APP FOR PEDIATRIC CHRONIC CARE

Batch Number:12

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Abstract

Pediatric chronic care refers to the ongoing management of long-term health conditions in children. This care involves a comprehensive approach that integrates medical, emotional, and social support to improve the child's quality of life.

The abstract of a study or paper on pediatric chronic care would likely summarize the key aspects of managing these conditions, including the challenges faced, effective strategies for treatment, the importance of family involvement, and the impact on a child's development and well-being.

Introduction

- Creating an app for pediatric chronic care is valuable and initiative.our app can help healthcare providers,parents and care givers and it can help to improve the management of chronic care conditions mainly in childrens.
- The Pediatric Chronic Care Clinic works with children who have chronic or complex medical problems.
- Pediatric is nothing but healer of children.chronic care is nothing but a disease continuing for a long time or pre existing.
- Children with chronic health conditions may have some activity limitations, frequent pain or discomfort, abnormal growth and development, and more hospitalizations.

Literature Review

s. no	Title of the paper & year	Authors	Journal/ conference	Published in	advantages	Disadvantages
1.	**BrainTracker: mHealth app for Remote Assessment of Pediatric Epilepsy and Comorbidities, 2020**	Kevin Gary, Mason Cole, Dipak Purbey, Meng-Jung Lin Krishnakantha Jayashree Chandrashekhar	IEEE publisher	2020	a. We have developed a mobile health application with tasks and surveys that target areas of functioning that are commonly at risk in children across medical disorders.	a. Not all patients have access to smartphones or the internet, potentially creating healthcare disparities

Literature Review

s.no	Title of the project & year	Authors	Journal/conference	Published in	advantages	disadvantages
2.	**Integrating Patient-Generated Observations of Daily Living into Pediatric Cancer Care: A Formative User Interface Design Study,2018**	Udaya Lakshmi, Mathew hong,Lauren wilcox	IEEE publisher	2018	a. prior work largely focuses on capturing clinician-defined, patient-generated data in adult oncology care.	a. Patient-entered data may not always be accurate or complete, leading to potential inaccuracies in treatment decisions

Literature review:

S. No	Title of the project & year	Authors	Journal /conference	Published in	advantages	disadvantages
3.	**An mHealth System for Toxicity Monitoring of Paediatric Oncological Patients using Near Field Communication Technology,2015**	Katharina Duregger, Dieter Hayn, Jürgen Morak, Ruth Ladenstein and Günter Schreier	IEEE publisher	2015	a.A pre-existing telemonitoring system for elderly, chronically ill patients [13-15] has been extended and adapted in order to fulfil the requirements of paediatric oncological settings.	a.The uncertainty associated with the long-term prognosis of chronic conditions can create anxiety for both children and their families.

Objectives

- Appointment Reminders: Send reminders for medical appointments, therapy sessions, or specialist visits.
- Medication management: Help parents and caregivers track medication schedules, dosages, and any potential side effects.
- Secure health records: medical information or medical reports,ensuring that only trusted people,such as doctors,can access it foor your care.
- Improved doctor-patient communication:facilitate communication between healthcare providers,children and their parents for better care coordintion.
- Symptom tracking : keeping a record of how you feel and any changes in your body, like writing down when you have pain or other health issues.

Existing method-drawbacks

- Pediatric chronic care involves the long-term management of health conditions in children.here are some drawbacks.
- **Fragmented Care:**

- Issue: Care for pediatric chronic conditions often involves multiple healthcare providers, including primary care physicians, specialists, therapists, and educators. The lack of communication and coordination among these providers can result in fragmented care.
- Drawback: Fragmented care can lead to miscommunication, duplicated efforts, and an overall lack of continuity in managing the child's health.

- **Limited Patient and Family Involvement:**

- Issue: In some cases, the involvement of patients and their families in the decision-making process and management of chronic conditions is limited.
- Drawback: Lack of involvement can lead to non-adherence to treatment plans, missed appointments, and a decreased understanding of the condition, hindering the overall effectiveness of care.

