SUMMER INTERNSHIP REPORT

At

IQVIA Consulting & Information Services India Pvt. Ltd.

(April 22nd to June 21st, 2024)

Using Digital Technology to Improve National Health Financing Mongolia

By

Dr. Shradha Bihani

(PG/23/113)

PGDM (Hospital and Health Management)

2023-2025

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21st June 2024

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Dr. Shradha Bihani** was associated with **IQVIA Consulting and Information Services India Private Limited ("IQVIA")** on the **Using Digital Technology to Improve National Health Financing in Asia and the Pacific** as a part of the curriculum during the period from **22nd April 2024** till **21st June 2024**

This certificate is being issued to recognize successful completion of her internship.

For IQVIA Consulting and Information Services India Pvt. Ltd

VARINDRA Digitally signed by VARINDRA
Date: 2024.06.21 21:43:31 +05'30'

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Varindra B
Director - Human Resources, South Asia

Certificate of Approval

The Summer Internship Project titled "**Using Digital Technology to Improve National Health Financing in Mongolia"** at **IQVIA Consulting & Information Services India Pvt. Ltd.** Is herby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of **Post Graduate Diploma in Health and Hospital Management** for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed, or conclusion drawn therein but approve the report only for the purpose it is submitted.

Dr. Pijush Kanti Khan
Assistant Professor
IIHMR, Delhi

FEEDBACK FORM

(IIHMR MENTOR)

Name of the Student: Dr. Shradha Bihani

Summer Internship Institution: IQVIA, Delhi

Area of Summer Internship: Health financing

Attendance: 100/100

Objectives met: 1) Learned end to end project delivery

2) Made significant contributions to key projects, demonstrating a thorough understanding of the project's goals and effectively collaborating with team members to achieve desired outcomes.

Deliverables: 1) Created and delivered professional presentations

2) Delivered comprehensive research reports on key topics relevant to projects

Strengths: 1) Consistently meet all deadlines and submits all work in a timely manner

2) Strong ability to quickly grasp new concepts and skills

3) Consistently exhibits dedication, diligence, and a proactive approach to completing tasks and contributing to projects.

Suggestions for Improvement: Needs to improve document preparation skills

Signature of the Officer-in-Charge (Internship)

Mentor, IIHMR-Delhi

Date: 3rd July 2024

Place: Delhi

FEEDBACK FORM

(Organization Supervisor)

Name of the Student: Shradha Bihani

Summer Internship Institution: IQVIA, Delhi

Area of Summer Internship: Health Financing

Attendance: 100/100

Objectives met: ① Learned end to end project delivery
② Was engaged in ongoing projects

Deliverables: ① Prepared project deliverables (ppt & reports)
② Conducted benchmarking excercise

Strengths: ① Fast learner and very well comprehends the subject matter
② Good with developing presentations
③ Delivers on time

Suggestions for Improvement:
① Improve on developing word documents

Signature of the Officer-in-Charge (Internship)

K. Gaur
Best wishes

Date: 19th June 2024
Place: Delhi

Acknowledgement

I would like to take this opportunity to express my deepest gratitude and appreciation to all those who have supported me throughout my internship journey. I would also like to thank everyone for sharing their wonderful experiences and giving me an opportunity to grow under their guidance.

First and foremost, I am immensely grateful to **Dr. Santosh Moses**, **Ms. Jyoti Mittal**, and **Ms. Parul Sharma** for providing me with this opportunity for their guidance, expertise, and unwavering support throughout the entire research process. Their invaluable advice, insightful feedback, and encouragement have been instrumental in shaping this internship.

I am also immensely grateful to my mentor at IIHMR Delhi, **Dr. Pijush Kanti Khan**, Assistant Professor, for sharing his wisdom and guiding me through this project. His expertise, patience, and willingness to share his knowledge have helped me put my learning into action. He has not only helped me overcome challenges but has also encouraged me to explore new possibilities.

I am also thankful to my college, **International Institute of Health Management Research, New Delhi** for providing me with this excellent internship opportunity. Lastly, I would also like to thank my friends and colleagues, whose collaboration has been essential to the successful completion of this project.

