

SUMMER INTERNSHIP PROGRAM

At



Chikitsa.io, PUNE

From 15 May 2025 to 24 July 2025

A REPORT BY

Charu Dhiman

Master of Business Administration

Health and Health and Hospital Management

under the Mentorship of

Dr. Varsha Tanu

Associate Professor

IIHMR University, Jaipur



TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ms. Charu Adhiman successfully completed her internship as a Medical Consultant Intern at Vigorous HealthTech Pvt. Ltd. from 15th May 2025 to 24th July 2025.

During her internship, she performed her responsibilities sincerely and demonstrated a good understanding of medical processes and patient coordination.

We appreciate her contribution and wish her the very best in her future endeavors.

Yours Sincerely,
Vigorus Healthtech Pvt. Ltd.



Auth. Signatory

Astha Gupta
(Admin Head)
Vigorus Healthtech Private Limited

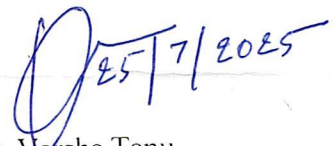
IIHMR University Faculty Mentor Approval

This is to certify that **Ms. Charu Dhiman** academic year 2024-26 of Institute of Health Management Research has prepared a poster with respect to her summer internship held during May-July 2025.

She has carried out work as per the guidelines. Her poster is approved for presentation:

Date: _____

25/7/2025



Dr. Varsha Tanu

Associate Professor

EMR STRUCTURE DEVELOPMENT

BACKGROUND

Chikitsa.io is an AI-powered health-tech platform that streamlines healthcare workflows, focusing on automating tasks like clinical documentation and diagnostics. Its AI-driven EMR system improves data management and reduces paperwork. Designed for both hospitals and clinics, Chikitsa.io aims to make healthcare faster, smarter, and more accessible, particularly in underserved areas.

MISSION AND VISION

Mission of Chikitsa.io:

To revolutionize healthcare by leveraging AI to automate clinical workflows, reduce administrative burdens, and improve patient care, making healthcare more efficient, accessible, and patient-centric.

Vision of Chikitsa.io:

To make healthcare faster, smarter, and accessible to everyone, with a focus on reducing clinician workload and enhancing care quality, especially in underserved areas.

CHALLENGES

Integrating AI solutions with hospital IT systems.
Ensuring data accuracy and real-time validation.
Balancing clinical requirements with user-friendly design.
Quickly adapting to new AI tools.
Managing tight deadlines and multi-tasking effectively.

RECOMMENDATIONS

1. Gather continuous feedback from healthcare professionals.
2. Enhance integration with hospital IT systems.
3. Strengthen NLP for better data extraction.
4. Develop a mobile app for patient tracking.
5. Improve real-time EMR data validation.

SWOT Analysis of Chikitsa.io

STRENGTHS

- AI-powered tools for clinical documentation and fraud detection
- Comprehensive multispecialty EMRs for diverse medical fields
- ABDM-compliant and highly interoperable
- Agile, cross-disciplinary team driving quick innovation

WEAKNESSES

- Scalability challenges in diverse healthcare infrastructures
- Limited B2C offerings (no patient-facing app)
- Customization difficulty for smaller clinics
- Dependence on large hospital networks for growth

OPPORTUNITIES

- Expansion into underserved Tier 2/3 cities
- Government partnerships with ABDM and NHM initiatives
- AI diagnostics and clinical decision support systems
- Health insurance integration for streamlined claims

THREATS

- Intense competition from larger health-tech companies
- Regulatory hurdles with evolving privacy laws
- Slow adoption in hospitals used to legacy systems
- Data security risks threatening trust and growth

BEFORE



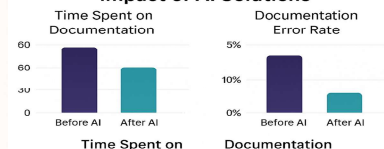
Manual documentation was time-consuming and prone to errors

