own lives. Globally, these practices are contentious and vary widely in legality and acceptance<sup>1</sup>.

- **Permissive Jurisdictions:** Countries like Belgium, the Netherlands, and Canada have legalized euthanasia and PAS under strict conditions, emphasizing patient consent and terminal illness. These laws aim to respect autonomy and relieve suffering but raise concerns about potential abuses and the moral burden on healthcare providers<sup>2</sup>.
- **Restrictive Jurisdictions:** Many nations, including those with strong religious or cultural objections, prohibit euthanasia and PAS, viewing them as ethically unacceptable. Opponents argue that these practices undermine the sanctity of life and could lead to vulnerable individuals feeling pressured to end their lives prematurely<sup>3</sup>.

### Life Support in Acute and Chronic Settings

Life-sustaining treatments, such as mechanical ventilation, present ethical challenges in both acute emergencies and chronic conditions.

**Acute Situations:** In emergencies, initiating life support can be lifesaving. However, determining when to withdraw support if recovery is unlikely

involves complex decisions about medical futility, patient wishes, and quality of life.

**Chronic Conditions:** For patients with long-term dependence on life support, questions arise about the burdens of prolonged treatment, potential suffering, and the patient's previously expressed desires. Advance directives and palliative care consultations are crucial in guiding these decisions.

### Global Perspectives

Cultural, legal, and ethical views on end-of-life issues differ worldwide:

- **Western Countries:** Emphasis on individual autonomy has led to broader acceptance of advance directives and, in some cases, legalized euthanasia or PAS<sup>4</sup>.
- **Religious and Traditional Societies:** In regions where religious or cultural norms prioritize the sanctity of life, there is often resistance to practices like euthanasia, with a focus on palliative care and natural death.
- **Developing Nations:** Limited healthcare resources and varying legal frameworks can complicate end-of-life care, with less formalized systems for advance directives or palliative services.

### Ethical Principles

Key ethical principles guiding end-of-life care include:

- **Autonomy:** Respecting patients' rights to make informed decisions about their care.
- **Beneficence:** Acting in the best interest of the patient to promote well-being<sup>5</sup>.
- **Non-Maleficence:** Avoiding harm to the patient, including unnecessary or burdensome treatments<sup>6</sup>.
- **Justice:** Ensuring fair access to care and equitable treatment decisions.

Navigating the ethical complexities of death and dying requires careful consideration of individual values, cultural contexts, and legal standards. Ongoing dialogue among healthcare providers, patients,

families, and policymakers is essential to address these sensitive issues compassionately and ethically. The legal interplay between a patient's right to refuse medical treatment and a physician's duty to preserve life is complex and varies across jurisdictions. However, in many legal systems, patient autonomy, particularly the right to informed consent and refusal of treatment, is a fundamental principle.

#### Legal Precedence of Patient Autonomy

In the United States, the landmark case *Cruzan v. Missouri Department of Health* (1990) affirmed that competent individuals have a constitutionally protected liberty interest in refusing unwanted medical treatment, grounded in the doctrine of informed consent. This principle underscores that patients can decline medical interventions, even if such refusal may result in death.<sup>11</sup>

Similarly, the European Court of Human Rights has upheld the primacy of patient autonomy. In a 2004 ruling, the court determined that Spanish doctors violated the rights of a Jehovah's Witness by administering blood transfusions against her explicit wishes, emphasizing the importance of respecting patients' decisions, even in life-threatening situations.

#### Exceptions and Considerations

While patient autonomy is a cornerstone of medical ethics and law, exceptions exist:

- **Incapacity:** If a patient is deemed incompetent to make informed decisions, healthcare

providers may intervene based on the patient's best interests or advance directives.

- **Public Health Concerns:** In cases where individual refusal of treatment poses a significant risk to public health, authorities may impose certain treatments.
- **Emergency Situations:** In emergencies where consent cannot be obtained, physicians may provide necessary treatment to preserve life.

#### Conclusion

Generally, the law prioritizes patient autonomy over the physician's duty to save life, recognizing the individual's right to make informed decisions about their own body and treatment. However, this precedence can be influenced by factors such as the patient's decision-making capacity, public health implications, and emergency contexts.

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## Medico-Political

### Model Healthcare Policy for Private-Public Partnership (PPP) in a Middle-Level Developing Country.

**Author:** Dr. Neil Sharma

#### 1. Introduction

The healthcare sector in developing countries faces numerous challenges, including limited resources, infrastructure deficits, and access disparities. A Private-Public Partnership (PPP) approach can optimize resource utilization, improve healthcare service delivery, and ensure sustainability. This policy outlines a strategic framework for implementing a PPP healthcare model in a middle-level developing country.

