

**Research studies areas to be taken-up under Grant-in-aid scheme of DHR**

**1. Research Studies in areas relevant to Public Health.**

S.NO.	Priority Area of Research	Topic of the study
	<b>Non-Communicable Diseases</b>	
1.	Cancer	<ul style="list-style-type: none"> <li>• Estimation of State/region wise disease burden</li> <li>• Profiles of cancers</li> <li>• Risk factors identification</li> <li>• Development and evaluation of algorithms for diagnosis and Management</li> <li>• Other areas relevant to the programme.</li> </ul>
2.	Mental Health	<ul style="list-style-type: none"> <li>• Epidemiological studies for assessing for disease burden and determinants etc.</li> <li>• Development of skills for end of life care</li> <li>• Model projects under Brain Grid with NKN</li> <li>• Development and evaluation of algorithms for diagnosis and management</li> <li>• Other areas relevant to programmes.</li> </ul>
3.	Cardiovascular Diseases	<ul style="list-style-type: none"> <li>• Epidemiological studies for Burden estimation (regional/states)</li> <li>• Socio-behavioral, lifestyle and other risk factors</li> <li>• Profile of CVS diseases</li> <li>• Development and evaluation of algorithms for diagnosis and management</li> <li>• Other areas relevant to programmes.</li> </ul>
4.	Environmental Health/occupational health	<ul style="list-style-type: none"> <li>• Burden estimation</li> <li>• Impact of legislation</li> <li>• Air and water pollution</li> <li>• Health problems related to pesticides etc</li> <li>• Profile of occupational health problems of national importance</li> <li>• Other areas relevant to programmes.</li> </ul>
5.	Stroke and neurological disorders	<ul style="list-style-type: none"> <li>• State and regional data</li> <li>• Type of strokes</li> <li>• Risk factors estimations</li> <li>• Development and evaluation of algorithms for diagnosis and management</li> <li>• Other areas relevant to programmes.</li> </ul>
6.	Diabetes	<ul style="list-style-type: none"> <li>• State and regional data</li> <li>• Risk factors estimations</li> <li>• Strategies for management at various levels</li> <li>• Other areas relevant to programmes.</li> </ul>
7.	Metabolic disorders	<ul style="list-style-type: none"> <li>• State and regional data along with risk factors</li> </ul>

		<ul style="list-style-type: none"> <li>• Development and evaluation of algorithms for diagnosis and management</li> <li>• Other areas relevant to programmes.</li> </ul>
8.	Congenital Malformations and Genetics	<ul style="list-style-type: none"> <li>• State and regional data including classification</li> <li>• Risk factors estimations</li> <li>• Development and evaluation of algorithms for diagnosis and management</li> <li>• Other areas relevant to programmes</li> </ul>
9.	Kidney and liver disorders	<ul style="list-style-type: none"> <li>• State and regional data and types</li> <li>• Risk factors estimations</li> <li>• Development and evaluation of algorithms for diagnosis and management</li> <li>• Other areas relevant to programmes.</li> </ul>
<b>Studies on Gender and Health</b>	<p>1. Physical Health problems specifically related to women regarding top 5 problems:</p> <ul style="list-style-type: none"> <li>▪ Heart diseases,</li> <li>▪ Breast cancer/cervix</li> <li>▪ Osteoporosis</li> <li>▪ Depression</li> <li>▪ Autoimmune diseases</li> </ul>	<p>Studies on various aspects such as:</p> <ul style="list-style-type: none"> <li>• Vulnerability to diseases.</li> <li>• Socio-cultural factors</li> <li>• Education and access to information</li> <li>• Gender specific public health interventions</li> </ul>
1.	Maternal health	<ul style="list-style-type: none"> <li>• Estimating morbidity and mortality patterns</li> <li>• Nutritional disorders</li> <li>• Tools for reducing MMR</li> <li>• Reproductive health</li> <li>• Health care seeking behavior</li> <li>• Other areas relevant to programmes.</li> </ul>
2.	Child health	<ul style="list-style-type: none"> <li>• Estimating morbidity and mortality patterns</li> <li>• Nutritional disorders (malnutrition and obesity)</li> <li>• Diarrhoeal and respiratory disorders</li> <li>• Factors affecting pre-term, LBW</li> <li>• Immunization</li> <li>• Other areas relevant to programmes.</li> </ul>
3.	Low child sex ratio and other Gender and Health	<ul style="list-style-type: none"> <li>• Factors influencing female feticide</li> <li>• Social beliefs</li> <li>• Qualitative research studies</li> <li>• Domestic violence</li> <li>• Other areas relevant to programmes.</li> </ul>