AFTER



AI-powered transcription and streamlined UI reduced workload

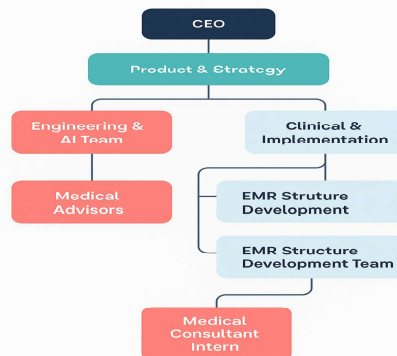
Impact of AI Solutions



Key Takeaways from My Internship

- ✓ Gained practical experience in AI applications for healthcare
- ✓ Improved teamwork skills working with multidisciplinary teams
- ✓ Deepened understanding of clinical workflows and EMR systems
- ✓ Enhanced problem-solving by tackling real-world healthcare challenges
- ✓ Gained hands-on experience in UI/UX design for EMRs

CHIKITSA



Weekly Report (week 1)

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Health and Health and Hospital Management

Week no: 1 From: 15 May 2025 to 17 May 2025

Activity Done	• Understood the core vision and modular architecture of Chikitsa.io's AI-powered EMR system. • Studied in detail the EMR modules developed so far, including ophthalmology, basic medicine. • Observed how each EMR is tailored to the clinical workflow of the respective specialty while maintaining consistency across modules. • Identified the standard fields used across EMRs: Basic Details, Chief Complaints, History, Examination, Investigations, Diagnosis, and Treatment Plans. • Analysed how speech-to-text integration and real-time data structuring are used. • Reviewed sample patient data flows and backend structure to understand data tagging, form validation, and logic mapping.
Linking theory (Classroom learning) with practice at your organization	• Theoretical concepts from health informatics and hospital information systems helped me understand the structure and logic behind modular EMR development at Chikitsa.io. • Exposure to classroom learning around structured data capture, workflow automation, and clinical pathway mapping directly aligned with the EMR design philosophy at Chikitsa.io.
Gaps identified on the working area.	• Lack of standardization across some EMR modules in terms of field ordering and terminology (e.g., some use "Diagnosis," others "Provisional Diagnosis"). • UI layout inconsistencies in a few modules which may affect user navigation, especially across specialties.

	• Certain EMR sections had overlapping data fields (e.g., patient history and examination) which could lead to redundancy in data entry.
Suggestions for improvement	• Standardize the structure and naming conventions across all EMR modules to ensure consistency and ease of use for clinicians. • Implement uniform UI/UX guidelines across all modules to improve visual coherence and navigation efficiency.
Plan for the next week	The plan is to study in detail how the structure of EMR should be what all need to be added how improvements can be done.



Signature of the Student

Weekly Report (Week 2)

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Health and Hospital Management

Week no: 2 **From:** 19 May 2025 to 24 May 2025

Activity Done	• Conducted a comprehensive study of cardiology-specific clinical workflows to design an effective EMR layout. • Collected and compiled all essential data fields required in a Cardiology EMR module, aligned with NABH documentation standards. • Categorized inputs into structured sections such as Patient History, Risk Factors, Systemic Examination, Investigations (ECG, Echo, TMT), Diagnosis, and Treatment Plan. • Studied how cardiovascular symptoms and comorbidities are captured during OPD consultations and reflected them in EMR field design. • Identified areas for automation and AI integration (e.g., ECG interpretation, structured cardiac history collection).
Linking theory (Classroom learning) with practice at your organization	• Utilized learnings on NABH standards and compliance frameworks to ensure documentation alignment with quality and accreditation requirements. • Mapped academic concepts such as systemic examination findings and differential diagnosis to their digital counterparts in the EMR. • Translated textbook-based cardiovascular assessment workflows (e.g., ECG analysis, heart sound interpretation) into structured EMR input formats.

