Your Storyline

FINAL REPORT

Prepared by: Chantalle Clarkin RN, PhD
Prepared for: Registered Nurses' Foundation of Ontario (RNFOO)

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Your Storyline (YSL) is a web-based digital tool to support health-focused storytelling. Over the last 40 months, our progress includes the completion of the app's design and development plan, co-design sessions with target users, digital story creation using the YSL storytelling process, and the development of a high-fidelity prototype. A high-fidelity prototype is a detailed and interactive model of a product that closely resembles the final version in design, function, and user experience.

Building on iterative cycles of desirability-feasibility-viability testing, and through ongoing collaboration with our advisory group and stakeholder partners, the essential components of YSL are final (i.e., concept, process, content, and flow). Through engagement and 1:1 consultation, we undertook additional fine tuning and testing to narrow the scope of the project and ensure that the storytelling methods fit the web-app modality and met an existing need.

Driven by stakeholder feedback, the YSL app prototype now features:

- Greater prominence on reflection-in-action and reflective storytelling.
- A refined target audience of healthcare providers (HCP)s as end-users for the high fidelity prototype. Iterative testing revealed that nurses and other HCPs had the greatest interest in a health-focused storytelling app, as it could facilitate connection, co-learning, and reflexive practice. HCPs could benefit immensely from story-focused reflection, as storytelling has the potential to mitigate stress and burnout, enhance professional fulfillment, and support wellbeing.
- A shift in conceptual focus towards a simplified, self-directed, and intuitive tool delivered by app interface technology.

The YSL prototype stands out for its user-centered design, integrating features like intuitive navigation, tailored storytelling prompts, and secure sharing options. Stories created by HCPs in Your Storyline will serve to surface experiential knowledge, reflections, and practice-in-action – and, perhaps more importantly, allow these stories be shared with others.

Record. Reflect. Connect.

Your voice matters! Your experiences inspire, enlighten, and uplift others in our healthcare community. Share your story today and contribute to our collective wisdom. Reflect, learn, and shape Your Storyline.

Together, let's foster resilience and change in healthcare.

Share your story

INTRODUCTION

Vision for Your Storyline (YSL)

While healthcare is shifting towards patient-centered approaches, the sharing of stories is not always easy due to resource constraints and practice realities. This presents an unfortunate gap in health practice because storytelling is a recognized mechanism for enhanced humanism and compassion in healthcare at the individual and institutional level (Rose et al., 2016). Storytelling can also enhance provider wellness and satisfaction, decrease burnout, and allow hope to flourish.

Storytelling in healthcare is more than a method of communication; it's a vital tool for understanding, healing, and connection. It serves as a bridge between the clinical and personal, transforming experiences into narratives that carry profound significance for both providers and recipients of care.

YSL is the first health-focused web-app that supports HCPs to name, claim, and share their own stories and experiences as care providers. In future iterations, we would love to adapt and extend YSL to include other target audiences, such as patients, caregivers and community members.

Why Storytelling in Healthcare?

Storytelling is an indispensable component of healthcare that contributes to more compassionate, patient-centered, and effective care. It creates connection between health science and the human experience, highlighting the narrative nature of healing and the integral role of personal stories in health and wellness.

The full potential of storytelling has yet to be realized among HCPs; the value of stories exist not only in their use as tools for reflection, but in their ability to represent and organize experience, promote lifelong learning, build community, and bring about individual and collective change.

Storytelling can contribute to:

Holistic Care: Storytelling allows HCPs to see beyond the clinical symptoms and to understand the person behind the patient. This can foster empathy, strengthens the patient-provider relationship, and enhance the quality of care. Used in concert with trauma-informed practice, storytelling can inform treatment plans in ways that are not only evidence-based, but also personally and culturally appropriate.

Communication and Education: Storytelling can transform complex health information into relatable and understandable narratives, making it easier for patients and their families to make informed decisions. Stories can also be powerful educational tools, conveying important health messages and creating examples of practice-in-action that can be used in nursing education.