I am sincerely thankful to have had the chance to work with such inspiring individuals. Their belief in me has inspired me to continuously improve myself.

Sincerely,

Dr. Shradha Bihani

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Acronyms/ Abbreviations

API	Application Program Interface
DRG	Diagnostic Related Groups (Case-based payment system)
EHR	Electronic Medical Record
EMR	Electronic Medical Record
FHIR	Fast Healthcare Interoperability Resource
GoM	Government of Mongolia
HIEP	Health Information Exchange Platform
HIGO	Health Insurance General Office
HIIP	Health Information and Intelligence Platform
HIS	Health Information System
HMIS	Health Management Information System
ICT	Information Communication Technology
KPIs	Key Performance Indicators
MoH	Ministry of Health
NCDs	Non-Communicable Diseases
NDC	National Data Center
NHF	National Health Financing
OOP	Out-Of-Pocket
PHC	Primary Health Care
PHR	Personal Health Record
QIs	Quality Indicators
SDGs	Sustainable Development Goals
UHC	Universal Health Coverage
UNICEF	United Nations Children's Fund
WHO	World Health Organization

I. Observational Learnings

Section 1- Introduction

1.1 About IQVIA

IQVIA Global

IQVIA is a leading global provider of consulting and technology solutions, and data services working exclusively in healthcare domain. IQVIA's global business is spread across multiple regions namely – **Europe, Middle East & Africa, and South Asia (EMEA & SA), Asia Pacific, US & Canada, Latin America, and Japan**, thereby enabling IQVIA to provide a suite of tailor-made services to the clients across the globe.

90,000 + Experts serving clients in **100+** countries	**15B +** Global Revenues, NYSE listed	**30,000 +** Technology experts, Advanced analytics/ data scientists / statisticians, Epidemiologists, PhDs, Medical Doctors, Service Experts	**70** Years of experience as founded in **1954**	**60 +** Petabytes of Unique data

IQVIA's presence in India

20+ Years of experience

15 Offices in 8 States

200+ PH Experts

IQVIA works with major governments and development partners across India to strengthen various aspects of Public Health

IQVIA in India has a strong public health practice of delivering **more than 200 projects** spread across multiple domain areas namely, health financing, healthcare infrastructure, health systems strengthening, quality improvement, nutrition, community-based healthcare, social inclusion, family planning, gender interventions, capacity building, etc.

In India, IQVIA is closely working with major development partners such as **Asian Development Bank, World Health Organization (WHO), United Nations Children's Fund (UNICEF), United Nations Development Programme, etc.**, and with both **Central and State government departments** which includes Ministry of Health & Family Welfare, National Health Authority, Niti Aayog, Central Bureau of Health Intelligence, Ministry of Housing and Urban Affairs, Ministry of Women and Child Development, National Health System Resource Centre, etc.

1.2 Objectives

- To learn project life cycle management along with contributing in ongoing projects.
- To enhance communication and teamwork skills by collaborating on group projects.
- Improve my ability to work independently and manage time effectively.

- To develop understanding and skills on conducting extensive secondary research, data compilation, documentation and presentation.
- Gain hands-on experience in public health consulting by working on real-world projects related to health financing and policy analysis.

Section 2- Mode of data collection

The data collection process involved utilizing secondary research methods, including systematic reviews, analysis of published literature, consulting public domain current reports, extracting data from reliable government websites, and gathering information from relevant platforms, to gain a broader understanding of existing knowledge and trends.

Section 3- General findings on learnings during the internship

Health Financing Team

IQVIA has a team of employees working closely with several stakeholders such as government organizations, donor entities and multilateral/ bilateral organizations for service delivery across South East Asia and Central Asia. IQVIA team works across health financing and digital health domains. The service offerings include:

- Setting up PMUs
- Research
- Monitoring & evaluation
- Knowledge partner
- Capacity building
- Policy Advocacy

They also facilitate with budgeting, forecasting, health financing schemes and planning, ensuring comprehensive service delivery. The team works closely with clients to understand their specific requirements and, provides solutions that are both efficient and effective.

