

EPROCUREMENT NOTICE

REQUEST FOR EXPRESSIONS OF INTEREST

[CONSULTING SERVICES – FIRMS SELECTION]

INDIA – Uttarakhand Health Systems Development Project

Credit 5948-IN

Assignment Title: Development, Deployment, Management, Training and Capacity Building of Telemedicine Solution, for the identified Health Centres of Government of Uttarakhand under the Uttarakhand Health Systems Development Project using Hub [4] and Spoke [400] Model

Procurement Plan Reference Number: IN-UKHFWS-209982-CS-QCBS

The Government of Uttarakhand has received financing from the World Bank toward the cost of the Uttarakhand Health Systems Development Project [UKHSDP]. The Uttarakhand Health and Family Welfare Society [UKHFWS] which is the implementing agency for the UKHSDP intends to apply part of the proceeds for consulting services.

The Consulting Services [“the Services”] include Development, Deployment, Management, Training and Capacity Building of Telemedicine Solution, for the identified Health Centres of Government of Uttarakhand under the Uttarakhand Health Systems Development Project using Hub [4] and Spoke [400] Model.

The Project now invites eligible consulting firms [“Consultants”] to indicate their interest on-line on eProcurement portal of Government of Uttarakhand, <https://www.uktenders.gov.in/nicgep/app> , in providing the Services. Interested Consultants should provide information demonstrating that they have the required qualifications and relevant experience to perform the Services.

Shortlisting Criteria:

The consultant shall meet all the criteria (1 to 4) as listed below:

1. A certificate of incorporation issued by the relevant Government registry confirming due incorporation and valid and legal existence of the Consultant.

Documents : Certificate of Incorporation

2. The Consultant must have a proven capability and demonstrate at least two similar projects in the last five years with regard to Development, Deployment, Management, Training and Capacity Building of Telemedicine Solution across healthcare facilities or networks of hospitals/healthcare facilities as on date of submission of Expression of Interest. In case of Joint Venture, the Joint Venture as a whole should demonstrates this capability.

Documents:

Satisfactory Completion of Works Certificates from the client(s) confirming the year of work, scope of work and work order details;

OR

Work Order + Phase Completion Certificate from the client(s) for the ongoing “Live” projects with their scope of work

3. The Consultant should have Positive Net Worth as on 31st March 2020. In case of Joint Venture, the Lead Member’s net worth shall be taken into consideration.

Documents: Audited and Certified Balance Sheet of last 3 Financial Years (2017-18, 2018-19, 2019-20)

AND

Certificate from Chartered Accountant and Authorized Signatory

4. Average annual turnover of during the last three financial, i.e., years 2017-18, 2018-19, 2019-20 should be at least INR 5 Crores or US \$ 684930 (as per the published Income Statement).

Single firm must meet the requirement in full. In case of JV, combined the JV shall meet 100 % of the requirement.

Documents: Certificate from statutory auditor appointed by the company of last 3 Financial Years (2017-18, 2018-19, 2019-20).

It may be noted that the selected consultant is expected to set up office in Uttarakhand in case it does not have one, which should be in operation before commencement of the assignment.

A consultant will be selected in accordance with the Quality and Cost Based Selection [QCBS] method set out in the Consultant Guidelines.

The attention of interested Consultants is drawn to paragraph 1.9 of the World Bank's Guidelines: Selection and Employment of Consultants under IBRD Loans and IDA Credits and Grants by World Bank Borrowers, January 2011 and revised July 2014 ["Consultant Guidelines"], setting forth the World Bank's policy on conflict of interest.

Consultants may associate with other firms in the form of a joint venture or a sub-consultancy to enhance their qualifications but should indicate clearly whether the association is in the form of a joint venture and/or a sub-consultancy. In the case of a joint venture, all the partners in the joint venture shall be jointly and severally liable for the entire contract, if selected.

To participate in the e-tendering process, a firm is required to register in the e-Procurement portal of Uttarakhand [<https://www.uktenders.gov.in/nicgep/app>] free of charge.

The Request for Expression of Interest [REOI] along with indicative Terms of Reference is available online at Uttarakhand e-Procurement : <https://www.uktenders.gov.in/nicgep/app> from March, 05 2021 to March 20, 2021 [up to 15.00 hours IST] for viewing/downloading free of cost.

Expression of Interest [EOI] must be submitted online only at <https://www.uktenders.gov.in/nicgep/app> by or before March 20, 2021 [up to 1500 hours IST]. EOI submitted through any other mode shall not be entertained.

Further information can be obtained at the address below during office hours [*i.e., 1000 to 1700 hours*].