#### 2. Objectives

- Strengthen healthcare infrastructure through collaborative investments.
- Enhance access to affordable and quality healthcare services.
- Encourage private sector participation in public healthcare delivery.

- Improve efficiency in service delivery and resource management.
- Establish a sustainable financing mechanism for healthcare services.

### 3. Governance Structure

#### 3.1 Public Sector Responsibilities

- Develop regulatory frameworks and oversee policy implementation.
- Provide financial support and infrastructure development.
- Ensure quality control and compliance with national health standards.
- Monitor and evaluate performance indicators.

#### 3.2 Private Sector Responsibilities

- Invest in healthcare facilities, technology, and human resources.
- Deliver efficient healthcare services in collaboration with public institutions.
- Innovate healthcare solutions to address local health challenges.
- Comply with national regulations and service quality benchmarks.

#### 3.3 Joint Responsibilities

- Share financial risks and rewards through contractual agreements.
- Develop and implement training programs for healthcare professionals.
- Collaborate on research and development initiatives.
- Ensure equitable access to healthcare for all population segments.

### 4. Financing Mechanism

- **Public Funding:** Government allocations, tax revenues, and donor assistance.

- **Private Investment:** Corporate investments, social enterprises, and impact funds.
- **Health Insurance:** Expansion of national and private insurance schemes.
- **Cost-sharing Models:** Affordable user fees with exemptions for vulnerable groups.

### 5. Service Delivery Model

- **Primary Healthcare:** Community health centres co-managed by public and private entities.
- **Secondary & Tertiary Care:** Government hospitals with private sector expertise and technology.
- **Specialized Services:** Private sector investment in high-end diagnostic and treatment facilities.
- **Telemedicine & Digital Health:** Public-private collaboration in telehealth platforms.

### 6. Regulatory and Legal Framework

- Establish clear legal provisions for PPP agreements in healthcare.
- Define operational standards, accountability measures, and dispute resolution mechanisms.
- Develop monitoring bodies to assess the effectiveness and sustainability of PPP initiatives.

### 7. Monitoring and Evaluation

- Establish key performance indicators (KPIs) for service quality, accessibility, and efficiency.
- Conduct periodic assessments and audits of PPP healthcare programs.
- Engage independent evaluators to ensure transparency and accountability.

### 8. Conclusion

This PPP healthcare policy for Fiji aims to enhance healthcare service delivery through strategic collaboration between the public and private sectors. By leveraging shared resources, expertise, and innovation, this model will contribute to a resilient, inclusive, and sustainable healthcare system that meets the unique needs of Fiji's diverse population.

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# Letter to the Editor

## **Diabetes (Fiji)**

**Author:** Dr. Abdul Wahid Khan

Documented medical research in Fiji took on a strong and positive foothold in the 1960s. With support of politician giants like Ratu KKT Mara and classically supported by prominent private-sector entrepreneur, Mahendra Patel and not withholding the unremitting clinical and research skills of Dr. Parshu Ram, the Diabetic Centre was established in the 1970's after much professional discourse.

The Centre served well to train dietitian, nurses, doctors in the management of diabetes as it was an expanding and the leading non-communicable disease, raising its ugly shadow in Fiji thanks to our changing appetite for western food and lifestyles.

The development of "Diabetic Hubs" was orchestrated in 2009 as a "one stop shop" for screening, preventative and optimization of diabetic care aligned on Singaporean models. Further training of nurses in foot care, dietitians to optimizing the dichotomy of the evolving food habits, fads and sedentary lifestyles needed much attention. The development of the "Prosthesis center" was to compliment the "Hub" concept.

Unfortunately, the spread of the "Diabetic Hub" concept which affords much better care compared to the rushed SOPD clinics is appreciated by patient clients, has not been followed through in the last 10 years into subdivisional level precincts and practice, as was anticipated.

The Diabetes Foundation and its board has not been pro-active enough and independent of the Ministry of Health and Medical Services, to widen its fields of activities in the Fijian communities. The board needs to act independently, complimenting the support of the ministry but proactive on its own standing to source funding, technology and professional expertise, to act and react to an existential crisis.

Newer modelling of holistic diabetic care is needed. Monitoring of current service delivery, innovative policy directives and services is long overdue and warranted as the pattern of diabetes mellitus and its complications are responsible for premature morbidity and mortality in Fiji. Act now or the NCD crisis will get you and your kin.