Project- Using Digital Technology to Improve National Health Financing in Mongolia

About the project: **'Digital Health Financing Support to Mongolia,'** aim is to assess the current situation of Mongolia's digital health ecosystem in terms of infrastructure, governance, digital health services for insurers, providers, and citizens, and health analytics system. This will be followed by identifying gaps and proposing interventions that may be considered for scale-up to enhance efficiency, efficacy, and transparency of the digital health financing system.

My learnings

- Developed my skills in evaluating academic publications, including journal articles, research papers, and reports from credible foreign sources

- Gained practical experience in developing case studies by leveraging insights from a comprehensive secondary review of secondary literature.
- Developed proficiency in data visualization techniques, including the creation of clear and informative charts, graphs, and reports.

Section 4- Conclusive learning, limitations and suggestions for improvement

4.1 Conclusive learnings

- Enhanced research skills by gathering reliable data from market statistics, industry reports, and academic publications.
- Gained experience in data organizing, formatting, and presenting.
- Developed strong time management and prioritization skills by successfully managing multiple projects and meeting deadlines.
- Improved professional communication skills, including email etiquette and presentation delivery.
- I developed my skills in crafting comprehensive client proposals tailored to the specific needs and objectives of our prospective partners.

4.2 Limitations

- The scarcity of resources like specialized databases posed difficulties in obtaining comprehensive data.
- I had limited access to data due to confidentiality constraints. Consequently, my research report was completed with restricted data availability. Additionally, as an intern, I was not permitted to consult Mongolia's country expert to address gaps that secondary research could not cover.

4.3 Suggestions for improvement

- Rotational opportunities for interns will foster a comprehensive understanding of company operations, enhance interdepartmental collaboration, and help interns develop versatile skill sets.
- Provide interns with access to online learning resources and industry-relevant courses tailored to their assigned roles, enhancing their knowledge and skills.
- To gain access to a variety of data sources and expertise, IQVIA can work with academic institutions, research groups, and healthcare providers.

II. Project Report: Using Digital Technology to Improve National Health Financing in Mongolia

Section 1- Introduction

1.1 Rationale-

In principle, the astute use of digital technologies in healthcare can significantly improve effectiveness and efficiency of the system by streamlining processes, automating tasks, improving financial management thus reducing costs, ensuring efficacious access, enabling delivery of quality care, improving safety, accessibility & timeliness, and ensuring sustainability due to unlimited demand and limited resources. Additionally, digital technologies can aid in addressing beneficiaries' queries, mitigating fraudulent activities, ensuring transparency, and supporting timely, relevant, and actionable monitoring.

Digitizing the nation's health system can in principle be highly beneficial for insurers, providers, and patients and can assist key policy makers in making informed decisions. Therefore, incorporating suitable digital solutions may help making the system resilient and robust. The key is identifying digital solutions which are appropriate and applicable to the individual health system.

1.2 Research Question- How can Mongolia leverage digital technology to enhance its National Health Financing (NHF) ecosystem to achieve Universal Health Coverage effectively and efficiently, considering the existing gaps in terms of digital ecosystem?

1.3 Objectives-

Primary Objective- To conduct as-is analysis for identifying areas of improvement for Mongolia for leveraging digital technology as means for modernizing NHF related information system and fully capitalizing on the cutting edge of digital technology to enhance efficiency, efficacy and transparency.

Secondary Objective- To develop a comprehensive plan for implementing proposed interventions for digitalizing components of NHF system which will ensure alignment with Mongolia's health strategy and international standards.

Section 2- Mode of data collection

The data collection process involved utilizing secondary research methods, including systematic reviews, analysis of published literature, consulting public domain current reports, extracting data from reliable government websites, and gathering information from relevant platforms, stakeholder consultations to gain a broader understanding of existing knowledge and trends.

