

**Internship
at
R.D Gardi Medical College, Ujjain
ARCADE, Department**

**Submitted By
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Introduction

Internship is a part of the second year program, where we have to observe, adapt to the work culture of organization and assigned role and deliver as per the responsibilities of the designated post. It is necessary to participate in various departmental activities so we can orient our self with the way the department works at ground levels which gives us first hand exposure of the real job. Internship is the process, through which we understand process of work and thereafter involve ourselves in decision making.

I am appointed as Assistant Programme Manager (APM) –APRIAM Project, R D Gardi Medical College Ujjain.

APRIAM Project is a project under Antibiotic Stewardship programme. It's a cohort study to identify the antibiotic resistance in *E.coli* isolates extracted from the stool samples of children of 1-3 years of age.

Fecal *E. coli* is regarded as a useful indicator of the spread of acquired antibiotic resistance genes in the community. Commensal *Escherichia coli* can act as reservoirs of resistance genes in the human gut. These resistant genes might be rapidly transferred to other commensal or pathogenic organisms. Limited research has been done with regards to antibiotic resistance in *E. coli* among Indian children. In the few studies conducted, wide variation has been demonstrated in resistance rates of *E. coli* isolates from reportedly healthy children

Objective of Internship

- 1) To understand the structure of the organization and effectively contribute to the smooth functioning of the organization.
- 2) To learn various managerial and administrative skills needed to work in a Medical and Research institute.
- 3) To ensure effectively implementation of activities under the project APRIAM.

PROFILE OF UJJAIN CHARITABLE TRUST AND HOSPITAL

Ujjain Charitable Trust Hospital and Research Centre (UCTH) is one of the not for profit charitable trust in Ujjain established in the 2001. Trust is fully dedicated in providing health care services, special focus in rural areas with sophisticated diagnostic and therapeutic equipments from last thirteen years. The trust runs two super specialty tertiary hospitals with a bed capacity of 1020 along with health extension services in urban and rural areas. UCTH with 450 beds is also involve in various basic, fundamental and applied medical research relating to surgical, clinical, public health and socio-medical areas.



PROFILE OF R D GARDI MEDICAL COLLEGE, UJJAIN

The Ujjain Charitable Trust Hospital and Research Centre run first and one of the most reputed private medical colleges in Madhya Pradesh named Ruxmaniben Deepchand Gardi Medical College with high academic standards for providing excellent medical education and research work. The medical college provides education to medical undergraduate and postgraduate education in all major specialties. Various paramedical courses in the field of nursing, physiotherapy etc are also provided by the medical college with facility of a good modern hospital equipped with sophisticated diagnostic & therapeutic equipments where all the services are provide free for everyone.

UCTH and RDGMC have an active research and training program in collaboration with other national and international universities and institutions. The main focus of institution is the public health research. The college research interests are diverse, Main research areas are:

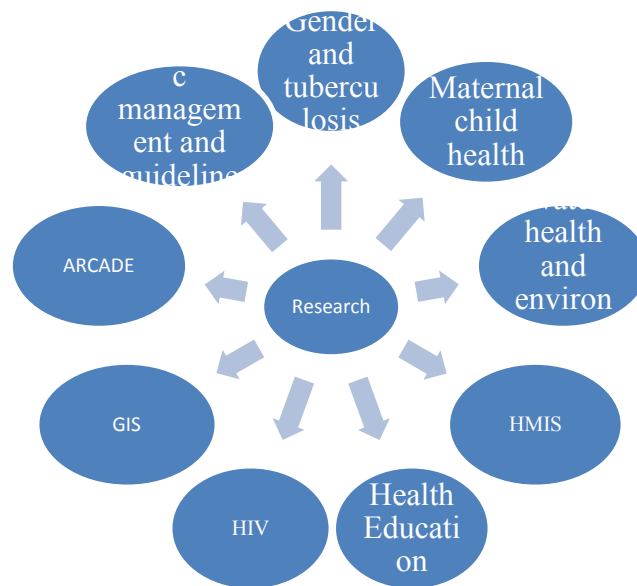
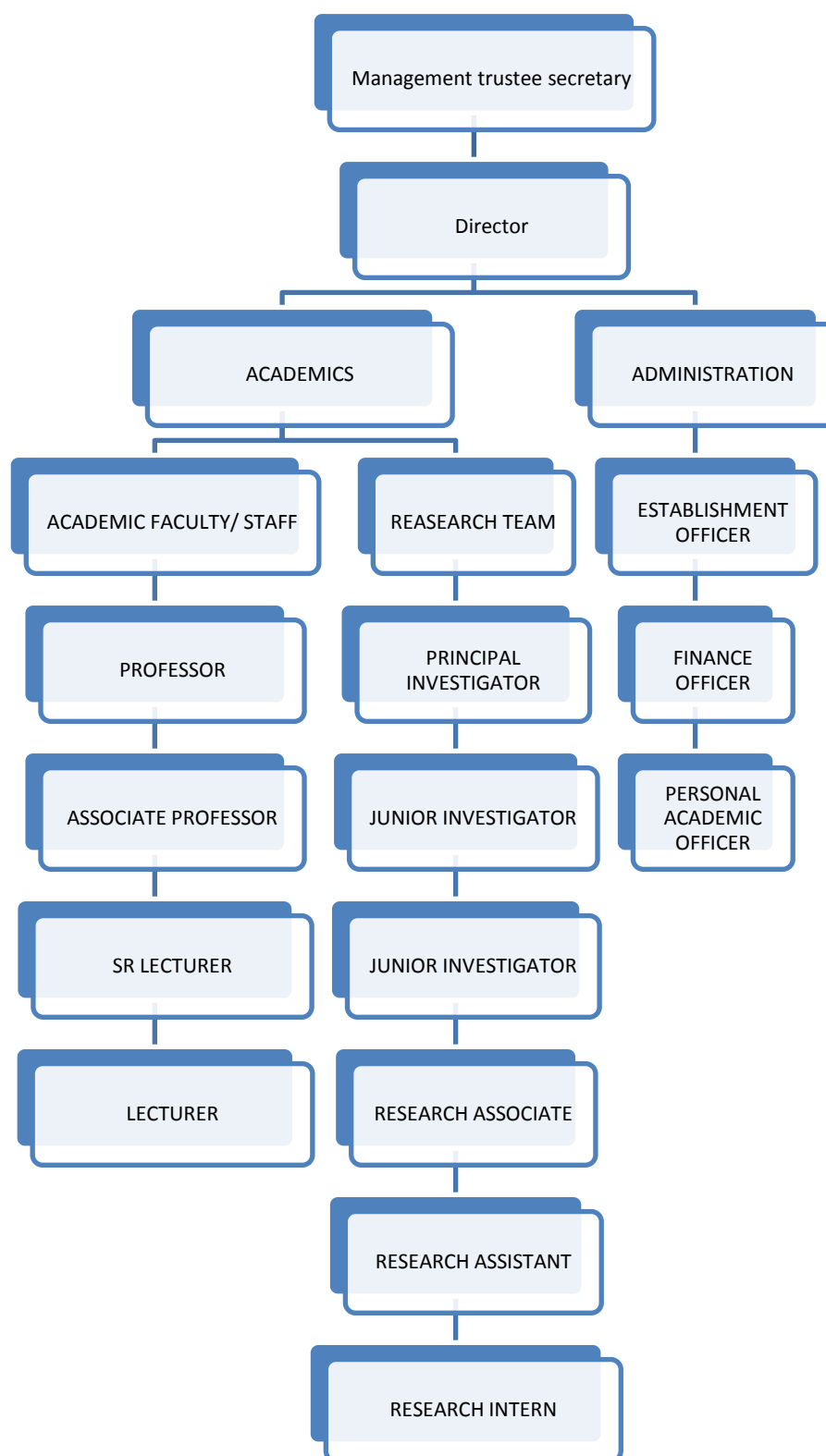


Fig 2: List of research activities carried in R D Gardi Medical College, Ujjain

RDGMC has had previous research collaborations with the Karolinska Institutet, The Nordic School of Public Health, and Centre for International Health (Bergen, Norway). The college has particularly worked in collaboration with the provincial government to develop a GIS to map healthcare providers in the province. Expertise exists in conducting large-scale field surveys, evaluation & performance studies and both qualitative and quantitative research. (Publications and other information).

Organization structure of RDGMC:



Management structure of RDGMC, Ujjain

About the APRIAM Project

Under APRIAM project there is undergoing a study on “**Molecular epidemiology of antibiotic resistance genetic markers in *E. coli* isolates present in the faecal flora of children aged 10 months to 5 years of age in Ujjain, Central India – a community based cohort study with supplementary information from environment**”.

Objectives

- To determine the prevalence of antibiotic resistance and pattern of resistance in *E. coli* in the fecal flora in a cohort of children 10 months to 5 years age
- To determine the prevalence of ESBL (including carbapenemase) producers over time in a cohort of children 10 months to 5 years age
- Molecular epidemiology of resistance pattern in children, animal and environment
- To determine the pattern of antibiotic resistant genetic markers (plasmid /chromosomal)
- To study factors: demographic, environmental and OTHER important factors associated with drug resistance in children 10 months to 5 years age in rural community, Ujjain District.