Project Director

Uttarakhand Health Systems Development Project

2nd Floor, Red Cross Building, Danda Lakhaund

Sahastradhara Road

Dehradun

Terms of Reference (ToRs) – Consultant [Firm]

Development, Deployment, Management, Training and Capacity Building of Telemedicine Solution, for the identified Health Centres of Government of Uttarakhand under the Uttarakhand Health System Development Project¹ using Hub [4] and Spoke [400] Model

1. Introduction to the Project

Uttarakhand Health Systems Development Project [UKHSDP] is conceived as a strategic initiative to enhance people's access to quality health care services in the state of Uttarakhand. The Project is financed by the World Bank and implemented by Uttarakhand Health and Family Welfare Society [UKHFWS]. The project seeks to support Uttarakhand in improving access to quality health services and in providing health financial risk protection. Specifically, the project would focus on improving access to health services for the predominantly remote population of the state, through strengthening public and private health-delivery systems; promoting greater stewardship and managerial capacity in the health directorate; improving information systems; augmenting monitoring and research; and extending coverage of state health insurance scheme beyond hospitalization to include primary healthcare services.

Project Development Objective (PDO) is to improve access to quality health services, particularly in the hilly districts of the state and to expand health financial risk protection for the residents of Uttarakhand. The project has two components: a) Innovations in engaging the private sector [for integrated service delivery and for health financing], and b) Stewardship and health systems improvement. A description of the activities under the two project components is provided below.

Project Components

Component 1. Innovations in engaging the private sector: Innovations in engaging the private sector would finance engagement with the private sector in the delivery of healthcare services as well as in healthcare financing. This component expands access to services by creating integrated, technology-enabled health system architecture with enhanced focus and availability of primary care, emergency care and necessary referral services. This component also focuses on telephonic health information and telemedicine services. Additionally, it also expands financial protection by defining a benefit package of primary care services for child and adolescent health care and for the management of non-communicable diseases.

¹ <http://www.ukhsdp.org/assets/pdf/project-appraisal-document.pdf>

Component 2. Stewardship and system improvement: This component strengthens the government’s capacity to engage effectively with the private sector, and therefore, to enable the government to provide effective stewardship to improve the quality of services in the entire health system and particularly in its capacity to effectively pursue the innovations being planned under this project. The component focuses on strengthening the institutional structures for stewardship and service delivery and augmenting the state’s human resource capacity, so that the necessary skill sets required for effective implementation of the project and the state’s health programs are available. The strengthened capacity serves beyond the activities of this project, as it contributes to the government’s stewardship role for the health system. It supports research and evidence generation, use of evidence for strategic planning, and improved information systems for data generation and management, including timely feedback to providers. It also supports Facilities Assessment as well as contracting of agencies on a turnkey basis to support the attainment of NABH quality standards in identified public health facilities in the state. Finally, the component promotes a multidisciplinary approach that strengthens the ability of the health system to respond to seasonal and context-specific needs. Project management costs also are financed from this component.

2. Objective of the Assignment

According to WHO, telemedicine is defined as *“the delivery of health care services, where distance is a critical factor, by all health care professionals using information and communication technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and for the continuing education of health care providers, all in the interests of advancing the health of individuals and their communities”*.

With the above in view, the UKHFWS of the UKHSDP intends to hire the services of a consultant/firm to support the setting up of a telemedicine system following the Hub and Spoke model² for Department of Health & Family Welfare, Government of Uttarakhand (GoUK) to ensure quality health care delivery to people in Uttarakhand, separated by geographical, economical and information gap distances by adopting virtual means of connection/communication in real time. The selected firm shall set up 4 Medical Colleges (“H”) along with 400 Health Centers, (“Spokes”) for provision of Telemedicine facility in the state of Uttarakhand on turnkey basis. Selected consultant will need to ensure that provision of telemedicine services under telemedicine interventions is as per the “Telemedicine Practice Guidelines” of the Government of India³.