Section 3- Methodology

3.1 Evaluation Matrix

To comprehensively evaluate the digital health financing ecosystems of Mongolia, a standardized metric was necessary. The IQVIA team utilized the WHO matrix for assessing the maturity of digital health systems in response to Non-Communicable Diseases (NCDs). This framework was used to create an extensive mapping approach based on six thematic areas. These areas represent key enablers for a robust health financing system and allow for a thorough assessment of their maturity.

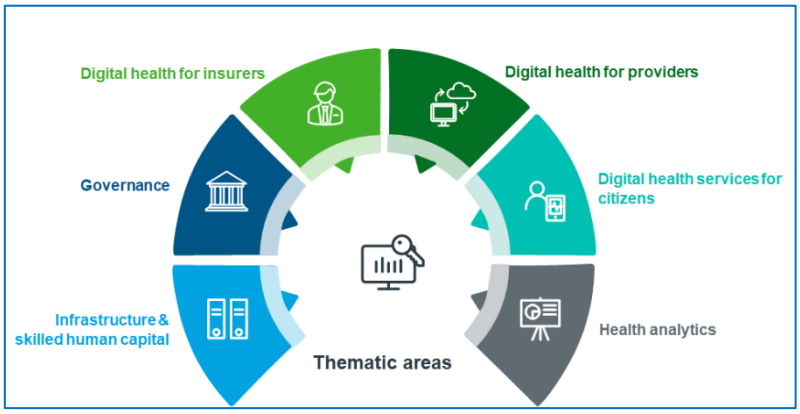

Figure 1 : Six-thematic areas

3.2 Description of the assessment methodology

The six thematic areas have been broken down into various parameters to conduct a situational analysis through secondary research and identify key areas for intervention. An evaluation matrix was developed to enable thorough secondary research, capturing the current status of Mongolia from basic to advanced levels across all thematic areas. To enhance and standardize the evaluation process, a scoring scale was created. Additionally, a color-coding system was implemented to make the evaluation matrix user-friendly and easy to understand. Parameters are color-coded based on the scores they receive according to the scoring scale, as follows:

Scoring scale across all parameters

- **0: Non-existent**
- **1: First initial steps taken**
- **2: Existing and in working order**
- **3: Fully developed / advanced**

Section 4- Data findings and interpretation

Basis above mentioned methodology, following findings were concluded:

1. Infrastructure and skilled human capital

The Ministry of Health, Mongolia (MoH) has provided at least one improved computer in about 192 PHC facilities (out of 549 PHC facilities) as part of the e-Health project.[1] The country is striving to improve internet connectivity nationwide despite a number of obstacles, and as of June 2022, 443 PHCs (or approximately 81% of all PHCs) had high-speed internet connection.[2] Mongolia strives for energy self-sufficiency; as of 2021, local production meets around 89% of the nation's energy needs, with the remaining 11% coming from imports.[3] [4]

Platforms for gathering data have been made accessible to make it easier for healthcare professionals to obtain information. Through the use of KHUR, these data systems are joined, forming an integrated Healthcare Information Database, or HIDatabase.

APIs were developed with 538 primary healthcare providers, 240 private hospitals, and 48 public hospitals to enable smooth information flow between HIGO and providers. In addition, a directive was issued for data warehousing that required the connection of e-Mongolia with the Health Information Exchange Platform (HIEP). The National Data Centre (NDC) was given the responsibility of storing and safeguarding health data, with a 20TB capacity as of May 2022.[5] Additionally, training facilities have been set up and put into service to increase capacity in HIMS and IT literacy. Its objectives are to provide a computer user's textbook and accredited training programs for information network specialists. Through this effort, almost 1,180 professionals received training. With a **total maturity score of 12 out of a possible 21 (57%)**, Mongolia has made investments in and is attempting to further enhance its digital health infrastructure. The scoring is as follows-