Reflexive Practice: Reflection invites HCPs to appreciate experiences, process and learn, and identify ways to improve personal practice and service delivery. Technology-enabled approaches to reflection hold tremendous potential to scale the reflective storytelling process. To date, reflective practice activities have relied on a largely individualistic model, heavily weighted towards notions of the 'individual' and the individual's thoughts and actions. In comparison, storytelling can not only enhance reflection, but stories themselves can be used individually or shared to promote learning.

YSL LEADERSHIP

Building on over a decade of experience with digital storytelling methods, YSL was created by researchers and clinicians at the Centre for Addiction and Mental Health (CAMH). United by the shared vision of fostering resilience and community through story, app development was shaped at every stage by an advisory group of people with lived and living experience (PWLE).

Chantalle is a Registered Nurse with over 23 years of clinical and research experience in variety of practice contexts including pediatric acute care, mental health, and suicide prevention, Chantalle is a Scientist and qualitative health researcher at CAMH, an award-winning documentary filmmaker, and an adjunct lecturer at the Bloomberg Faculty of Nursing at the University of Toronto (U of T).

Allison is a Psychiatrist, Scientist, the Associate Chief of Virtual Mental Health and Outreach, and the Chief Medical officer of 9-8-8: Suicide Crisis Helpline at CAMH. She is also an Associate Professor in the Departments of Psychiatry, Dalla Lana School of Public Health, and English at the U of T.

Together, Chantalle and Allison are founding members of **HeART Lab**, a research group that blends art, research, and technology to advance health equity.

Chris is one of our advisory group members who has helped shape this initiative from the very start (beginning with an appearance in our NIA pitch video). Chris lives with a spinal cord injury known as incomplete paraplegia, and believes strongly in the power of storytelling to support recovery.

Steve Coppola partnered with the YSL team to lead the development of the prototype. He is the founder of **Input UX**, and brings over 25 years of experience creating digital tools and utilities, in particular web and mobile apps for some of the world's most-recognized brands (e.g., Microsoft, Nike, and RBC). Steve also brought a wealth of ingenuity to the project, and was recognized as the Most Creative Canadian (2018) by Marketing Magazine.

CHANTALLE CLARKIN RN, PHD
Project Lead

ALLISON CRAWFORD MD, PHD
Project co-lead

CHRIS
Advisory group member

PROJECT OBJECTIVES

YSL DEVELOPMENT WAS GUIDED BY FOUR CENTRAL OBJECTIVES, WHICH WERE ACHIEVED IN THE DEVELOPMENT OF THE HIGH-FIDELITY PROTOTYPE

Each step in our process reflects our commitment to delivering a user-centric tool that enhances the narrative experience in healthcare.

1. Development of Your Storyline App Design and Project Plan

App development was new territory for our team and our process was guided by a comprehensive project plan that detailed the necessary steps to move from ideation to prototype development. Through this process, we learned the language of technology (i.e., terms such as API, Wireframing, DFV testing) to communicate our concept and preferences to UX designers. We also engaged in market research and planning to ensure YSL's objectives aligned with the needs of the healthcare community.

2. Co-Design with Human-Centered Design Principles

We engaged in a co-design process, adhering to human-centered design principles, to shape the development of YSL. Through collaborative design meetings, group sessions, and pilot testing, we gathered valuable insights from potential users, including HCPs and PWLE. This collaborative process involved a lot of listening and openness to integrating feedback to strengthen the original design and vision, and ensured that the app's design and functionality resonated with the end-users' needs and preferences.

3. Creation of Digital Stories

As part of this project, we advanced and extended our digital storytelling techniques for a virtual setting and assessed how our methods could be adapted, translated, and delivered by app interface. We completed a virtual digital storytelling workshop and created a series of digital stories to test our adapted approach (see page 7 for further details). Through ongoing engagement and individual consultations with advisors and stakeholders, we identified the crucial elements of health-focused storytelling. The YSL process required more refinement and testing than initially anticipated to deliver a self-directed and user-friendly experience, and a secure online space. This investment of time ensured that our storytelling approach was compatible with a web app format and fulfilled a genuine need.