² <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5751794/>

³ <https://www.mohfw.gov.in/pdf/Telemedicine.pdf>

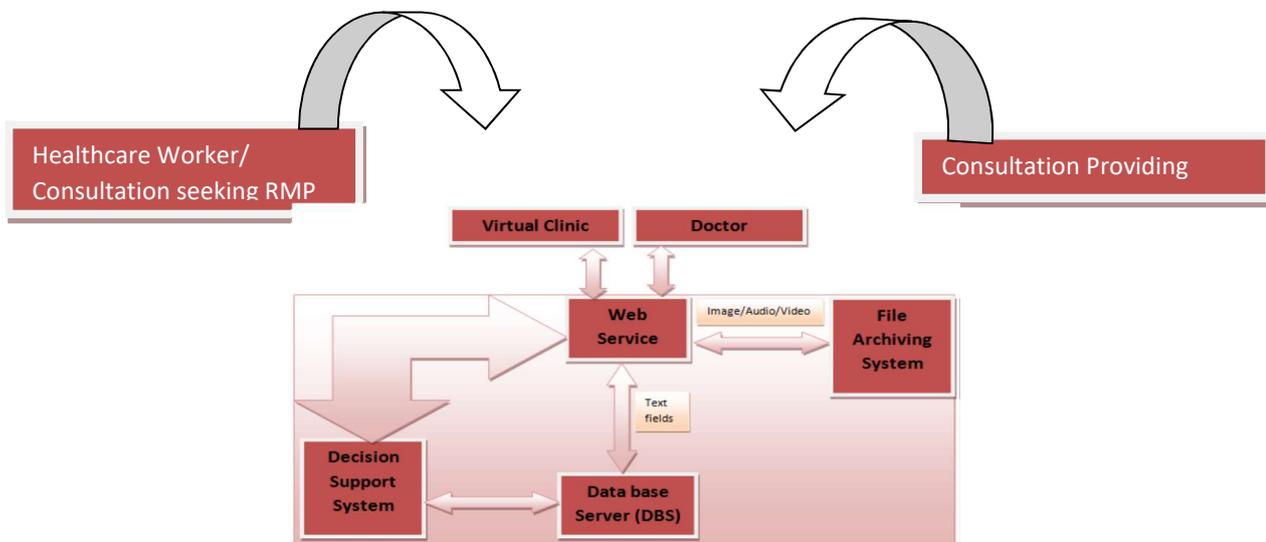
⁴ <https://www.researchgate.net/publication/280314833> A Telemedicine Proposal for Remote Areas of Pakistan

UKHFWS notes that the objective of the assignment includes additional gains such as promoting the role of telemedicine-services in order to achieve the objective of health for all, and, confidence building of Registered Medical Practitioner (RMP) at health facilities through knowledge gain via handholding by Senior / specialist RMP at studio aka Hub at Medical Colleges.

3. Scope of Work/Assignment

In order to achieve the above objective, the selected consultant/firm will be responsible for undertaking tasks which include development, deployment (supply and installation of equipment, implementation, operationalization,), design training materials and deploy multiple training strategies including workshops, classroom sessions, audio-visual features, exposure visits and practical work experience to impart effective training, management & maintenance of the telemedicine system for the state of Uttarakhand. This capacity building and training is expected to contribute directly to the Directorate’s efforts aimed at improving compliance to the latest applicable of MoHFW guidelines of Telemedicine.

Figure-1: Process flow of telemedicine⁴



The selected consultant/firm shall follow the Hubs and Spokes model⁵ to be setup across the state with 4 Medical Colleges (“Hubs”) along with 400 Health Centers, (“Spokes”) in the state for provision of Telemedicine facility on turnkey basis.

The consultant/firm shall establish physical servers across 4 centralised command centres (CCC) or Hubs at the 4 medical colleges – MC1 (Almora Medical College, Almora), MC2 (Doon Medical College, Dehradun), MC3 (Haldwani Medical College, Haldwani) and MC4 (Srinagar Medical College, Srinagar Garhwal) - where registered medical practitioner (RMP) would be available and these RMPs would make use of an information technology based telemedicine solution as described above under the framework section for the following two settings:

a) RMP (RMP seeking consultation on behalf of Patient) to RMP (Consultation providing specialist/Senior RMP)

b) Healthcare worker⁶ (seeking consultation on behalf of Patient) to RMP (Consultation providing RMP)

The IT solution should have provisions of video (with audio) system to seek specialist consultation on presenting complaints of patients in person either with Health care worker or consultation seeking RMP running on physical server based software platform which can collect, analyze, manage and report/ disseminate the data thus generated. The system shall also have provisions to store, process and archive medical information of individuals as per the data privacy and protection policy of the Government of India and the state government. The record should be longitudinal in nature for all the patients which can be accessed by authorized users and help them import, input, view, schedule, order, prescribe and report. The record keeping will be categorized into the Medical Information System (MIS) for faster execution of data, to maximize the availability of data and utilize the data for more accurate clinical decisions.