Parameters	Description	Score
Network infrastructure (incl. availability of computers)	Computers are not available at all health facilities. ~192/ 549 PHCs have at least 1 upgraded & working computer.	1
Connectivity–Internet	Internet accessibility has reached ~84%, i.e., 2.82 Mn people were connected to internet. During implementation of E-health project, 443/ 549 PHCs were connected to high-speed internet	2
Data centers (cloud based, in-premises)	KHUR is integrated information exchange system being used for health database. 33 organizations are transmitting 615 types of information being utilized by 122 government & 300 private organizations to deliver services to public.	2
Data exchange system (secure exchange of health records)	There are established APIs that enables information exchange between HIGO and health care providers.	2
Data backup & disaster recovery	Enhancement of storage capacity came through a directive which mandated integration of HIEP with e-Mongolia & NDC for storing & securing health information database, as of May-22, its capacity was 20TB	2
Uninterrupted power supply	Indigenous production fulfills ~89% of country's energy consumption, remaining 11% is met through energy imports.	2
Skilled human capital	Capacity building is an ongoing process and has a dynamic requirement with evolution of automation	1
Total score		**12**

Figure 2: Evaluation of Mongolia's digital infrastructure

2. Governance

In order to enhance the digital health ecosystem, the GoM created an e-health plan (2010–14) with the goal of using ICT for fair, easily accessible, and high-quality healthcare. However, no digital health regulatory framework is in place. To improve the integration and use of health information and e-health solutions for e-health projects (2015–22), funding was secured from IDA. Additional support from UNICEF's East Asia and Pacific Regional Office and WHO. [6] [7] [8] GoM created the Fast Healthcare Interoperability Resources (FHIR) Implementation Guide, which describes the information exchange framework in combination with the HL(Health Level) 7 FHIR protocol, to improve information sharing with HIEP. In 2022, the Law on Personal Data Protection came into effect, prioritizing patient privacy and consent in accordance with international norms. A system has been established where citizens can voice their opinions and complaints, '11-11 centre'.[9] Given Mongolia's **total maturity score of 9 out of a possible maximum of 27 (33%)**, we suggest that the country concentrate on improving its governance of digital health by fortifying its national strategy, regulatory framework, etc. The scoring is as follows-

Parameters	Description	Score
Existence of digital health department at MoH	MoH established E-Health division in 2018 to supervise digital health governance. However, with the establishment of the Ministry of Digital Development & Communication, the division got dissolved.	1
National digital health strategy	In 2009, an e-Health strategy was developed for the duration of 2010-14.	1
Regulatory framework for digital health	No regulatory framework	0
Data security & privacy law(s)	The "Law on Personal Data Protection" was implemented in 2022.	2
Independent complaint institution/ Ombudsman	To address citizens' concerns, the "11-11 center" has been established.	2
Digital health research institutions/ networks	No established institution/ network, and presently it is ad-hoc & no integrated overarching system.	0
Funding for digital health	Mongolia received funding of $19.50 million from IDA of World Bank for implementation of e-health project (2015-22). GOM also received support from WHO & UNICEF East Asia & Pacific Regional Office.	1
Digital health standards	In 2021, an FHIR implementation guide was developed to govern information exchange system. Additionally, World Bank developed 24 health data standards & submitted them to MoH for validation and endorsement	1
Advisory board on emerging technologies (AI, ML, Blockchain, Computer Vision)	No advisory board , however, in 2022, GoM established Ministry of Digital Development and Communication, to coordinate ICT initiatives of other ministries & agencies to ensure links and interoperability needed for a whole-of-government approach.	1
Total score		9

Figure 3: Evaluation of Mongolia's digital governance

3. Digital health insurers

Approximately 2.3 million persons received electronic ID cards in 2012; these cards had microprocessors integrated that stored biometric information and personal data. In accordance with the nation's "One Citizen-One Registration" initiative, the "Improved Registry System" project was introduced in 2016–2020 to further improve civil registration services.

