

Study Title:

SIMPLe – Screening Intervention for Myeloma and Prevention of Lifestyle Diseases Study

Location:**Institution:**

Armed Forces Medical College (AFMC), Pune
Departments of Community Medicine and Internal Medicine
Kasurdi, Western Maharashtra – a rural agrarian village

Background:

With non-communicable diseases (NCDs) accounting for 41 million deaths annually—77% of which occur in low- and middle-income countries—India is experiencing a dramatic epidemiological shift. NCDs now comprise over 55% of the total disease burden in the country.

Rural populations, despite their physically active lifestyles, are not insulated from the metabolic and cardiovascular consequences of modern risk factors like poor diet, stress, and undiagnosed illnesses. Unfortunately, public health efforts continue to focus heavily on communicable diseases in rural settings, overlooking the silent surge of NCDs.

Objectives:

- To assess the prevalence of key NCDs including diabetes, hypertension, obesity, anemia, and hematological malignancies such as MGUS (Monoclonal Gammopathy of Undetermined Significance).
- To enhance early detection and healthcare access in rural populations.

Methodology:

- **Design:** Descriptive cross-sectional study
- **Population:** 856 residents aged 45 years and above
- **Tools:** Kobo Toolbox (sociodemographic data), proformas (clinical history), anthropometry, digital BP machines, and lab analysis
- **Teams:** 6 field teams with ASHA workers, PG residents, UG cadets, and lab technicians

- **Laboratory Investigations:** HbA1C, CBC, Beta-2 microglobulin, Serum Protein Electrophoresis (SPEP), Total Protein

Discussion:

- Compared to older studies (Deo et al., 2006 and ICMR INDIAB 2011), the prevalence of diabetes and hypertension in SIMPLe was significantly higher.
- Obesity rates have risen from 36.7% (2018 study) to 42% in Kasurdi.
- MGUS findings align with Asian data but are lower than Western countries (3–5%).

A Way Forward

- Annual screenings with expanded panels (e.g., tumor markers)
- IMAGE has adopted the 15 MGUS cases for long-term care
- Funding support sought from ALVL Foundation and SERB grants

Conclusion:

The SIMPLe study uncovers the silent epidemic of non-communicable diseases sweeping through rural India. By screening 856 villagers, implementing family adoption, and leveraging digital health (ABHA), this initiative sets a benchmark in preventive rural healthcare. The road ahead lies in early detection, continuity of care, community empowerment, and systemic policy changes.