After installation of software/hardware at Hub and Spoke location sites the different health care workers (different categories) shall be provided training. This shall include content detail, training materials, case studies/examples, as well as the format of delivery, which will differ from topic to topic and should be a combination of classroom-type, workshop-format, real-life empirical examples, other states and country’s adopted model of telemedicine, guided practices, role play, group work, implication of telemedicine on concrete examples. It should also include a list of intern trainees and agencies/stakeholders to be targeted under each training topic. The selected consultant firm shall design the content and format for each of the topics provided below to be covered by the training program

a) Introduction to telemedicine, Pros and cons of telemedicine

b) Explanation of the history of telemedicine has contributed to the current application of this technology in healthcare.

c) Describe the various types of telemedicine modalities and potential clinical implications.

⁵ <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5751794/>

⁶ Nurse, Allied Health Professional, Mid-level health provider, ANM or any other health worker designated by an appropriate authority as per Telemedicine Practice Guidelines of GOI

- d) Explanation of Modes which can be used for telemedicine - audio, video, chat, store-and-forward
- e) Demonstrating with example telemedicine as an important solution which increases cost efficiency, reduces transportation expenses, provide better consultation opportunity to specialists and health care providers, and improves quality of care and communication among providers.
- f) Legal and ethical issues related to telemedicine (patient consent at every step)
- g) Considerations for drugs (approved under the guideline) which can and cannot be prescribed over telemedicine
- h) Necessary requirements, equipment usage, patient interaction, worker inoculation, and emergency response procedures
- i) Systems, procedures, equipment and documentation requirements for ensuring optimal compliance to telemedicine guidelines and regulations
- j) Roles and responsibilities of different categories of healthcare professionals and workers in the designated Hubs and Spokes
- k) Patient safety and informed consent in telemedicine
- l) Advances in telemedicine and successful exemplar model.

4. Tasks to be completed

The tasks to be undertaken by the consultant/firm as part of scope of work to fulfill the objectives of the assignment, in consultation with the Project Implementation Team [PIT] of the UKHFWS of the UKHSDP, include but are not limited to the following:

Task I: Development

Task: Development Phase

- i. Support the Government of Uttarakhand (GoUK) in developing telemedicine strategy as part of the broader digital health system strategy and policies, using the framework of MoHFW, Govt of India and other international technical agencies such as WHO, to expand access to medical consultation and diagnosis, particularly those in remote areas, and to improve access of primary health care providers with tele-mentoring supports from other clinical RMP/specialists.
- ii. Support the GoUK in identifying the requirements and priorities for telemedicine deployments (based on both quantitative – burden of disease – and qualitative – areas seen as particularly in need of support - information) to support PHCs and CHCs, community, home monitoring and clinical networks.
- iii. Support UKHSDP in identification of the role of telemedicine in addressing the challenges faced by the Uttarakhand health care sector for providing health care services.
- iv. Ensuring that telemedicine standards are developed and adopted according to GoI guidelines and also suggest cost effective service implementation.
- v. Developing the Hubs and Spokes network adapting learning from the existing best practices from within the country and elsewhere.
- vi. Assessing the available resources and to support the building of infrastructure for the use of telemedicine.
- vii. Develop following modules⁷ (Annexure A attached):

⁷ <https://www.researchgate.net/publication/280314833> A Telemedicine Proposal for Remote Areas of Pakistan

- Healthcare Workers Side/Consultation seeking RMPs Side Module
- Consultation Provider RMP's Side Module
- Central System Module
- Registration Module
- Query Handler
- Database Server
- File Archiving Module
- Decision Support System (DSS)

Task II: Deployment Phase

This phase will include availability of requisite number of technical human resource for specified time period (as per table 2) based on strategy, framework and policy as per GOI policy document⁸ and Framework for the Implementation of a Telemedicine Service across the state mentioned in **Annexure A**.

Task III: Maintenance Phase

The consultant/firm shall support the management of telemedicine services in line with the following

- There shall be a minimum uptime guarantee of 95% of the Telemedicine network.
- Access to Dashboards / Reports to be provided to PIT of UKHFWS of the UKHSDP to monitor daily, weekly, monthly and annual progress on real time basis
- To ensure consent of the patient is taken at every step of procedure by biometrics
- To ensure the retention of Medical Records of patients which cannot be accessed by anyone else except the RMP treating the patient.
- Ensuring safe, smooth and uninterrupted operation of Telemedicine Equipment.
- Providing round-the-clock response to emergencies/issues arising with respect to the performance of the Telemedicine Equipment, as per the Specification and Standards and Key Performance Indicators of this Agreement during normal operating conditions.
- Carrying out periodic preventive/ routine maintenance and ensuring that the Telemedicine Equipment remains in good working condition. The selected agency shall ensure regular visits of bio-medical engineers at Hubs and Spokes for smooth functioning (preventive maintenance).
- Procuring and maintaining adequate inventory of all necessary spares. The selected agency shall procure spares, which would be subjected to periodic inspection by the representatives of the UKHFWS of the UKHSDP at its discretion as per GoI guidelines.
- Carrying out any up-gradation of Telemedicine Equipment and replacement of defect in any Telemedicine Equipment, if required, during the agreement period September 2023.
- Generation of Electronic Medical Record (EMR) online with video consultation file: The EMR is to be stored till the completion of the project and all the records should be handed over to UKHSDP

