Progress Note Logging Application

Badass Team Name
(AKA Purple Hippos)

Origin of Idea

300+ Autism centers in Minnesota, providing behavioral therapy for autistic children in the state.

Every therapy session with a child must be logged in order to monitor progress towards developmental goals, as well as track total billable hours.

Done via "progress notes", logging patient and service information, time in a session, and other critical information.

Progress notes are sent for approval to a doctor overseeing the operations of the center, which then allows the center to bill for the hours of the session once approved.

Origin of Idea

At many centers, progress notes are filled out on paper, leading to an inefficient workflow.

Example workflow with paper progress notes:

1. Therapist prints and fills out progress note on paper.
2. Paper progress note is scanned and uploaded.
3. Overseeing doctor prints and reviews progress notes, provides written signature of approval for each note.
4. Signed progress notes are again scanned and uploaded.
5. Signed progress notes are manually reviewed to calculate billable hours.

Proposal

We digitalize the progress note system.

Remove overhead time from printing, scanning, and reviewing progress notes twice.

Automate the calculation of billable hours.

Contacted an autism center to receive feedback on MVP as it is developed over the course of the semester.

Technical features (Vision)

Compose Progress Notes

Providers can create documents with pre-attached fields directly in the browser.

Benefits: Simplifies documentation process, ready for upload.

Summary of Treatment

Back Next

Progress with Overall Treatment Plan Goals/Objectives:

Back Next

Response/Reaction to Treatment Interventions:

Back Next

Technical features (Vision)

Automatic Note Upload

Notes are uploaded to the server for organized storage after completion

Benefits: Easy access and organization by patient name, date, and time.

Technical features (Vision)

View and Edit Notes

Documents can be edited post-upload, including date and time of edits

Ensures information accuracy and relevance

Note ID	Patient FName	Patient LName	Provider FName	Provider LName	Service Date	Service Type	Start Time	End Time	Last Saved	Approved?
0000001	PatientFName1	PatientLName1	ProviderFName1	ProviderLName1	05/15/2024	Service1	08:00 AM	10:00 AM	10:30 AM 05/15/2024	YES
0000002	PatientFName2	PatientLName2	ProviderFName2	ProviderLName2	05/15/2024	Service2	10:30 AM	01:30 PM	02:00 PM 05/15/2024	NO
0000003	PatientFName3	PatientLName3	ProviderFName3	ProviderLName3	05/16/2024	Service3	09:00 AM	11:00 AM	11:30 AM 05/16/2024	PENDING
0000004	PatientFName4	PatientLName4	ProviderFName4	ProviderLName4	05/16/2024	Service4	01:00 PM	03:00 PM	03:30 PM 05/16/2024	YES
0000005	PatientFName5	PatientLName5	ProviderFName5	ProviderLName5	05/17/2024	Service1	09:00 AM	11:00 AM	11:30 AM 05/17/2024	NO

Technical features (Vision)

Filter Notes by Patient

Quick search and filtering of documents by patient name

Benefits: Saves time, enhances document retrieval efficiency

First Name:

Last Name:

Provider First Name:

Provider Last Name:

Between dates:

mm/dd/yyyy

and

mm/dd/yyyy

Between times:

--:-- --

and

--:-- --

Type of Service:

Clear Filters

Technical features (Vision)

Track Sign-Offs

Administrators can digitally sign off on documents

Benefits: Simplifies approval process, ensures accountability

Technical features (Vision)

Assign Patients

Providers can see their assigned patients for the day within the application

Benefits: Streamlines patient assignment, improves provider workflow

Technical features (Vision)

Data Transfer to Accounting

Seamless transfer of necessary data to accounting software

Benefits: Enhances financial accuracy and reporting

Technical features (Vision)

Export Notes

Notes can be exported in various formats, including PDF

Benefits: Facilitates sharing and documentation portability.