Gaps identified on the working area.	• UI for cardiology lacked specialty-focused enhancements (e.g., quick access to vitals timeline, drug interactions for cardiac meds). • No direct linkage between presenting symptoms and relevant cardiac investigations, which could delay clinical decision-making.
Suggestions for improvement	• Introduce structured templates for cardiac-specific history • Implement auto-suggestions or flagging mechanisms for high-risk patient profiles based on clinical inputs (e.g., elevated BP + chest pain).
Plan for the next week	• Will be working on my next project orthopedics



Signature of the Student

Weekly Report (Week 3)

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Health and Hospital Management

Week no: 3 **From:** 26 May 2025 to 30 May 2025

Activity Done	• Collected comprehensive data fields required for the Orthopedic EMR module, in alignment with NABH documentation standards. • Categorized orthopedic workflows into structured EMR sections such as History of Present Illness, Injury Details, Fracture Classification, Examination Findings, Radiological Investigations, Diagnosis, and Treatment Plan. • Reviewed orthopedic investigation reports (X-ray, CT, MRI) and designed placeholders for structured findings and surgical notes.
Linking theory (Classroom learning) with practice at your organisation	• Understood how Digital Health concepts like paperless documentation, interoperability, and real-time clinical access are being implemented in Chikitsa's EMR platform. • Reinforced classroom knowledge of clinical documentation standards (e.g., NABH, EMR adoption models) while translating them into practical EMR templates.
Gaps identified on the working area.	• Absence of structured templates for common orthopedic conditions like fractures, arthritis, and ligament injuries, leading to unstandardized documentation. • Lack of integration of orthopedic classification systems • Inadequate pre-operative and post-operative surgical documentation flow within the EMR for orthopedic interventions.

Suggestions for improvement	• Add structured templates for fractures, arthritis, and trauma cases using standard classifications (AO, Salter-Harris). • Introduce dedicated sections for injury mechanism, MLC tagging, and trauma scoring. • Build a clear pre-op and post-op workflow for orthopedic surgeries
Plan for the next week	Working on dental EMR



Signature of the Student

Weekly Report (Week 4)

Name of the Organisation: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Health and Hospital Management

Week no: 4 **From:** 2 June 2025 to 6 June 2025

Activity Done	• Collected all necessary clinical data fields and documentation requirements for the Dental EMR module in accordance with NABH standards. • Segmented the EMR into key sections: Patient Complaint, Dental History, Oral Examination, Radiographic Findings, Diagnosis, Treatment Plan, and Procedure Notes. • Studied common dental procedures (e.g., fillings, scaling, root canal, extraction, prosthetics) and mapped them to appropriate EMR fields. • Structured input formats for intraoral and extraoral findings, including tooth-wise charting for decay, missing, or filled teeth.
Linking theory (Classroom learning) with practice at your organisation	• Applied theoretical knowledge of oral anatomy and common dental pathologies to structure fields for clinical examination and diagnosis. • Utilized classroom understanding of dental charting and procedure coding to create standardized input formats for treatment planning and documentation. • Understood how digital health principles like electronic dental records, patient education integration, and digital imaging streamline clinical workflows and improve continuity of care in dental practice.
Gaps identified in the working area.	• No integrated tooth-numbering or interactive dental charting system, making clinical documentation less intuitive for dentists. • Lack of structured templates for common procedures like root canal, scaling, and prosthetic work limits standardization.