Individuals must register with civil authorities in order to get healthcare services.[10] [11] [12] Healthcare providers file claims using HIGO's digitalized claim processing system. However, can be reinforced even further in terms of evaluating and assessing claims. With a **total maturity score of 10 out of a possible 21 (48%)**, the system is functional but needs to be strengthened in order to enable easier operations, in terms of income/ expenditure dashboard, the digital health funding plan etc. The scoring is as follows-

Parameters	Description	Score
Digital health financing strategy	No digital health financing strategy	0
Unique ID system for citizens/ beneficiaries	Unified registration process is synced with e-Mongolia. In 2012, ~ 2.3 Mn electronic ID cards were distributed. In 2016–20, Improved Registry System," project was launched in alignment with "One Citizen-One Registration" national program.	2
Clinical coding and costing software	This has been done by HIGO and details are available on HIGO's website.	2
Claim Processing System	Digital claim processing system is in place; however, it requires further strengthening in terms of assessment & evaluation of claims.	2
Fraud & abuse management system	Is operates as part of claim review process & aids in identifying mis-claim & potential fraud, can be strengthen	2
Income and expenditure dashboard	National Statistical Commission of Mongolia is developing health insurance reports that aid in determining the income and expenditure of the HIF.	1
Capacity building	Establishment of training centers to promote IT literacy & HMIS training.	1
Total score		10

Figure 4: Evaluation of Mongolia's digital health for insurers

4. Digital health for providers

Data is electronically collected and stored using e-Health software form-611, which makes data interchange with HIGO simple via APIs. KHUR is utilized to develop an integrated health information system, wherein various data collection platforms are linked, for real-time sharing of patient health service-related information, including referrals & services received.

By 2022, 100% of digital pictures created were sent to central PACS, and around 453 PHC institutions were sending out monthly e-health reports. [13] [14] In order to improve claim processing speed, HIGO created a portal where providers submit claims for screening, which includes both manual and automated evaluations. Once a claim has been approved, payments are sent.

The amount reimbursed is determined by applying the percentage of improper claims found in the manual targeted reviews to the initial dataset of claims with the same DRG coding.

With a **total maturity score of 9 out of a possible maximum of 18 (50%)**, the system is functioning but needs to be strengthened to enable more seamless operations for the EHR, payment, and data recording system etc. The scoring is as follows-

Parameters	Description	Score
Beneficiary identification system	Is operational & helps payers to identify providers that may be submitting claims & potentially engaging in fraudulent, abusive or wasteful practices.	3
Benefit review & automated stop gap/ denial of additional services	Is operational, however, can be streamlined & automated	2
Standardized digital medical documentation/ health records	e-Health software form–611 is used to collect and store medical records electronically.	1
Interconnected health systems - EMR/ EHR/ PHR	Real-time sharing of patient health service-related information is possible i.e., referrals made & health services received. In 2022, 453 PHCs were transmitting monthly e-health reports, &100% of digital images generated in pilot facilities were transmitted to central PACS.	1
Reimbursement review & payment system	Payment system is available with HIGO. However, Clarification required around mode of payment for different channels of claims received.	1
Capacity building	E-Learning Center has been established MNUMS, to provide vocational training to healthcare providers. 5-elearning modules for emergency health services have also been developed, under MCCR project	1
Total score		9

Figure 5: Evaluation of Mongolia's digital health for providers

5. Digital services for citizens

The GoM, in collaboration with international organizations, has introduced e-services to improve access to healthcare in rural and urban areas. Starting with telemedicine services for cardiac cases between PHCs and referral hospitals in 2003, the program has expanded to include tele-cardiography, hip ultrasound screening, paediatric surgery, maternal and newborn health etc.[15] Implementation of m-health program brought forward applications such as e-Cart, i-Med Mongolia, and e-Clinic LLC,[16] [17] [18]with facilities of online bookings & identifying providers. GoM has made an effort to make these services accessible via the e-Mongolia portal, patient data, diagnostics, and information about health insurance premiums paid through e-Barimt.[19] [20] [21]

GoM has launched a telephone number and a unified platform called '11-11' to address citizens' grievances and are responded within 30 days.[22] The system has a **total maturity score of 8 out of maximum 18 (44%)**, indicating its functionality and acceptance. Further enhancements to e-health services will make it more user-friendly. The scoring is as follows-