4. Prototype Development

We created both low- and high-fidelity prototypes of the YSL app. The low-fidelity prototype allowed us to test basic functions and user flow, while the high-fidelity prototype, developed subsequently, offered a more refined and interactive version of the app (see pages 8-12 for a detailed description of the design process). The high-fidelity prototype includes detailed design elements, interactive features, and a user-friendly interface that closely resembles the final product, allowing for comprehensive testing and user experience optimization.

your storyline

ADAPTING THE YSL STORYTELLING METHODS TO A DIGITAL ENVIRONMENT

To assess the feasibility of adapting our workshop-based digital storytelling methods to an app interface, the YSL team engaged in an 8-week digital storytelling workshop hosted by StoryCenter, a not-for-profit organization dedicated to using storytelling for educational and social change. This workshop was delivered entirely virtually.

Participating in this workshop served multiple purposes, including to:

- Gain insights into digital storytelling in a fully virtual environment.
- Investigate various storytelling methods and refine our app-based approach.
- Collaborate with community members and clinicians, our primary users, to enrich our storytelling approach.
- Transition our workshop techniques into structured app-friendly steps and prompts.

Workshop participants (n= 9) included three YSL team members from Toronto, two international researchers and educators from Europe and the US, two Persons With Lived Experience (PWLE) from rural Ontario and New Brunswick, and two HCPs with clinical expertise in mental health.

Through this virtual training, we gained the following valuable insights:

- Digital storytelling methods can be adapted to effectively produced concise, first-person narratives.
- Virtual spaces can foster safe storytelling environments, with certain limitations.
- Even through digital means, storytelling nurtured a strong community bond.
- Segmenting the storytelling process into smaller parts proved more practical for busy HCPs, allowing for gradual story development and reflection over time.
- Participants preferred using computers for storytelling, noting challenges with smaller devices like phones and tablets which introduced unexpected accessibility issues.

Two workshop participants consented to having their digital stories shared with the RNFOO NIA Committee, illustrating the impactful narratives crafted using YSL methods:

1. **"The Landscape of Care"** by an HCP team member: [View Story]
2. **"Learning to be Alone"** by a YSL team member: [View Story]

This experience underscored the potential of virtual digital storytelling and its applicability in the YSL App, offering a pathway to meaningful, technology-enabled, storytelling.

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DESIGN PROCESS

TRANSFORMING OUR BIG PICTURE THINKING INTO DETAILED ON-SCREEN EXPERIENCES THAT ARE MEMORABLE AND ENGAGING FOR YSL TARGET USERS

1. Ideation and Conceptualization: As an initial step, we held virtual brainstorming sessions to clearly outline the app's purpose, target audience, and core functions.

2. Formation of an advisory group

3. Requirements Definition: We determined the functional and non-functional requirements for YSL, including the key features, user roles, privacy requirements, and necessary interactions.

4. User Flow and Interaction Design: We mapped out potential user flows to illustrate how users could navigate through the app to complete and share stories. This included defining the interactions between different screens and elements.

5. Wireframing and Low-Fidelity Prototyping: The basic structure and layout of the app was established using wireframes. A wireframe is a two-dimensional illustration of a page's interface that focuses on space allocation and prioritization of content, available functionalities, and intended user actions. This includes thinking through and mapping every possible action a user can take when using the app, from simple tasks like creating an account, to more complex functions like the development of their personal stories. Wireframing helped us visualize the app's design and user flow before focusing on aesthetic details.

6. User Feedback and Iteration: We presented the wireframes to our advisory group for feedback. This input was used to refine YSL's design and functionality.

7. High-Fidelity Design: High-fidelity prototypes were created to incorporate detailed design elements, such as color schemes, typography, and imagery. Two design aesthetics were created and tested with our advisory group (see page 11 for a design comparison).

8. Usability Testing and Refinement: We conducted usability testing with the high-fidelity prototype, asking members of our advisory group to speak aloud and share their impressions as they interacted with the 21 screen (mobile and desktop views) web-app prototype. Findings were summarized to identify usability issues and shared back with the UX designer (see page 12 and 13).