Existing method-drawbacks

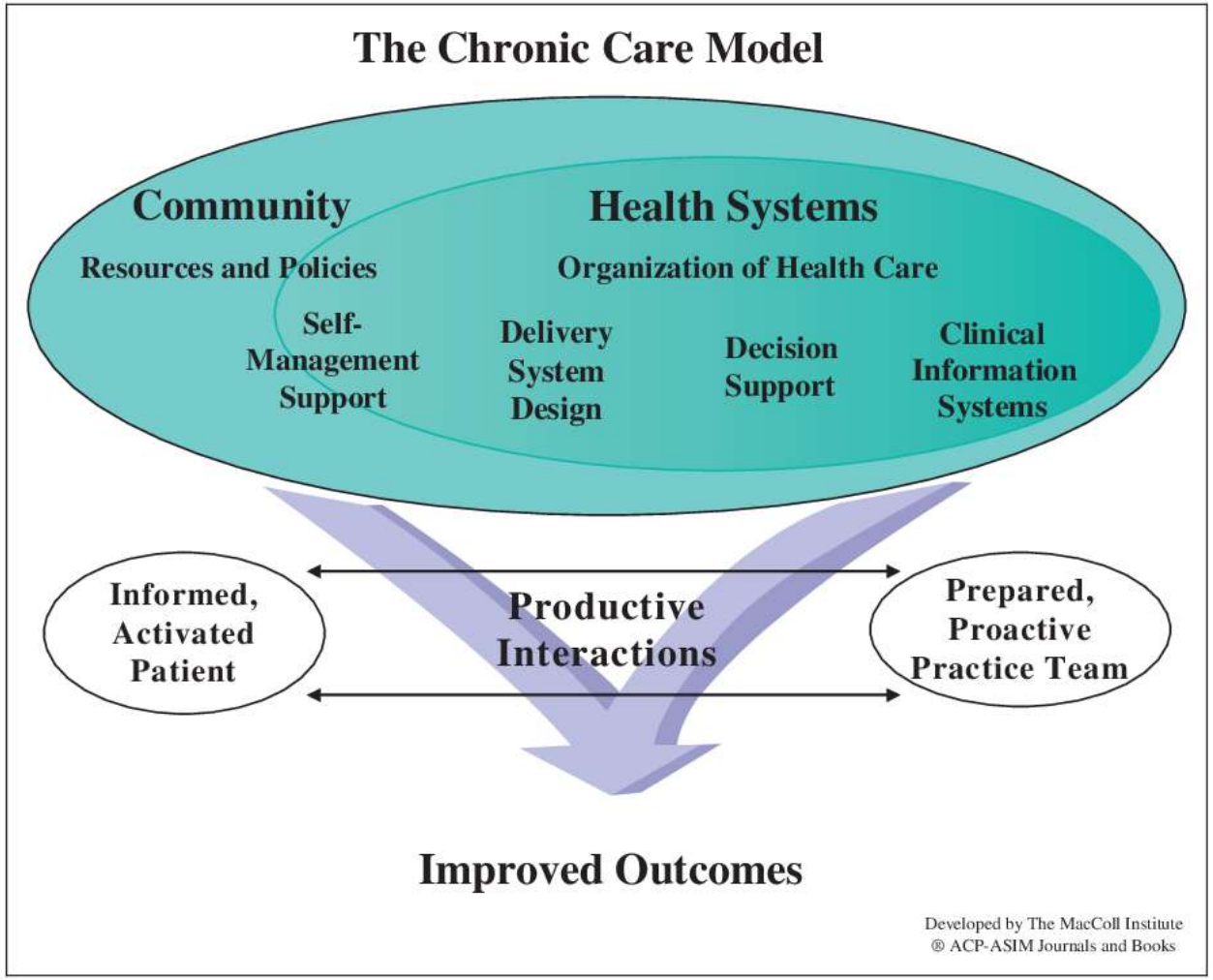
➢ Education Gaps:

- Issue: There may be gaps in providing education to families about the child's condition, treatment options, and self-management strategies.
- Drawback: Without proper education, families may struggle to understand the importance of treatment adherence, symptom recognition, and lifestyle modifications, leading to suboptimal care.

Proposed Method

- Appointent scheduling: include a scheduling system for doctor's appointments and follow-ups,with automated remainders.
- Medication management: enable medication remainders,dosage tracking and precriptionrefills to ensure proper treatment adherence.
- Secure health records: medical information or medical reports,ensuring that only trusted people,such as doctors,can access it for your care.
- Symptom tracking : keeping a record of how you feel and any changes in your body, like writing down when you have pain or other health issues.
- Emergency assistance:when you get quick help during a serious and unexpected situation, like when something bad happens, and you need immediate support.

Architecture



Modules

- Designing an app for pediatric chronic care involves various modules.
- **Patient Profile:**

  Medical History: A comprehensive profile including the child's diagnosis, treatment history, medications, and relevant medical information.

  Allergies and Alerts: Clearly documented allergies and alerts to ensure safe care.
- **Appointment and Medication Reminders:**

  Scheduled Alerts: Push notifications and reminders for upcoming medical appointments, medication doses, and other important events.

  Calendar Integration: Syncing with the user's calendar for easy coordination.
- **Health Tracking:**

  Symptom Tracker: Daily or periodic input for tracking symptoms, allowing for trend analysis.

  Medication Log: Recording medication doses and adherence.