Story Map

Provider Story Map for Progress Notes
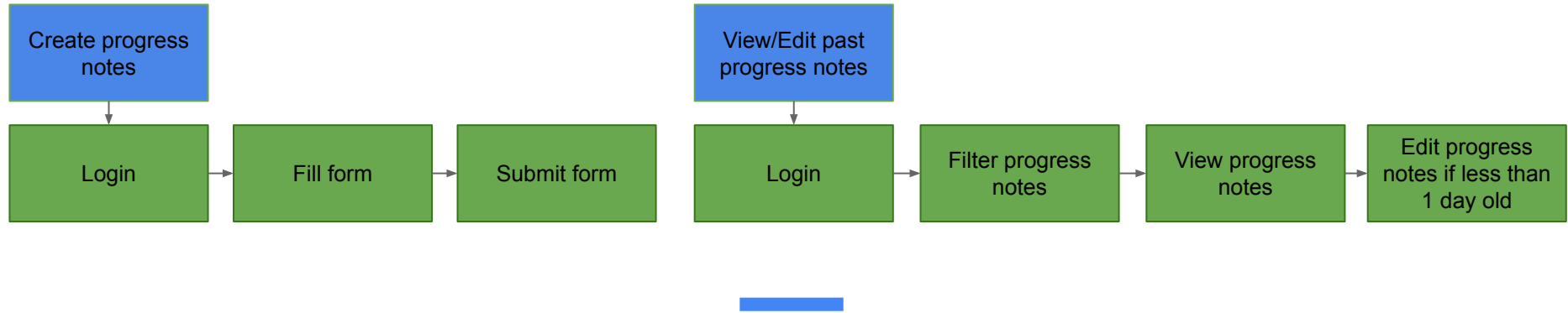
Create progress notes			View/Edit past progress notes			
Login	Fill form	Submit form	Login	Filter progress notes	View progress notes	Edit progress notes if less than 1 day old