9. High-Fidelity Prototype Finalization: All feedback and technical considerations were incorporated into the final high-fidelity prototype, ensuring that it is polished, user-friendly, and ready for development. The high-fidelity prototype can be experienced on Figma (see page 14 for a link to the prototype)

10. Documentation and Build: Our high-fidelity prototype and related materials form the necessary foundation to build the YSL app. Our documentation, user testing, designs and specifications will guide the back-end development of the app.
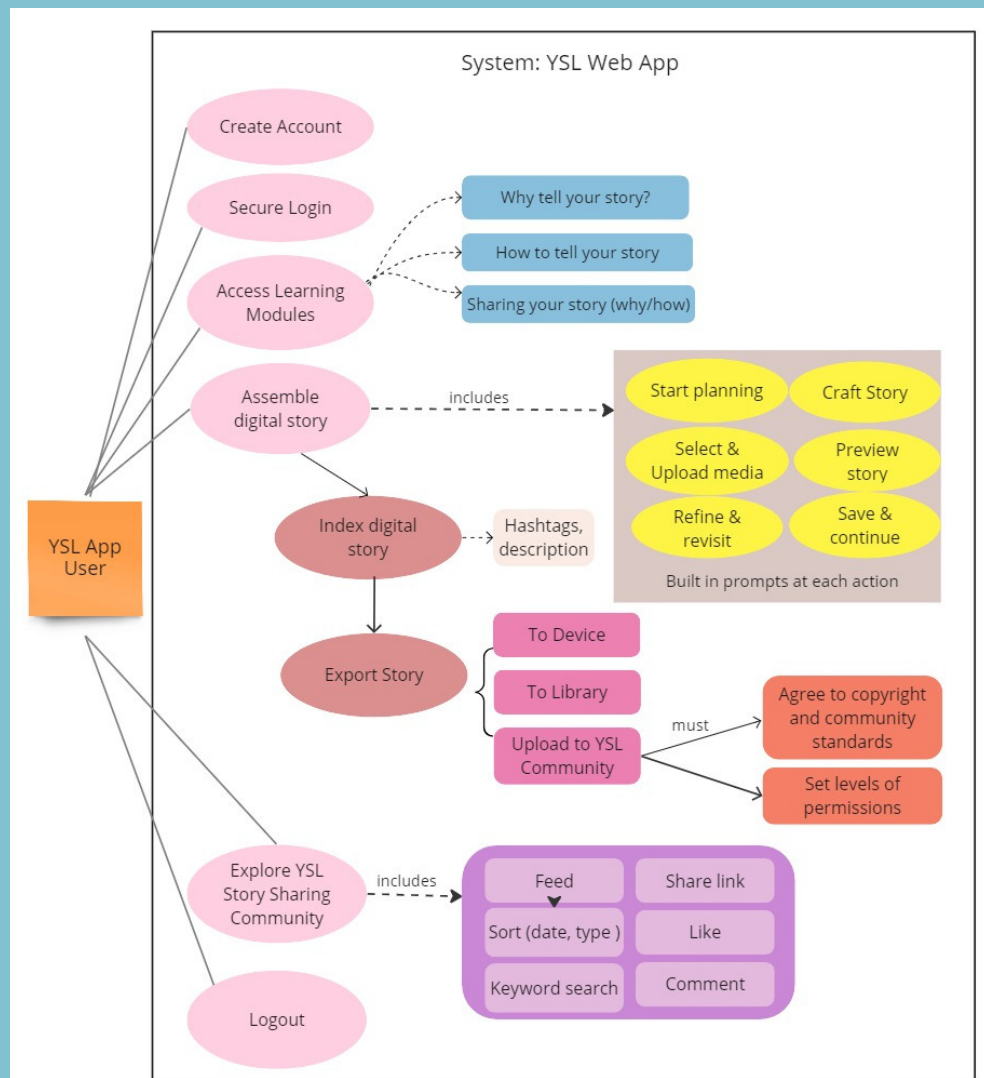
DESIGN PROCESS: ILLUSTRATED STEPS