## 2. Programme for Translational Research

Item	Topic of the Study
<p><b>Leads identified by ICMR Institutes and partly developed</b></p>	<p>The technologies targeted for 2013-14 include :</p> <ul style="list-style-type: none"> <li><b>(i) diagnostic assays/ reagents/ devices</b> for diabetes mellitus; cervical cancer; thallemia ; infectious diseases such as tuberculosis, leptospirosis, hepatitis E, rotavirus diarrhoea, food borne pathogens, Chlamydia infections, kala- azar, malaria, filarial and lung fluke;</li> <li><b>(ii)</b> vaccines for Japanese encephalitis, hepatitis E, ;</li> <li><b>(iii) nutrition:</b> assays for bioavailability of iron , vitamin A estimation;</li> <li><b>(iv) Others:</b> cooling garment to prevent and manage heat effects; ergonomically designed rickshaw; test for determination of viability of sperms; molecules, metabolites / organisms for biological control of mosquitoes.</li> </ul> <p><b>31-75 : Leads identified as second priority likely to take 3-4 years to develop prototype/ technologies</b></p>
<p><b>1.Leads identified from extramural projects</b>  <b>2.Leads identified by other agencies/ requiring inter-departmental collaboration with like DST, DBT, DSIR, DRDO etc.</b></p>	

### 3. Programme for Inter-sectoral Co-ordination including funding of joint projects

S.NO.	Purpose of study
<b>Joint projects with DBT /DST/DRDO on diagnostics &amp; vaccine</b>	
1.	<ul style="list-style-type: none"> <li>• Diagnostics in area of Cancer, Stroke, Diabetes, Vector borne diseases, Tuberculosis, Leishmaniasis etc.</li> <li>• Vaccines for Vector borne diseases, Leishmaniasis etc.</li> </ul> <p>Basic biology, polymers, devices, bio-instrumentation and other life science related areas like nanotechnology etc.</p>
<b>Joint projects with DBT /DST/CSIR/ on New drug discovery</b>	
2.	<ul style="list-style-type: none"> <li>• Drug discovery in the areas of Cancer, Stroke, Diabetes, Vector borne diseases, Tuberculosis, Leishmaniasis etc.</li> <li>• Diagnostics, devices and therapeutics with DST, DBT, CSIR, DRDO, Information Technology</li> </ul>
<b>Joint projects with AYUSH New drug discovery / Treatment</b>	
3.	<ul style="list-style-type: none"> <li>• Drug discovery / new treatment in the areas of Cancer, Stroke, Diabetes, Vector borne diseases, Tuberculosis, Leishmaniasis, cardiovascular diseases, Mental disorders, arthritis, skin disorders etc.</li> <li>• Role of Yoga in cardio-vascular diseases, diabetes, stroke and neurological disorders etc.</li> <li>• Other alternate therapies</li> </ul>
<b>Joint projects with Department of Environment</b>	
4.	<ul style="list-style-type: none"> <li>• Effect of climate change on vector borne diseases, and other communicable diseases and impact of transgenic/ recombinant technology on health</li> <li>• Indoor and outdoor air pollution</li> <li>• Noise heat, radiation pollution etc</li> <li>• Pollution due to chemicals, pesticides, other toxic waste etc.</li> <li>• Development of disaster management tools</li> </ul>
<b>Joint projects with DARE/ ICAR</b>	
5.	<ul style="list-style-type: none"> <li>• Diagnostics, treatment and control of diseases on Zoonosis</li> <li>• Improvement of nutritional status</li> <li>• Nutritional safety –use of pesticides; other toxic contaminants etc</li> </ul>
<b>Joint projects with Department of Space</b>	
6.	<ul style="list-style-type: none"> <li>• GIS mapping of Vector borne diseases with geo-climatic factors</li> <li>• GIS mapping of cardio-vascular, cancer, diabetes diseases with population density, industry, agricultural produce etc.</li> </ul>
<b>Joint projects with M/o of Women &amp; Child Development, Department of Health &amp; FW and ICSSR/ Department of information technology/ labour etc.</b>	