⁸ "Telemedicine Practise Guidelines" of GOI (<https://www.mohfw.gov.in/pdf/Telemedicine.pdf>)

after the completion of the project. EHR is to be recorded as per the EHR Standard 2016⁹ notified by the MoHFW

Task IV: Training Phase

In this phase the consultant/firm shall provide professional and structured training to the employees in 4 Hubs, each Hub shall be occupied by 11 RMP experts (n=11) and RMP/HealthCare worker (n=800) at Spokes at training session on management of systems and backstopping plans developed in line with the following:

- Training for operationalization of telemedicine including Computer skills, Soft skills, database management and data protection
- Ensuring the staffs are adequately deployed and trained in relation to the safe handling of Telemedicine Equipment
- Classification of health workers at Hubs and Spokes centers working in various designated telemedicine healthcare facilities in Uttarakhand into congruous groups/categories and establish specific training needs
- Preparing dedicated training curriculum and training methodology for all identified groups/categories of healthcare workers.
- Preparing appropriate training kits/manual[s]/literature/handouts for distribution amongst participants.
- Organizing appropriate human resource to function as training faculty for the entire training period.
- Preparing a Training Plan comprising of a detailed Training Calendar for scheduling trainings of healthcare workers/RMP such that the entire activity can be completed within the stipulated period of 6 months.
- Organizing, scheduling and conducting trainings as per the Training Calendar. This includes all aspects in relation to the trainings including arrangement of training venues, logistic arrangements for faculty, coordination with the respective Health Facilities for ensuring attendance of their staffs, etc.
- The UKHSDP shall strive to facilitate the training including facilitating the process of the trainings at Hubs and Spokes level, however the selected agency will need to make arrangements for identifying appropriate venue of the training at the same level.
- Collecting and documenting information on trainings conducted and trainee feedback from all trainings
- Conducting pre and post-test of all persons trained for purposes of certification.
- Preparing consolidated report on the conduction of training, analyzing feedback and giving future directions.

5. Duration of the Assignment

The expected duration of the assignment is 30 months from date of contract signature. The performance of the selected consultant/firm will be formally evaluated after 6 months to assess if the contract period should be extended or not.

6. Deliverables and Timelines

The selected consultant/firm shall work under overall direction and guidance of UKHFWS of the UKHSDP with direct reporting to review committee including Joint Director Health system strengthening, Additional Project Director, and Project Director UKHSDP. For day to day technical and

⁹ https://www.nrce.in/download/files/pdf/nrce_ehr_stand_india.pdf

managerial coordination, the selected firm shall directly communicate with Joint Director, Health System Strengthening [HSS], UKHFWS, and work closely with his team.

Deliverables and Timelines for Deployments:

SN	Deliverables	Broad Contents	Timeline (number of days after previous stage)	Linked to Payment [Yes/No]	% Payment
1.	Inception report	Detailed structure plan for implementation of development, deployment, maintenance and training about telemedicine strategy	Within 1 month of contract signing	Yes	5% of contract value
2.	Development of Telemedicine HUB and SPOKE Model	<ul style="list-style-type: none"> • Conceptual model developed for on-line Telemedicine interactions describing gaps analysis on infrastructure, equipment and other necessary desirable for telemedicine intervention. • Presentation of layout and design of system including modules in text format. • Developing telemedicine module (as mentioned in Task-I Pt. vii) for the state along with UKHSDP inputs 	Within 20 days of acceptance of inception report	Yes	5% of contract value
3	Acceptance of satisfactory operation of one pilot and Hub with associated Spokes established by the selected consultant/firm	<ul style="list-style-type: none"> • Establishment, preparation and testing of Telemedicine Services in the pilot Hub and associated Spokes (including pilot testing, etc.) to be reviewed by the PIT team comprising of IT consultant, JDHSS and APD UKHSDP. 	3 months of contract signing and acceptance of report	Yes	10% of Contract Value
4.	Acceptance of Field-Tested Training Modules for RMP and Health care workers at established pilot Hub and associated Spokes	<ul style="list-style-type: none"> • Submit a pilot report for review and suggestion from PIT (UKHSDP) • Commencement of Telemedicine Services in the Hub and associated Spoke • Submit a detailed status report regarding completion of establishment of infrastructure including feedback received from PIT 	Within 1 month from acceptance by the Client of Inception Report and serial no.3	Yes	5% of the contract value