THE IDEATION AND REQUIREMENTS DEFINITION PHASES: LEARNING HOW TO COMMUNICATE OUR VISION

Notes from initial brainstorming session
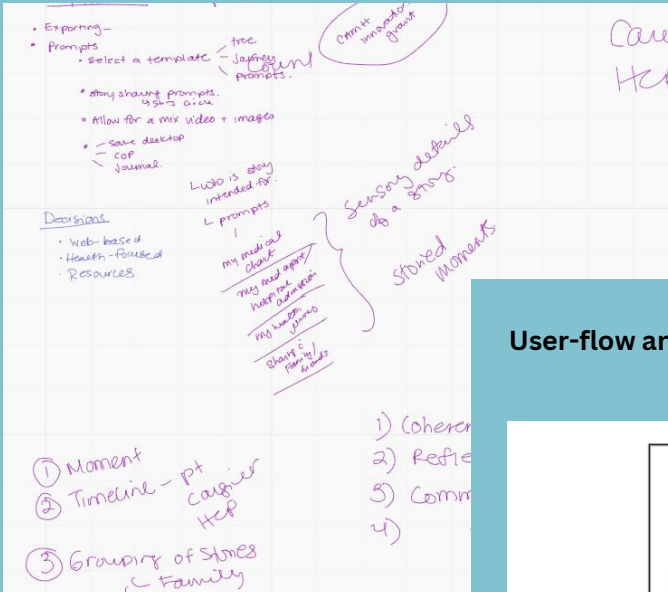
User-flow and requirements diagram presented to the advisory group for feedback

Key Decisions at this Stage of Development:

1. User group narrowed to HCPs
2. Greater emphasis on reflection as part of storytelling process
3. Need for more testing and adaptation of digital storytelling methods to fit web-app modalities
4. Requirement for customizable privacy and sharing options identified

DESIGN PROCESS: ILLUSTRATED STEPS

ITERATIVE WIREFRAMING: THINKING THROUGH THE ON-SCREEN EXPERIENCE

Initial user flow wireframes

Figure 1: Wireframe flow mapping for Your Storyline app

Low fidelity prototype: Function and Flow Wireframes

Key Decisions at this Stage of Development:

1. In the low fidelity prototyping phase, we incorporated essential elements, such as design for accessibility, space and placement, privacy and secured sign in, content prioritization, functions, and intended user flow.

2. Mapping user flow involved decisions about simple tasks like creating an account, to more complex functions such as elicitation through storytelling prompts, and the assembly of personal stories.

DESIGN PROCESS: ILLUSTRATED STEPS

ITERATIVE HIGH FIDELITY PROTOTYPING: WHERE CONCEPTS ARE TRANSFORMED INTO DIGITAL SOLUTIONS

In the high-fidelity prototyping phase, we watched our design come to life through the addition of creative design elements such as custom imagery, colour, typography, and text.

Working collaboratively with the UX designer and our advisory group, we A/B tested two stylistic directions and learned so much about intuitive design.

Follow the links below to view 4 screens in each visual design direction in Figma.

DESIGN DIRECTION 1
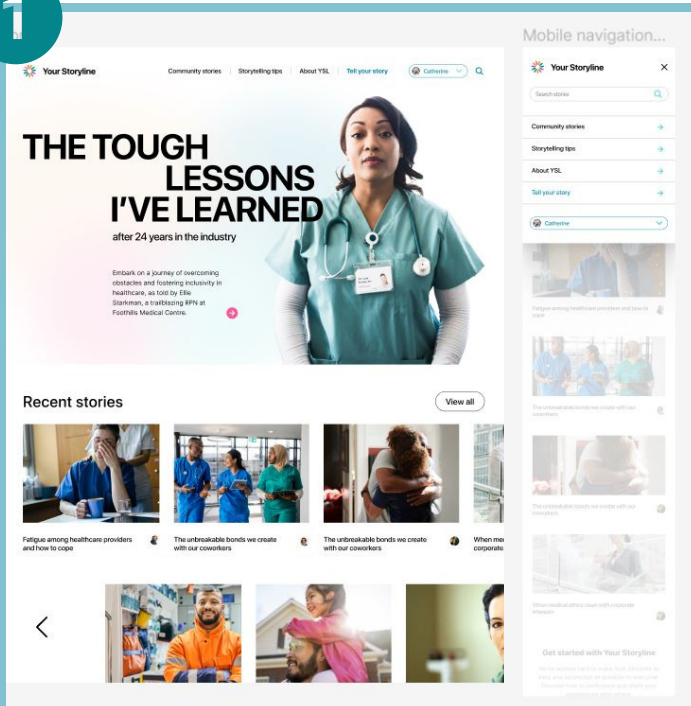
DESIGN DIRECTION 2

The first design was a more conservative concept, using relatively understated colours and blending the use of photography with illustration.