Modules

- **Care Coordination:**

  Shared Care Plan: A central location for the care plan accessible to both caregivers and healthcare professionals.

  Team Collaboration: A platform for healthcare providers to collaborate on the child's care.

- **Analytics and Reporting:**

  Health Trends: Graphical representation of health data over time.

  Reports for Healthcare Providers: Summarized data for healthcare professionals during appointments.

Hardware requirements:

- For developing the application the following are the hardware requirements.

- RAM : 16GB to 32GB or more, depending on the system's complexity and expected user load.

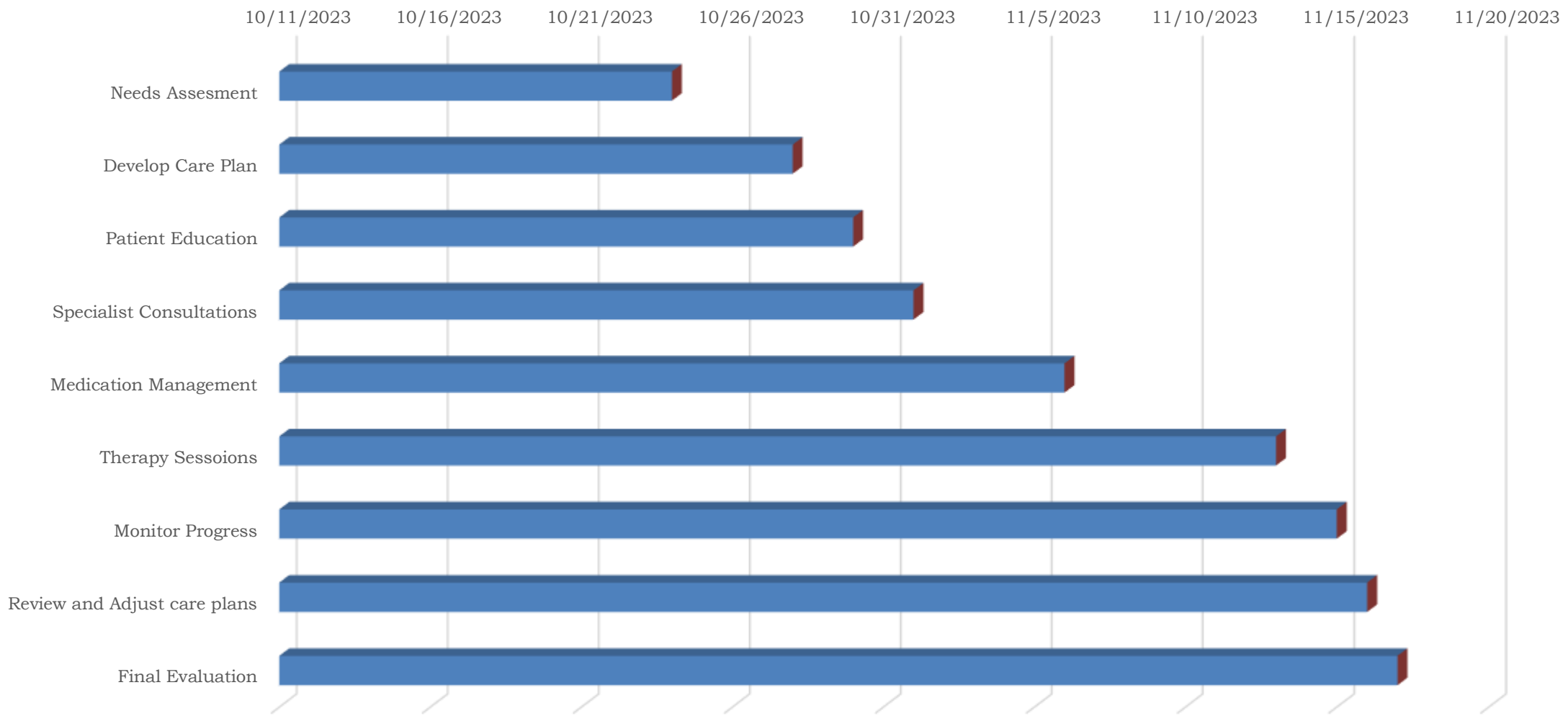
- Processor : A multi-core processor (e.g., quad-core or higher) with a clock speed suitable for the system's requirements.

- Storage : database storage , backup storage.

Software requirements:

- Java
- Python
- C#
- Node.js

Gantt Chart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Needs Assesment
Develop Care Plan
Patient Education
Specialist Consultations
Medication Management
Therapy Sessoions
Monitor Progress
Review and Adjust care plans
Final Evaluation

References

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- K. Duregger, Telehealth in Paediatric Oncology, Master thesis, FH JOANNEUM, Graz, Austria, 2015

Thank You