Parameters	Description	Score
Adoption of e-health services	Services of telemedicine is available & used between PHC & referral level hospitals as well as between various referral hospitals	2
e-Market place for discovery of healthcare services	Along with m-health application there are details of providers through HIGO's website.	1
Digital grievance redressal system	Users can call 1800-1363 for advice & information required for accessing electronic system.	2
Access to Patient Health Records (PHR)	Details of diagnostics and health certificate may be obtained through e-Mongolia.	1
Advanced PHR offerings with personalized information & services	Currently, PHR only includes the patient use of the system (patient navigation through the system); but not necessarily details of the patient medical record i.e., test results etc.	1
Availability of m-Health application for patients	e-Barmit is used for premium payments & i-Med Mongolia, e-Cart, eClinic LLC are used to access services.	1
Total score		8

Figure 6: Evaluation of Mongolia's digital health services for citizens

6. Health analytics

The National Centre for Health Development produces annual health indicators reports, analysing population demographics, epidemiology, SDG indicators, health outcomes, and provider status. [23] The GoM offers open-licensed data from various government departments for free use and redistribution.[24] [25]

Initially, Mongolia employed a regional UHC monitoring dashboard that was incorporated into the Health Information and Intelligence Platform (HIIP) for effective M&E of KPIs and QIs. With a **total maturity score of 8 out of maximum possible of 18 (44%)**, suggests that it is making efforts to improve its health analytics system. Nonetheless, further measures are required to guarantee efficient decision-making. The scoring is as follows-

Parameters	Description	Score
Population level HMIS	Annual health indicator report includes overview of population demographic details.	2
Anonymized health data available for research	H-Info used by NCHD produces annual health indicators book for MoH.	2
Dashboards for M&E of KPIs	DHIS-2 has been introduced in 2 subnational regions as of 2016, needs further development.	1
Population health risk stratification systems	STEPs survey is conducted to assess epidemiology & associated risks.	1
Health big data & AI connecting with non-health sectors	Along with H-Info, GoM has an open data website where datasets from various government departments are available.	2
Annual report on digital health	No annual digital reports re prepared	0
Total score		8

Figure 7: Evaluation of Mongolia's health analytics system

Section 5- Conclusion

Mongolia has made significant progress in integrating digital technologies into its healthcare system, benefiting patients, providers, and insurers. While 81% of primary healthcare centers have high-speed internet and data systems are integrated, the country's digital health infrastructure scores 57% in maturity. Governance structures need strengthening, scoring only 33%. Digital health insurers and provider systems are functional but require enhancements, scoring 48% and 50%, respectively. Citizen services and health analytics show promise but need further improvement, each scoring 44%. Overall, Mongolia's digital health ecosystem has a strong foundation but requires targeted interventions to enhance governance, insurer and provider systems, and health analytics for more efficient and transparent UHC implementation. Based on assessment conducted, following components project scope of environment:

- **Claim processing-** The combination of manual and automated screening in the claim review process increases the likelihood of errors in the reimbursement calculations.
- **API system-** To enable data interchange, the APIs must be extensively developed, guaranteeing interlinkages with all relevant stakeholders. Attention must be directed on providers who have not yet been integrated with HIGO's API service.
- **Patient data protection and safety-** Premium payouts, linked to beneficiaries' income status, pose a significant risk to confidential data, particularly individual medical records, necessitating the implementation of international standards for data protection and safety.
- **Institutional framework for developmental changes-** Since the premium payouts are linked to income status of the beneficiaries, a lot of confidential data is at risk, obviously counting in individual medical records. It is paramount to deploy international standards for data protection and safety to mitigate any possible data breach.
- **Capacity building of NHF team-** The HIGO squad is not as capable as it may be due to high attrition rates and a lack of organized training programs. An organized program for capacity building that includes orientation, fresher, and refresher courses does not exist. For improved accessibility and network penetration, these modules must be created and made available online.

Therefore, following are proposed interventions for Mongolia's NHF system.