	• Missing fields for sterilization logs, consent tracking, and post-procedure instructions, which are essential for NABH compliance.
Suggestions for improvement	• Keep UI/UX simple, not to make it complicated for the usage • Add structured templates for common dental procedures along with NABH-compliant fields like consent and sterilization tracking.
Plan for the next week	• Collection of Vitals for all departments

Signature of student 

Weekly Report (Week 5)

Name of the Organisation: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital & Health Management

Week no: 5 **From:** 9 June 2025 to 13 June 2025

Activity Done	• Collected and standardized vitals data requirements across all EMR modules, ensuring alignment with NABH documentation norms. • Identified core vitals: Blood Pressure, Heart Rate, Respiratory Rate, Temperature, Oxygen Saturation (SpO2), Height, Weight, BMI, and Blood Sugar (RBS/FBS/PPBS). • Mapped specialty-specific vital parameters (e.g., GCS for Emergency, Pain Score for Orthopedic, Pulse Oximetry for Cardiology). • Created a unified vitals data structure for integration across modules like General Medicine, Cardiology, Orthopedics, Dental, and Neurology.
Linking theory (Classroom learning) with practice at your organisation	• Followed a systematic approach to collect and compare vitals data requirements across multiple specialties to ensure completeness and consistency. • Conducted a gap analysis between NABH guidelines and existing EMR fields using a structured evaluation matrix to inform design updates. • Gained hands-on exposure to how vital signs are digitized and integrated into electronic medical records to support real-time monitoring and alerts. • Understood the role of vitals data in enabling AI-powered clinical decision support and remote patient monitoring within digital health ecosystems.
Gaps identified in the working area.	• Inconsistency in the format and availability of vitals fields across different EMR modules, leading to fragmented documentation.

	• Lack of automated alerts or visual cues for abnormal vitals, which could delay clinical intervention. • No centralized vitals dashboard or timeline view for monitoring patient trends across visits or during inpatient stays.
Suggestions for improvement	• Standardize vitals fields and formats across all EMR modules with consistent units and validations. • Introduce visual trends (line graphs or color-coded alerts) to track vitals over time and flag critical values. • Develop a centralized vitals dashboard for both outpatient and inpatient monitoring with time-stamped entries.
Plan for the next week	• Detailing on Cardiology Module working on UI/UX design



Signature of the Student

Weekly Report (Week 6)

Name of the Organisation: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: Operations, EMR structure development, Quality Department

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital & Health Management

Week no: 6 **From:** 16 June 2025 to 20 June 2025

Activity Done	• Conducted detailed refinement of the Cardiology EMR module by mapping clinical workflows and NABH documentation requirements. • Reviewed and validated cardiology-specific inputs such as symptoms, cardiac history, risk factors, systemic examination, and diagnostic test formats (ECG, Echo, TMT, Angiography). • Segmented fields based on OPD and IPD use cases and structured the EMR sections accordingly for better usability. • Collaborated with the design team to initiate UI/UX wireframing of the Cardiology module using Figma, ensuring intuitive flow and specialty-specific layout.
Linking theory (Classroom learning) with practice at your organisation	• Followed a systematic approach to collect and compare vitals data requirements across multiple specialties to ensure completeness and consistency. • Conducted a gap analysis between NABH guidelines and existing EMR fields using a structured evaluation matrix to inform design updates. • Gained hands-on exposure to how vital signs are digitized and integrated into electronic medical records to support real-time monitoring and alerts. • Understood the role of vitals data in enabling AI-powered clinical decision support and remote patient monitoring within digital health ecosystems.
Gaps identified on the working area.	• Lack of dedicated space for capturing cardiac scoring systems in the earlier EMR drafts. • Some overlap and redundancy between history and examination sections needed streamlining.

	The initial UI lacked clear grouping for acute vs. chronic cardiac conditions, which could affect user clarity.
Suggestions for improvement	- Add structured scoring templates for cardiology risk assessments to support clinical decisions. - Separate acute cardiac event templates (e.g., MI, arrhythmia) from chronic condition flows (e.g., HTN, IHD) for clarity.
Plan for the next week	Will be working on detailed module of GENERAL MEDICINE



Signature of the Student

Weekly Report (Week 7)

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development, Quality Department