Your sincerely,

**Dr. Abdul Wahid Khan**  
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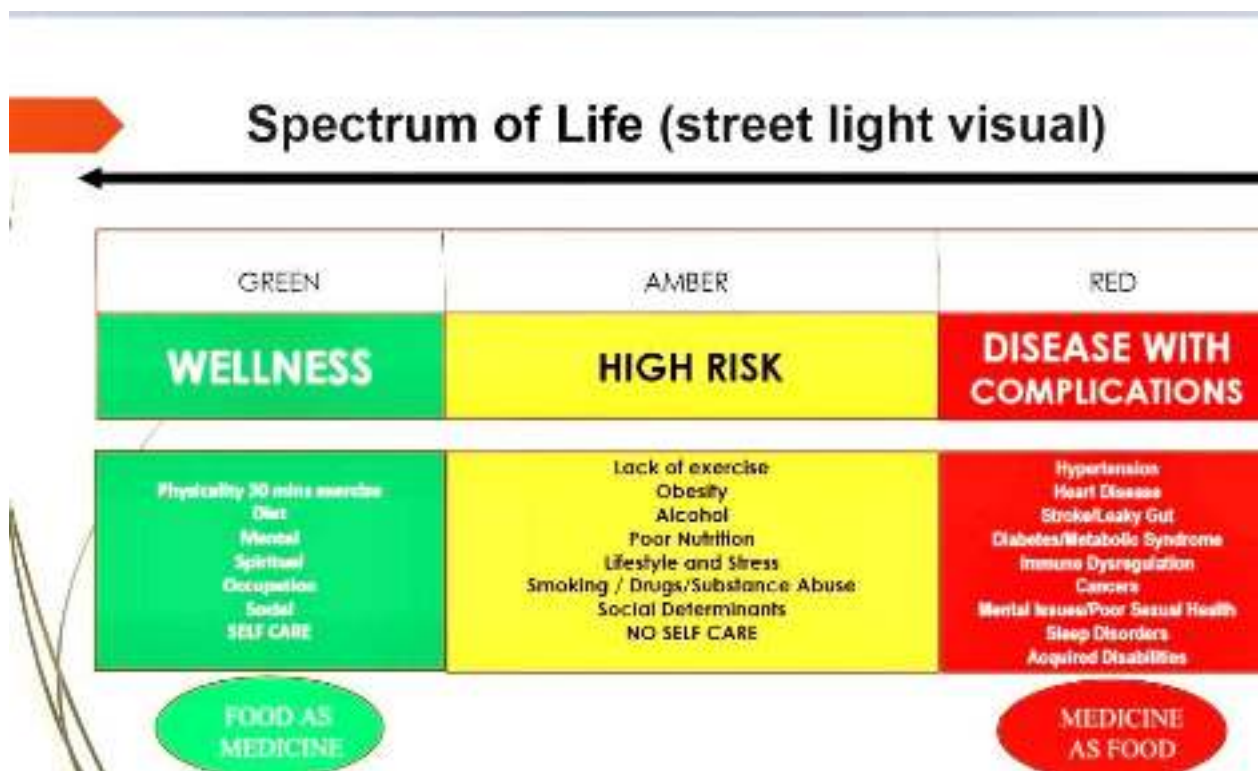
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# Your Referral

# HOSPITAL




## HOSPITALS

### SPECIALTIES & SERVICES

- ✓ **CARDIOLOGY**
- ✓ **CATH LAB**
  - Angiogram
  - Stenting
- ✓ **CARDIO THORACIC SURGERY**
- ✓ **NEUROSURGERY**
- ✓ **ORTHOPEDIC SURGERY**
- ✓ **PLASTIC SURGERY**
- ✓ **DERMATOLOGY**
- ✓ **PHYSIOTHERAPY**
- ✓ **LABORATORY SERVICES**
- ✓ **RADIOLOGY SERVICES**
  - CT Scan (Including Contrast Scan)
  - Ultrasound
  - X-Ray
- ✓ **GENERAL SURGERY**
- ✓ **UROLOGY**
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- ✓ **INTERNAL MEDICINE**
- ✓ **GENERAL ANESTHESIA**
- ✓ **DIETETICS**
- ✓ **MANY MORE...**

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**892 2241**

#### Suva

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Walu Bay, Suva

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Volume: 02 | Issue: 02  
15th June 2025

ISBN 978-982-101-812-8



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