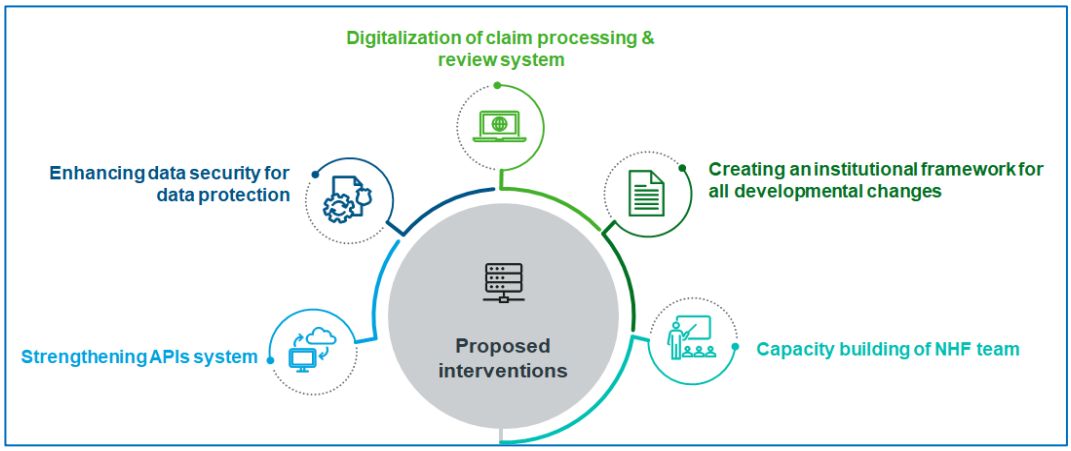

Figure 8 : Proposed interventions for Mongolia

Annexure

S. No.	Phases	Description	Comments	Scoring (0-3)
1	**Infrastructure**			
1.1	Network infrastructure (incl. availability of computers)			
1.2	Connectivity--internet			
1.3	Data centers (cloud based, in-premises)			
1.4	Data backup and disaster recovery			
1.5	Data exchange system (secure exchange of health records)			
1.6	Uninterrupted power supply			
1.7	Skilled human capital			
	Maximum score			**21**
2	**Governance**			
2.1	Existence of digital health department at MoH			
2.2	National digital health strategy			
2.3	Regulatory framework for digital health			
2.4	Data security and privacy law(s)			
2.5	Independent complaint institution/ Ombudsman			
2.6	Digital health research institutions/ networks			
2.7	Funding for digital health			
2.8	Digital health standards			
2.9	Advisory board on emerging technologies - AI, ML, Blockchain, Computer Vision			
	Maximum score			**27**
3	**Digital Health for insurers**			
3.1	Digital health financing strategy			
3.2	Unique ID system for citizens/ beneficiaries			
3.3	Clinical coding and costing software			
3.4	Claim Processing System			
3.5	Fraud and abuse management system			
3.6	Income and expenditure dashboard			
3.7	Capacity building			
	Maximum score			**21**
4	**Digital Health for providers**			
4.1	Beneficiary identification system			
4.2	Benefit review & automated stop gap/ denial of additional services			
4.3	Standardized digital medical documentation/ health records			
4.4	Interconnected health systems - EMR/ EHR/ PHR			
4.5	Reimbursement review and payment system			
4.6	Capacity building			
	Maximum score			**18**
5	**Digital Health Services for citizens**			
5.1	Adoption of e-health services			
5.2	e-Market Place for discovery of health care services			
5.3	Digital grievance redressal system			
5.4	Access to patient health records (PHR)			
5.5	Advanced PHR offering with personalized information & services			
5.6	Availability of m-health application for patients			
	Maximum score			**18**
6	**Health analytics**			
6.1	Population level HMIS			
6.2	Anonymized health data available for research			
6.3	Dashboards for M&E of KPIs			
6.4	Population health risk stratification systems for preventive care			
6.5	Health big data & AI analytics connecting with non-health sectors			
6.6	Annual report on digital health			
	Maximum score			**18**
	Total score (Maximum possible score)			**123**

Figure 9 : Snapshot of evaluation matrix

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