5.	Acceptance of satisfactory operation and establishment of other 3 Hub and associated Spokes	Setting up and establishment of infrastructure in one Hub and associated Spokes Preparation, Testing and commencement reports of Telemedicine Services in all the Hubs and associated Spokes to be reviewed by the PIT team comprising of IT consultant, JDHSS and APD UKHSDP.	6 months of contract signing	Yes	10% of the contract value
6.	Orientation of CMOs and CMS at Zonal HQ Level	This is a mandatory step between deliverables S. Nos. 4 and 6	Within 1 month of acceptance by Field-Tested Training Modules by the client and completion of S. No. 4	Yes	5 % of contract value
7.	Acceptance of Completion Report on Training	Detail Training completion Report duly verified by CMO/MS/CMS/MOIC on 2 Hubs and 200 Spokes (health institutes) with at least 90 % participants across all categories of Trainees	Within 12 months of contract signature date and its acceptance by the Client	Yes	10% of the contract value
8.	Acceptance of Completion Report on Training	Detail Training completion Report duly verified by CMO/MS/CMS/MOIC on 2 Hubs and 200 Spokes (health institutes) with at least 90 % participants across all categories of Trainees	Within 12 months of contract signature date and its acceptance by the Client	Yes	20% of the contract value
9.	Acceptance of Completion Report on Training the Balance/Remaining participants across all categories of Trainees and Final Completion Report along with feedback on training		Within 1 month of completion of training and acceptance of report by the client	Yes	20% of the contract value
10.	Maintenance	Maintenance of the telemedicine platform and database including but not limited to <ul style="list-style-type: none"> • Video, audio and textual support • Verification of forms (consent forms) 	From deployment till the completion of UKHSDP project	Yes	10% of the contract value

		<ul style="list-style-type: none"> • Maintenance of database and periodical changes as required • Clinical and Quality Audits 			
11.	Monthly Progress Reports	Submit a detailed monthly review report of the assignment.	From deployment till the completion of the project.	No	

Deliverables and Timelines for Training:

7. Team Composition and Qualification Requirements for the key Experts (and any other requirement which will be used for evaluating the key experts) :

UKHFWS shall assess the demonstrated experience and capacity of interested consulting firms applying for this assignment. The assignment requires a firm with relevant experience in securing Telemedicine for healthcare facilities with experience of completing such assignments for facilities in the public sector.

Key Expert	Key Expert Name	Key Expert Number	Indicative Responsibility	Minimum Qualification and Desired Professional Experience	Indicative Estimated Person Months
K1	Team Leader/ Coordinator	1	Single point of contact between UKHFWS and selected firm for successful implementation of this assignment. Represent the Firm in meetings at State Level, and plan, supervise and manage, coordinate and be responsible for delivery of the entire assignment	Education Level: Master's degree or higher degree in health/IT/ Developmental field Professional Experience: 10 Years in managing public sector projects in Health Sector Specific Experience: Minimum 5 years sectoral experience in telemedicine/ healthcare technology	8
K2	Clinic Site Experts and Health Specialist	4	He/she shall define the process and will be involved in technological evaluation and end-point selection from a clinical-usability perspective. The clinical experts will provide instructions/promote implementation of telemedicine	Education Level: Master's degree in general medicine Professional Experience: 10 Years Specific Experience: Minimum 5 years' experience in	30 [24 and 6 respectively]

			programme among the team	telemedicine/health care technology	
K3	Senior Programmer	1	He/she shall provide IT solutions and back end systems support	Education Level: BE/ B.Tech (computer science)/MCA. Professional Experience: 10 Years Specific Experience: Minimum 5 years' experience in programming telemedicine solutions	24
K4	Data Base and EHR Expert	2	He/she will manage secure data base and EHR in telemedicine intervention.	Education Level: BE/ B.Tech (computer science)/MCA. Professional Experience: 10 Years Specific Experience: Minimum 5 years experience in data secure data base management	24
K5	IT Technical Coordinators	4	They shall support and provide solution of all IT related issues and provide solutions and shall be available as technical interface at 4 Hubs in 4 Government Medical Colleges	Education Level: BCA/MCA. Professional Experience: 10 Years Specific Experience: Minimum 5 years experience in IT based Knowledge Process Outsource (KPO)	30
K6	Technical Support	13	They shall process technical investigation (install, maintenance and testing) and support in running telemedicine software programs and its related activities.	Education Level: BCA/MCA. Professional Experience: 3 Years Specific Experience: Minimum 1 years' experience in IT based Knowledge Process Outsource (KPO)	30