Admin Story Map for Progress Notes

Manage Patients

Login → Select/Add Patient → Edit/Create Patient

Manage Provider Accounts

Login → Select Provider → Edit Provider

Admin Story Map for Progress Notes (Cont.)

```
┌──────────────┐                                                            ┌──────────────┐
│    Export    │                                                            │    Review    │
│ patient data │                                                            │   Progress   │
│              │                                                            │    Notes     │
└──────┬───────┘                                                            └──────┬───────┘
       │                                                                           │
       ▼                                                                           ▼
┌──────────┐   ┌──────────────┐   ┌──────────────┐   ┌──────────┐    ┌──────────┐   ┌──────────────┐   ┌──────────────────┐
│          │   │ Select data  │   │ Select format/│   │          │    │          │   │ View Progress│   │ Approve or Deny  │
│  Login   │──▶│  to export   │──▶│  destination  │──▶│  Export  │    │  Login   │──▶│    Notes     │──▶│  Progress Note   │
│          │   │              │   │               │   │          │    │          │   │              │   │                  │
└──────────┘   └──────────────┘   └──────────────┘   └──────────┘    └──────────┘   └──────────────┘   └──────────────────┘
```
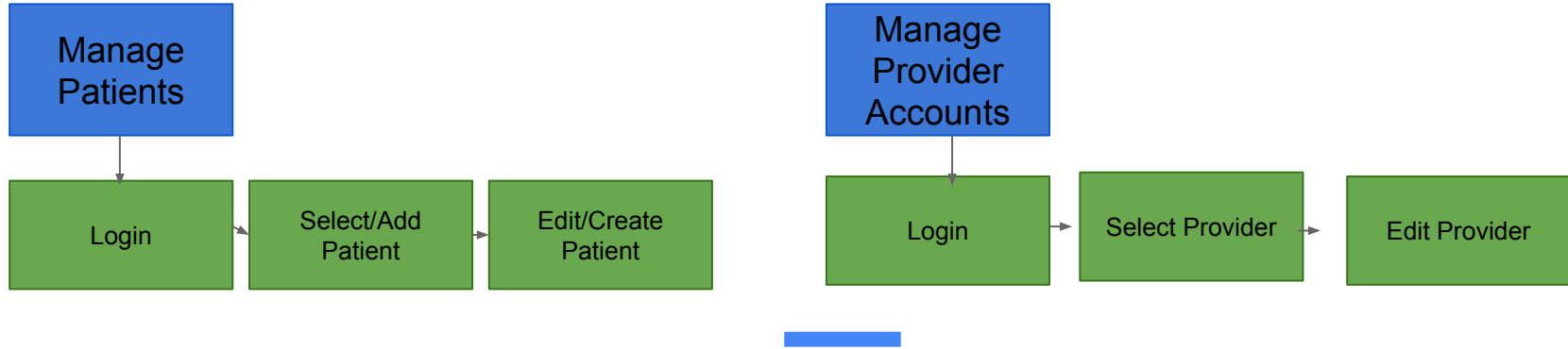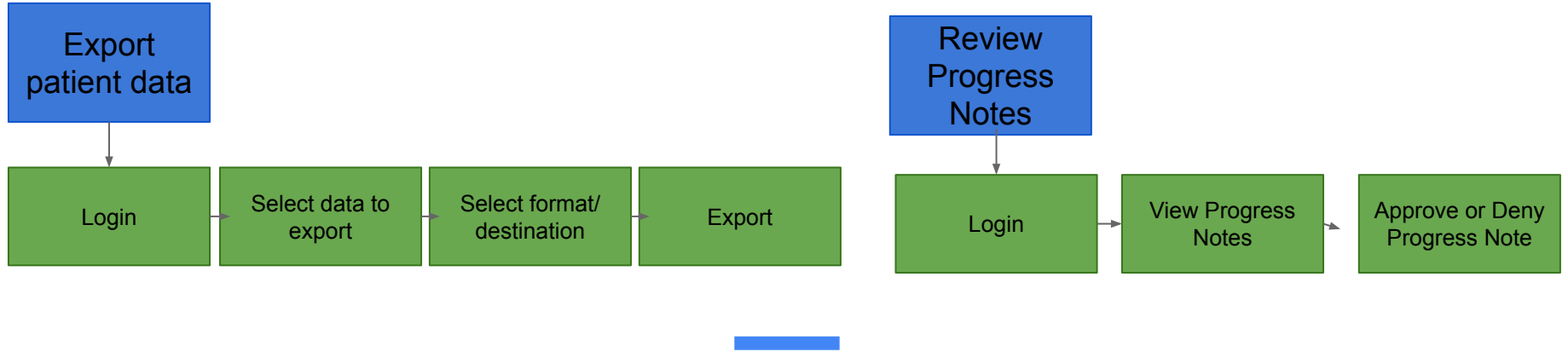
Personas

Sarah the Service Provider

Documenting progress daily

- Speed
- Convenience
- Personalized reporting
- Goal tracking

Andrew the Supervising Doctor

Sign off on documents and track progress

- Speed
- Convenience
- Comprehensive reporting
- Goal tracking
- Ease of evaluation/feedback
- Integration with medical records

Jessica the Administrator

Assign providers, handle data

- Ease of use
- Data management
- Security
- Progress reports
- Comprehensive analytics

Zach the Child

He's in the system

- Human-centric care and attention
- Personalized care
- Effectiveness of care
- Transparency

Non-functional requirements

UI/UX

User-based Goals

- Keep it simple in order to adapt to customer vision
- Make key elements standout (call to action)
- Provide experience similar to other websites (not reinventing the wheel)

Developer Goals

- Able to be refactored easily
- Straightforward implementation

Link

https://ph-notes.com

https://erichberger.github.io/

Challenges

Technical Challenges

- Making app usable on all screen sizes
- How do we present the wireframes without the server?
  - Creating TLS certification for HTTPS connection
  - Registering domain name

Privacy Concerns

- How do we make sure patient data is secure?
- How do we avoid interacting with patient data during the process?
- Are there any regulations in regards to HIPAA and technology?
- Can data be stored reliably?

https://autismdiagnosiscenter.com/privacy-policy

HIPAA

- Under the HIPAA Privacy Rule, we might be considered a Covered Entity
- Business Associates: providing services to a Covered Entity makes us one
- Protect Patient Health Information (PHI)
- Individually identifiable health information

Addressing Privacy Concerns

- Discuss expectations with clinic
- Do not store identifiable data
- Aim to make data at all levels as secure as we can

Thank you!

Questions?