APRIAM Project:

APRIAM is one of the biggest projects running in RDGMC. It has complied its two phases and now third phase are on roll.

Phases:

Phase I: Antibiotics as environment Pollutants and Resistance in waters in rural India-implications of in-and outpatient Antibiotic Management (APRIAM 1) 2007-2009.

Phase II: Antibiotics as environment Pollutants and Resistance in waters in rural India-Interventions to improve Antibiotic resistance Management (APRIAM 2) 2010-2012.

Phase III: Antibiotic stewardship program including infection prevention and control and wastewater treatment – Implementation research in hospital and community in India (APRIAM 3) 2013-2017

This project is a continuation of the project “Antibiotic pollutants in waters and resistance in rural India - Interventions to improve antibiotic resistance management”

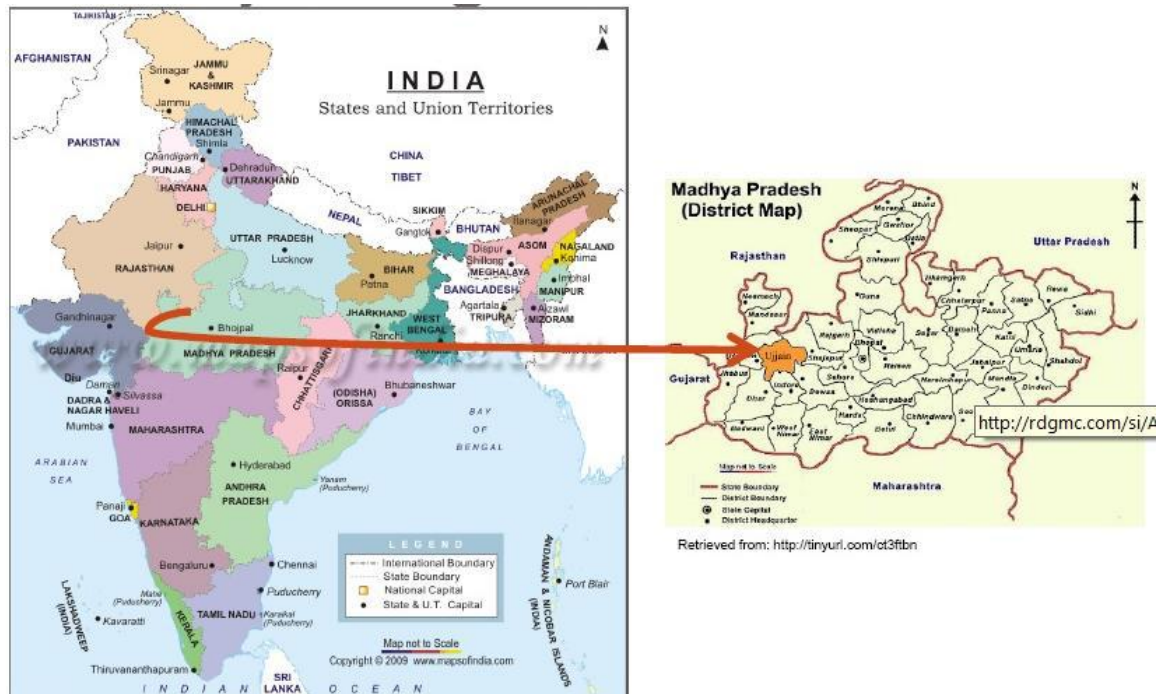
In the previous project founded high concentrations of antibiotics and highly resistant bacteria in hospital wastewater, high antibiotic use in inpatients as well as out-patients and a high percentage of resistant bacteria in samples from normal bacterial flora and clinical samples from both children and adults.

Identified hygiene as a key area to address increase in rational use of antibiotics, better resistance management and prevention of health-care associated infections (HAI). Interventions in the current project are ongoing, locally produced alcohol based hand-rub has been introduced, antibiotic prescribing is continuously followed and feedback meetings are regularly held in included hospital departments.

Experiments with hospital wastewater treatment are ongoing using local available technology such as natural and artificial UV light and

bacteriophages. Interventions have been developed and tested on a short-term basis.

Study setting:



Learning from APRIAM Project:

✓ Develop and Monitor a system:

I learn tools and techniques of developing an information system. I also acquired skills of monitoring a established system.

✓ **Field experience:**

From every step of project, there were many opportunities to learn but field experience provided me specific and necessary learning that was not reasonably available in the traditional college classroom learning. To visit such an interior villages was a great opportunity and experience. Learning from fieldwork could be summarized in the points below:

- ☐ Team Work and Team coordination
- ☐ Time management
- ☐ Negotiation with stakeholders
- ☐ Work with in limited resources
- ☐ Communication skill
- ☐ Problem solving and decision making