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital & Health Management

Week no: 7 **From:** 23 June 2025 to 27 June 2025

Activity Done	• Completed detailed UI/UX structuring for the General Medicine EMR Module, aligning all sections with NABH documentation guidelines. • Organized data fields into logical, clinically-relevant sections including Chief Complaints, History of Present Illness, Past Medical History, Systemic Examination, Investigations, Diagnosis, and Treatment Plan. • Designed wireframes with user-friendly navigation and expandable panels for lengthy forms (e.g., history and review of systems). • Ensured responsive layouts for both OPD and IPD workflows—supporting documentation needs from first visit to discharge summary. • Incorporated dropdowns, checkboxes, and grouped input formats to enhance data entry efficiency and reduce clinician workload. • Collaborated with the clinical team to validate terminology, mandatory fields, and specialty-specific inputs.
Linking theory (Classroom learning) with practice at your organisation	• Followed a systematic approach to collect and compare vitals data requirements across multiple specialties to ensure completeness and consistency. • Conducted a gap analysis between NABH guidelines and existing EMR fields using a structured evaluation matrix to inform design updates. • Gained hands-on exposure to how vital signs are digitized and integrated into electronic medical records to support real-time monitoring and alerts.

Gaps identified on the working area.	• Initial drafts lacked standardization of input types across different sections (e.g., vitals, examination, and history). • Some fields were too text-heavy and needed to be replaced with structured or selectable inputs to reduce typing burden.
Suggestions for improvement	• Use predefined templates for chronic diseases (e.g., Diabetes, Hypertension) to improve continuity of care. • Include dedicated sections for summary notes and discharge instructions in both OPD/IPD flows.
Plan for the next week	Will be working on gynecology module



Signature of the Student

Weekly Report (Week 8)

Name of the Organisation: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development, Quality Department

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital & Health Management

Week no: 8 **From:** 30 June 2025 to 4 July 2025

Activity Done	• Collected and organized all required clinical data fields for the Gynecology EMR module based on NABH standards and OB-GYN clinical workflows. • Designed section-wise UI/UX layout covering Chief Complaints, Menstrual History, Obstetric History, Contraceptive History, Gynecological Examination, Investigations, Provisional Diagnosis, and Treatment Plan. • Created structured formats for essential OB-GYN documentation such as Last Menstrual Period (LMP), Expected Date of Delivery (EDD), gravida/para status, and cycle regularity. • Included standardized templates for per speculum, per vaginal, and abdominal examination findings. • Integrated fields for pregnancy status, antenatal care tracking, surgical history, and infertility assessments. • Built modular UI with collapsible panels, dropdowns, and date selectors to improve data entry speed and form readability.
Linking theory (Classroom learning) with practice at your organisation	• Gained practical exposure to how digital EMRs can improve women's health tracking, continuity of antenatal care, and structured reproductive documentation. • Understood the role of digital templates in reducing omissions in sensitive examinations and ensuring clinical accountability in OB-GYN practice.

Gaps identified in the working area.	• Earlier versions of the EMR lacked standardized formats for menstrual history and antenatal follow-up tracking. • No dedicated section existed for per speculum and per vaginal findings, which are critical to gynecological assessments.
Suggestions for improvement	• Introduce predefined templates for antenatal visits, contraception counselling, and gynecological surgeries to ensure standardization. • Add automated LMP → EDD calculators and gestational age trackers to assist in obstetric care.
Plan for the next week	Will be working on emergency Module



Signature of the Student

Weekly Report (Week 9)

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development, Quality Department