K7	Accounts /Finance Manager	1	She/he shall perform all fiduciary and bookkeeping functions related to the assignment	Education Level: CA/MBA Finance. Professional Experience: 5 Years Specific Experience: Minimum 3 years' experience in IT based Knowledge Process Outsource (KPO)	30
K8	Legal and Ethical Expert	1	She/he shall provide legal and ethical inputs for safeguards and any legal/ethical issues	Education Level: LLB/LLM. Professional Experience: 5 Years Specific Experience: Minimum 3 years' experience in Health IT including legal, ethical and administrative aspects of telemedicine	12
K9	Telemedicine Technical Specialists	2	They shall define the process and will be involved for preparation and field testing, supervising and ensuring timeliness and quality of technical content of all trainings. The clinical experts will provide instructions/promote implementation of telemedicine services among the team	Education Level: Master's degree in modern medicine system Professional Experience: 7 Years Specific experience: Minimum 5 years' experience in telemedicine	30
K10	Capacity Building IT and Data Specialists	4	They shall be responsible for developing and monitoring of training calendar, training across 4 Hubs and 400 Spokes, preparing formats for evaluation of training.	Education Level: BE/ B.Tech (computer science)/MCA. Professional Experience: 10 Years Specific Experience: Minimum 5 years	6

				experience in telemedicine solutions	
TOTAL KEY PERSON MONTHS=216					

8. Client’s Input and facilities to be made available to the consultant by the client

The UKHFWS shall provide the detail of facilities and functions as well as affected populations to facilitate the firm. The JDHSS, UKHFWS shall closely follow up with the selected firm and provide necessary guidance, documents, information, contact details and coordinates, provide support to facilitate meetings, etc., on a timely basis, during the assignment. The JDHSS, UKHFWS shall also coordinate with relevant stake holders to ensure access to relevant stakeholders and information.

9. Composition of review committee to monitor consultant’s work

The Project Implementation Team [PIT] of the UKHFWS has appointed Joint Director, Health System Strengthening [HSS], UKHFWS to monitor and coordinate the activities of the selected consultant/firm.

A monthly review of the assignment shall be done under the chairmanship of Project Director/Additional Project Director at Project Office at Dehradun upon submission of monthly progress reports which shall have the following members:

- Project Director /Additional Project Director; UKHSDP
- Joint Director; Health System Strengthening UKHSDP
- Assistant Director Procurement; UKHSDP
- Designated IT expert
- Any other official designated by the Project Director

10. Copyright

All materials and documentation during the assignment will be the sole property of UKHFWS.

ANNEXURE A

Brief Framework of Telemedicine in Uttarakhand¹⁰ (based on MoHFW, GOI guidelines on telemedicine)

The six elements of Telemedicine needed to be considered before beginning any telemedicine consultation-

1) Context

The Registered Medical Practitioners (RMP) should exercise their professional judgment to decide whether a telemedicine consultation is appropriate in a given situation or an in-person consultation is needed in the interest of the patient. They should consider the mode/technologies available and their adequacy for a diagnosis before choosing to proceed with any health education or counseling or medication. They should be reasonably comfortable that telemedicine is in the patient's interest after taking a holistic view of the given situation.

Complexity of Patient's health condition: Every patient/case/medical condition may be different, for example, a new patient may present with a simple complaint such as headache while a known patient of Diabetes may consult for a follow up with emergencies such as Diabetic Ketoacidosis. The RMP shall uphold the same standard of care as in an in-person consultation but within the intrinsic limits of telemedicine.

2) Identification of RMP and Patient

Telemedicine consultation should not be anonymous -- both patient and the RMP need to know each other's identity.

An RMP should verify and confirm patient's identity by name, age, address, email ID, phone number, registered ID or any other identification as may be deemed to be appropriate. The RMP should ensure that there is a mechanism for a patient to verify the credentials and contact details of the RMP.

For issuing a prescription, the RMP needs to explicitly ask the age of the patient, and if there is any doubt, seek age proof. Where the patient is a minor, after confirming the age, tele consultation would be allowed only if the minor is consulting along-with an adult whose identity needs to be ascertained.

An RMP should begin the consultation by informing the patient about his/her name and qualifications.

Every RMP shall display the registration number accorded to him/her by the State Medical Council/MCI, on prescriptions, website, electronic communication (WhatsApp/email, etc.) and receipts, etc., given to his/her patients

3) Mode of Communication

Primarily there are 3 modes: Video, Audio or Text (chat, images, messaging, email, fax etc.). Their strengths, limitations and appropriateness need to be considered by the RMP.