7.	<ul style="list-style-type: none"> <li>• Nutritional patterns and developing interventions with WCD, Nutritional institutes</li> <li>• Socio-behavioural factors related with maternal health with ICSSR</li> <li>• Health education with WCD</li> <li>• Public health interventions with Department of Health and women and child development, social justice</li> <li>• Under-five morbidity pattern with ICDS</li> <li>• Nutritional interventions with schools, WCD</li> <li>• Studies with ICSSR on Low Child sex ratio, female feticide, domestic violence and sexual violence at work place</li> <li>• <b>Model projects on implementation of Knowledge management policy;</b></li> <li>• <b>other model projects related to national programmes including health systems research and socio-behavioural interventions</b></li> </ul>
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**4. Programme for Comparative /cost effectiveness analysis for public health choice.**

S.NO.	Area of Research	Sub-areas	Topics of the study
<b>A. Non-communicable diseases</b>			
1	Cancer		<ul style="list-style-type: none"> <li>• Methods for effective and early diagnosis</li> <li>• Impact of health services for cancer management</li> <li>• Efficacy of different regimens</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
2	Mental Health		<ul style="list-style-type: none"> <li>• Scales and tools for assessment of Mental Health</li> <li>• Evaluation of newer modalities of treatment like ECT etc</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
3	Cardiovascular Diseases		<ul style="list-style-type: none"> <li>• Assessment of promotive models for prevention of risk factors</li> <li>• Efficacy of newer diagnostic tests</li> <li>• Models of early treatment to reduce mortalities</li> <li>• Health informatics and health technology assessments</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
4	Stroke and neurological disorders		<ul style="list-style-type: none"> <li>• Newer diagnostics</li> <li>• Newer treatment modalities</li> <li>• Preventive models</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
5	Diabetes		<ul style="list-style-type: none"> <li>• Newer diagnostics</li> </ul>

		<ul style="list-style-type: none"> <li>• Newer management strategies</li> <li>• Health promotive and preventive models</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
6	Malaria Dengue Chikungunya Japanese Encephalitis (Vector Borne Diseases)	<ul style="list-style-type: none"> <li>• Efficacy of alternate drugs</li> <li>• Newer vaccines</li> <li>• Newer drugs including larvicidals</li> <li>• Preventive technologies</li> <li>• Use of technologies for prevention and cure</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
7	Tuberculosis / Leprosy Other Mycobacterial diseases	<ul style="list-style-type: none"> <li>• Multidrug resistance</li> <li>• Newer diagnostics</li> <li>• Newer drugs and combinations</li> <li>• Development of guidelines for diagnosis and management</li> </ul>
8	Leishmaniasis / Kalazar	<ul style="list-style-type: none"> <li>• Newer diagnostics</li> <li>• Newer drugs</li> </ul>
9	Zoonoses	<ul style="list-style-type: none"> <li>• Newer diagnostics</li> <li>• Newer drugs</li> </ul>
10	Guidelines for management of important maternal and child health problems; region specific guidelines for nutrition; enteric infections, acute fevers; PUO; genetic disorders, blood disorders etc;	