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital & Health Management

Week no: 9 **From:** 7th July 2025 to 11th July 2025

Activity Done	• Collected all clinical data points and workflow requirements to design the Emergency Module EMR, as per NABH guidelines and emergency care protocols. • Segmented the module into key sections: Triage Assessment, Primary Survey (Airway, Breathing, Circulation), Chief Complaint, Vitals, GCS Score, Clinical Notes, Investigations, Orders, and Disposition. • Designed specialized input formats for emergency scenarios including trauma tagging, time-stamped interventions (CPR, intubation), and medicolegal case (MLC) status. • Integrated quick-access templates for common emergency conditions (e.g., chest pain, stroke, trauma, poisoning). • Ensured compliance by including NABH-mandated fields like arrival mode, triage level, time of intervention, consent (where applicable), and transfer/discharge summary. • Built the UI/UX with a focus on speed and clarity—used color-coded tags (e.g., triage priority), collapsible input panels, and timestamp auto-fill to enhance clinician efficiency.
Linking theory (Classroom learning) with practice at your organisation	• Applied theoretical training on primary and secondary survey protocols (Airway-Breathing-Circulation) into structured EMR formats. • Used academic knowledge of triage, trauma evaluation, and Glasgow Coma Scale (GCS) scoring in building accurate emergency input fields.

	• Reinforced learning of systemic examination and differential diagnosis by organizing emergency clinical evaluation forms.
Gaps identified on the working area.	• Initial EMR layouts lacked time-capture fields for critical interventions and procedures, reducing accountability. • No clear UI separation between trauma, cardiac, and medical emergencies, which could confuse first-line users.
Suggestions for improvement	• Include automated timestamp capture for critical actions like CPR, injections, and intubation. • Create pre-built templates for high-priority conditions (e.g., MI, stroke, road traffic accidents).
Plan for the next week	Working on Neurology module



Signature of the Student

Weekly Report (Week 10)

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital & Health Management

Week no: 10 From: 14th July 2025 to 18th July 2025

Activity Done	• Compiled all essential data fields for the Neurology EMR Module, ensuring alignment with NABH documentation standards and clinical neurology workflows. • Segmented the module into sections: Chief Complaints, Neurological History, Motor & Sensory Examination, Cranial Nerve Assessment, Reflexes, Higher Mental Functions, Investigations (CT, MRI, EEG, EMG), and Diagnosis. • Structured inputs for neurological scoring systems such as GCS (Glasgow Coma Scale), NIHSS (stroke scale), and MMSE (Mini-Mental State Examination). • Designed dedicated panels for common neurological disorders (e.g., stroke, seizure, headache, neuropathy) with condition-specific fields. • Integrated UI components like visual reflex charts, dropdowns for tone/power grading, and checklists for cranial nerve testing.
Linking theory (Classroom learning) with practice at your organization	• Gained insight into how digital neurology records can streamline longitudinal tracking of chronic conditions like epilepsy or dementia. • Observed how structured documentation enables better decision support and reduces diagnostic delays in neuro-emergencies. • Conducted condition-wise data mapping to ensure fields were relevant to both acute and chronic neurological disorders. • Benchmarked neurology EMRs from existing systems and NABH guidelines to identify gaps and design a compliant format.

	• Worked in iterative loops with clinical stakeholders to validate neurological scoring components and UI alignment.
Gaps identified on the working area.	• No standardized format previously existed for documenting cranial nerve findings or sensory/motor examination results. • Missing structured follow-up plan for rehabilitation, physiotherapy, or neuro-psych evaluations in chronic neuro cases.
Suggestions for improvement	• Add interactive inputs for reflexes, tone, and gait assessments to improve ease of use for neurologists. • Create templates for stroke documentation with integrated timelines, interventions, and follow-up scheduling.
Plan for the next week	Working on DIGITAL NABH

Signature of the Student



Weekly Report Compilation

Name of the Organization: Chikitsa.io

Area/ Department/ Project of Summer Internship Program: EMR Structure development

