

These patients become caretakers and leaders within their social and familial networks.

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### Tele Radiology services between rural districts and state capital Bangalore, India, a cost effective, sustainable health care project for rural areas

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**Introduction:** There is a significant scarcity of CT scanners and Radiologists in rural districts of India. All road traffic accident cases with clinical suspicion of head injuries need to be transported to state capital, Bangalore, for proper diagnosis and treatment. Most of the times patients without any need of surgical intervention, are also transported un-necessarily, because CT scans and radiological interpretation were not available. Tele Radiology services ensure emergency services.

**Aim:** The impact of Health Care in rural districts after installation of CT scanner and online Tele Radiology services.

**Methods:** This is a retrospective study on impact of Tele Radiology in rural district of Chikamagalur, 150 miles from Bangalore. Whole body Helical CT scanner was installed in the rural district and on line Tele Radiology services were provided by Siddhartha University Bangalore. A comprehensive study of head injury cases referred from the rural center to tertiary Neurosurgery Hospital in Bangalore, from Aug 2006 to Aug 2015 (10 yrs.) is included in the study group. The study is undertaken by SDM Medical College, Sri Siddhartha University, Tumkur.

### Findings:

	Not			Remarks
	Patient	Transported	transported	
No Intracranial Injury	1763	0	1763	Soft tissue injuries in 65%.
Insignificant injury/ bleed	916	0	916	Minor intra/ extra axial bleeds.
Significant, but non-surgical intracranial hemorrhages	423	170	253	Significant intra axial and sub arachnoid bleeds, no surgical indications. However 40% were transported to tertiary care centers on patient request.
Significant bleed	424	424	0	All are referred to state capital.
Total	3526	594	2932	83.15% were not referred to state capital

**Interpretation:** Our study shows that, because of timely CT scanning and reporting, it was not necessary to transport 83% of head injury patients. 12% with intracranial bleed were transported immediately and had timely surgical care. 5% with moderate intra parenchymal hemorrhage, without surgical indication, were transported on request. Tele Radiology services between rural districts and state capital is a cost effective health care technological innovation to prevent un-necessary transportation of head injury patients to tertiary care centers.

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### Dietary patterns and obesity in Nepal

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**Background:** About one-fourth of Nepalese adults are estimated to be overweight or obese. No studies have examined the risk factors for obesity, especially pertaining to diet, in Nepal. The present study aimed to identify dietary patterns in a suburban Nepalese community and assess their association with overweight and obesity prevalence.

**Methods:** This cross-sectional study utilized data from the 1,073 adults (18 years or older) participating in the baseline survey of the Dhulikhel Heart Study. We derived major dietary patterns from the dietary intake using a validated food frequency questionnaire by using principal component analysis. Overweight was defined as BMI of 25 kg/m<sup>2</sup> or higher and obesity was defined as BMI of 30kg/m<sup>2</sup> or higher. Weight was measured using an Omron Model HBF-400 scale and recorded to the nearest 0.1 pounds. Height was measured using a standard tape with participants standing against a wall and recorded to the nearest 0.1cm. Statistical analysis was conducted using the generalized estimating equation (GEE) with multivariate logistic regression (with household as cluster) adjusting for age, sex, ethnicity, religion, marital status, income, education, alcohol consumption, smoking, physical activity, and systolic blood pressure.

**Findings:** Four dietary patterns were derived: mixed, fast food, refined grain-meat-alcohol, and solid fats-diary. The refined grain-rice-alcohol pattern was positively associated with overweight (aOR 1.19, 95% CI: 1.03 – 1.39; p =0.02) after adjusting for demographic and traditional cardiovascular risk factors. We found a significant interaction between age and the fast food pattern in association with obesity (p=0.01) and overweight (p=0.01). In adults of 40 years or older, the fast food pattern was positively associated with obesity controlling for demographic and traditional risk factors (aOR 1.69, 95% CI: 1.19- 2.39; p-value = 0.003).

**Interpretation:** Our results suggest that refined grains-meat-alcohol intake is associated with higher prevalence of overweight, and fast food intake is associated with higher prevalence of obesity in older adults (40 years or above) in suburban Nepalese adults.

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