¹⁰ "Telemedicine Practise Guidelines" of GOI (<https://www.mohfw.gov.in/pdf/Telemedicine.pdf>)

There may be situations where in order to reach a diagnosis and to understand the context better; a real-time consultation may be preferable over an asynchronous exchange of information. Similarly, there would be conditions where an RMP could require hearing the patient speak, therefore, a voice interaction may be preferred than an email or text for a diagnosis. There are also situations where the RMP needs to visually examine the patient and make a diagnosis. In such a case, the RMP could recommend a video consultation. Considering the situation, using his/her best judgment, an RMP may decide the best technology to use to diagnose and treat.

4) Consent

Patient consent is necessary for any telemedicine consultation. The consent can be implied or explicit depending on the following situations: If the patient initiates the telemedicine consultation, then the consent is implied (in an in-person consultation, it is assumed the patient has consented to the consult by his/her actions. When the patient walks in an OPD, the consent for the consultation is taken as implied. Like an in-person consultation, for most of the tele-consultations the consent can be assumed to be implied because the patient has initiated the consultation).

An explicit patient consent is needed if: A health worker, RMP or a caregiver initiates a telemedicine consultation. An explicit consent can be recorded in any form. Patient can send an email, text or audio/video message. Patient can state his/her intent on phone/video to the RMP (e.g., “Yes, I consent to avail consultation via telemedicine” or any such communication in simple words). The RMP must record this in his patient records.

5) Type of Consultation

RMPs must make all efforts to gather sufficient medical information about the patient’s condition before making any professional judgment.

a) Patient’s Information

- An RMP would use his/her professional discretion to gather the type and extent of patient information (history/examination findings/Investigation reports/past records etc.) required to be able to exercise proper clinical judgement.
- This information can be supplemented through conversation with a healthcare worker/provider and by any information supported by technology-based tools.
- If the RMP feels that the information received is inadequate, then he/she can request for additional information from the patient. This information may be shared in real time or shared later via email/text, as per the nature of such information. For example, an RMP may advise some laboratory or/and radiological tests to the patient. In such instances, the consult may be considered paused and can be resumed at the rescheduled time. An RMP may provide health education as appropriate at any time.
- Telemedicine has its own set of limitations for adequate examination. If a physical examination is critical information for consultation, RMP should not proceed until a physical examination can be

arranged through an in-person consult. Wherever necessary, depending on professional judgement of the RMP, he/she shall recommend:

- Video consultation
- Examination by another RMP/Health Worker;
 - The information required may vary from one RMP to another based on his/her professional experience and discretion and for different medical conditions based on the defined clinical standards and standard treatment guidelines.

b) Patient Evaluation

There are two types of patient consultations, namely, first consult, and the follow-up consult.

i. First Consult means :

- The patient is consulting with the RMP for the first time; or
- The patient has consulted with the RMP earlier, but more than 6 months have lapsed since the previous consultation; or
- The patient has consulted with the RMP earlier, but for a different health condition.

ii. Follow-Up Consult(s) means :

- The patient is consulting with the same RMP within 6 months of his/her previous in person consultation and this is for continuation of care of the same health condition. However, it will not be considered a follow up if:
 - There are new symptoms that are not in the spectrum of the same health condition; and/or;
 - RMP does not recall the context of previous treatment and advice.

6) Patient Management

If the condition can be appropriately managed via telemedicine, based on the type of consultation, then the RMP may proceed with a professional judgement to:

- Provide Health Education as appropriate in the case; and/or;
- Provide Counseling related to specific clinical condition; and/or;
- Prescribe Medicines.

Health Education: An RMP may impart health promotion and disease prevention messages. These could be related to diet, physical activity, cessation of smoking, contagious infections and so on. Likewise, he/she may give advice on immunizations, exercises, hygiene practices, mosquito control, etc.

Counseling: This is specific advice given to patients and it may, for instance, include food restrictions, do's and don't's for a patient on anticancer drugs, proper use of a hearing aid, home physiotherapy, etc., to mitigate the underlying condition. This may also include advice for new investigations that need to be carried out before the next consult.

Prescribing Medicines: Prescribing medications, via telemedicine consultation is at the professional discretion of the RMP. It entails the same professional accountability as in the traditional in-person consult.

If a medical condition requires a particular protocol to diagnose and prescribe as in a case of in-person consult then same prevailing principle will be applicable to a telemedicine consult. RMP may prescribe medicines via telemedicine ONLY when RMP is satisfied that he/she has gathered adequate and relevant information about the patient's medical condition and prescribed medicines are in the best interest of the patient.