Name of the Student: Charu Dhiman

Roll no: 1930

Stream: Hospital and Health Management

Activity Done	• Studied and understood the overall architecture of Chikitsa.io's AI-powered modular EMR platform and its alignment with NABH compliance. • Conducted detailed data collection and field mapping for multiple specialty EMR modules including: • Cardiology – structured templates for risk factors, diagnostic tools (ECG, TMT, Echo), and NABH-aligned documentation. • Orthopaedics – designed fracture classification templates, injury assessment fields, and surgical workflow layouts. • Dental – compiled tooth-wise charting, procedure notes, radiographic fields, and sterilization tracking. • Gynaecology – built OB-GYN specific documentation for menstrual history, antenatal care, per vaginal/speculum exams, and reproductive health tracking. • Emergency – created high-speed workflows for triage, ABC assessment, time-stamped interventions, and real-time patient tracking. • Neurology – integrated neurological scoring systems (GCS, NIHSS, MMSE), cranial nerve documentation, and specialty examination templates. • General Medicine – structured history-taking, systemic exam, comorbidity tracking, and discharge planning with UI wireframes. • Worked on Vitals Data Standardization across all modules, ensuring consistency, unit validations, timestamping, and NABH monitoring compliance. • Designed UI/UX wireframes for all modules using Figma or equivalent tools, incorporating collapsible sections, tab-based layouts, and clinical flow optimization.
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	• Ensured inclusion of NABH-mandated fields such as consent capture, comorbidity/allergy tracking, discharge summary, procedure notes, and follow-up. • Coordinated with clinical teams to validate data points, input types, and terminology consistency. • Proposed specialty-specific templates, interactive tools (e.g., scoring scales, reflex charts), and visual dashboards for enhancing user experience. • Applied classroom knowledge of clinical workflows, documentation standards, digital health, and user-centered design throughout the internship.
Linking theory (Classroom learning) with practice at your organisation	• Gained hands-on experience in building digital-first EMR systems designed for real-time clinical documentation, reducing reliance on paper records. • Understood how structured electronic data improves interoperability, continuity of care, and AI-assisted clinical decision support across specialties. • Observed how digital health tools like Voice-to-Text (VoiceMD), structured vitals capture, and scoring systems integrate into EMRs for faster and safer care delivery. • Learned the importance of timestamping, audit trails, and compliance logs in ensuring accountability within digital medical records. • Contributed to the digitization of workflows in high-impact areas like emergency care, antenatal tracking, neurology scoring, and vitals monitoring—enhancing accessibility and clinical efficiency. • Followed a systematic, field-wise data collection and validation methodology while designing each EMR module, using NABH guidelines as a benchmark. • Conducted gap analysis between existing documentation practices and ideal digital workflows to identify areas for UI/UX enhancement and clinical alignment. • Performed comparative benchmarking with EMRs used in other healthcare systems to identify best practices in design, structuring, and compliance. • Engaged in iterative feedback loops with clinicians to validate each design decision, ensuring practical usability in real-world clinical environments. • Employed modular thinking and design frameworks for scalable EMR development, enabling consistency across multiple specialties.

Gaps identified on the working area.	Lack of Standardization Across Modules Inconsistent naming conventions, field ordering, and input types were observed across different EMR modules, reducing uniformity and increasing training time for clinicians. Incomplete Specialty-Specific Templates Many modules (Cardiology, Orthopaedics, Gynaecology, Neurology) lacked dedicated structured templates for common conditions (e.g., stroke, fractures, pregnancy tracking), which are essential for specialty-specific documentation. Missing Scoring Systems & Clinical Tools Neurological scores ,fracture classification and risk scores were absent or only partially integrated into the UI. Redundant and Overlapping Fields Several modules showed duplication in data collection—especially in areas like history-taking and examination—leading to clutter and inefficiency. Unoptimized UI/UX for Speed & Clarity Emergency and Orthopaedic modules lacked high-speed documentation features (e.g., timestamping, shortcut templates) needed for urgent care settings. Limited Visual/Interactive Inputs EMRs lacked interactive tools like dental charts, reflex maps, cranial nerve testing aids, or dynamic vitals graphs, which would significantly improve usability. Vitals Monitoring Gaps Inconsistent vitals capture formats, missing timestamp fields, and absence of visual trend monitoring across modules reduced clinical visibility. Lack of Follow-up & Continuity Tracking Modules like General Medicine, Neurology, and Gynaecology lacked structured follow-up tracking fields for chronic care or post-procedure monitoring. Missing NABH-Mandated Fields Several early versions missed critical NABH-required inputs such as consent tracking, discharge instructions, comorbidity flags, and allergy documentation. Inadequate Medico-Legal (MLC) Support in Emergency The Emergency module lacked proper documentation

	structures for medicolegal cases (MLC), trauma tagging, and high-risk incident reporting.
Suggestions for improvement	• Standardize Field Structure Across Modules Ensure uniform naming conventions, input types, and layout design across all EMR modules to improve usability and reduce training time. • Introduce Condition-Specific Templates Develop predefined templates for high-volume or chronic conditions (e.g., stroke, MI, fractures, antenatal visits, diabetes, dental procedures) to streamline documentation and support consistency. • Integrate Clinical Scoring Tools Embed scoring calculators directly into the EMR interface for better clinical decision support. • Optimize UI for Specialty-Specific Workflows Use collapsible panels, quick-entry fields, colour coding (e.g., for triage), and specialty layouts (e.g., neuro, emergency, ortho) to reduce cognitive load and enhance speed. • Add Visual and Interactive Inputs Incorporate visual tools like dental charts, neurological reflex maps, pregnancy timelines, and vitals trend graphs to improve clarity and engagement. • Enable Timestamped Actions and Logs Automate timestamps for key clinical actions like CPR, intubation, drug administration, and surgical interventions, especially in Emergency and IPD modules. • Enhance Vitals Monitoring and Alerts Introduce a centralized vitals dashboard with graphical trends, color-coded alerts for abnormal values, and mandatory frequency settings as per NABH. • Strengthen Follow-up and Continuity Features Include structured fields for post-op monitoring, rehabilitation plans, follow-up visit logs, and care continuity documentation in modules like Neurology and Ortho. • Ensure NABH Compliance in Every Section Add and enforce mandatory fields such as consent forms, allergy tagging, comorbidity records, and discharge instructions across all EMRs. • Design for MLC and Emergency Use-Cases Build out dedicated sections for medicolegal documentation, trauma tagging, and priority labelling in the Emergency module.

Key Learnings	• Clinical Documentation Structure Learned how different medical specialties structure patient records—from general medicine to highly focused modules like neurology and gynaecology—based on clinical workflows, patient journey, and compliance needs. • NABH Standards Integration Understood the role of NABH documentation guidelines in shaping EMR structures, including mandatory fields for consent, vitals, progress notes, discharge summaries, and patient safety indicators. • User-Centric UI/UX Design Gained hands-on experience designing EMR interfaces using principles of usability, visual hierarchy, field grouping, and minimalism tailored for clinical environments. • Modular EMR Design Approach Understood how Chikitsa uses a modular design strategy to build scalable, customizable EMRs that can adapt to specialty-specific needs while maintaining consistency. • Digital Health Concepts in Practice Applied digital health knowledge in areas like real-time vitals monitoring, voice-assisted documentation, scoring system integration, and EMR interoperability. • Cross-Specialty Data Mapping Developed the ability to compare, validate, and map clinical data fields across specialties to ensure comprehensive and non-redundant documentation. • Practical Application of Scoring Tools Learned how to digitize and embed clinical scoring systems into structured documentation for better diagnosis and monitoring. • Workflow Mapping and Process Optimization Understood the importance of aligning EMR structure with clinical workflows—from triage in emergency to antenatal follow-ups in gynaecology. • Collaboration with Clinical Teams Developed collaborative communication skills while

	coordinating with doctors, designers, and product teams to validate EMR fields and UI decisions. • Attention to Compliance and Patient Safety Learned to identify critical fields for safety, medico-legal documentation, and clinical continuity, improving the quality and accountability of records.
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Signature of the Student



Approved by the IIHMR University's Mentor