The second design took a bolder direction, using vibrant accent colours, photographic images, darker backgrounds and more modern typography.

Key Decisions at this Stage of Development:

- We selected an adapted version of design 1,
- Our advisory group expressed a clear preference for the use of photographs over illustrations.
- We discussed equity, diversity and inclusion at length and committed to featuring diverse representations of HCPs on the YSL app.

DESIGN PROCESS: ILLUSTRATED STEPS

We conducted testing of Your Storyline using a Desirability-Feasibility-Viability (DFV) framework. This involved three critical steps to ensure that the app aligned with user expectations, was technologically attainable, and had market and uptake potential.

The 21 screen prototype was tested with the advisory group and a key stakeholder group of HCPs (5 nurses, 2 nursing students, 2 physicians, and 1 social work student). The design, layout, and flow were very well received. A summary of user testing feedback is shared in the table below:

Category and Description	Reviewer Feedback
Usability Evaluate based on how easy it is for users to learn and use	• The app design is very intuitive and easy to use. • The learning curve is minimal—this offers more instruction than other storytelling apps used on social media. • "I could imagine being able to start creating stories right away."
Functionality Expected features and flow	• Login screens and profile set up screens are very easy to follow. • The story engine is clear—will there be more options for in-app customization and/or editing of audiovisual content once uploaded? If not, it should be made clear that editing isn't possible in the app but that segments of content can be uploaded here. • In the settings, customizable notification options are appreciated.
Design & Aesthetics Ensure that the design is appealing and aligns with user expectations	• The design is clean and professional. • The color scheme is soothing and appropriate for a healthcare setting. • Really liked the story layout in Step 4 of "tell your story"
Content Evaluate the clarity, relevance, and usefulness of the content	• The content is relevant and helpful. • Consider generating some prompts for reflection that are thought-provoking and lead to meaningful stories. These could be themed call outs, in case there is a topic of interest (e.g., pandemic, nurses week, etc). • Will there be reflection prompts built into the story building engine? Where does the "reflect" stage occur within the app? • Purpose of learning modules could be more clear from the start

DESIGN PROCESS: ILLUSTRATED STEPS

DESIRABILITY-FEASIBILITY-VIABILITY (DFV) TESTING OF 21 SCREEN PROTOTYPE

Category	Reviewer Feedback
Navigation Evaluate how easily users can move around the app	• Layout is clear enough. • The flow seems smooth and logical. • It should be easy to move between different parts of the app. • If a user leaves the story builder mid-way, are stories saved as drafts or lost? A prompt about this would be helpful.
Accessibility Check whether the app meets accessibility standards	• The font size is large and easy to read, especially on desktop view. • Colour contrast is high--makes it easier to read. • Images represent diverse HCPs which is considered a major strength.
Security & Privacy Review security features to ensure YSL has robust privacy and security measures in place and is handling user data appropriately	• More information on privacy and security would be appreciated so that users feel confident that their data and stories are secure and being handled appropriately. • Will there be a statement about data usage policies during sign up? • Information on personal privacy would be useful—including considerations of how to name your story (display name, pseudonym, anonymous, given name).

User feedback and questions played a pivotal role in shaping the final high-fidelity prototype of our app. We summarized the input shared by our advisors and stakeholders to make informed adjustments, ensuring that the app's design and functionality met their needs and expectations.

While adding to our project timeline, maintaining an iterative approach led to significant improvements in the user interface, navigation, and content, making the app more intuitive and user-friendly.

All allocated project funds have been fully expended to support the design process.

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YOUR STORYLINE HIGH-FIDELITY PROTOTYPE

EXPERIENCE YOUR STORYLINE TWO WAYS: NAVIGATE THROUGH THE PROTOTYPE IN FIGMA OR WATCH THE NARRATED WALKTHOUGH VIDEO

Click on the Your Storyline icon below to experience and navigate through the Your Storyline prototype in Figma.

Click on the video frame to play a narrated walkthrough of Your Storyline
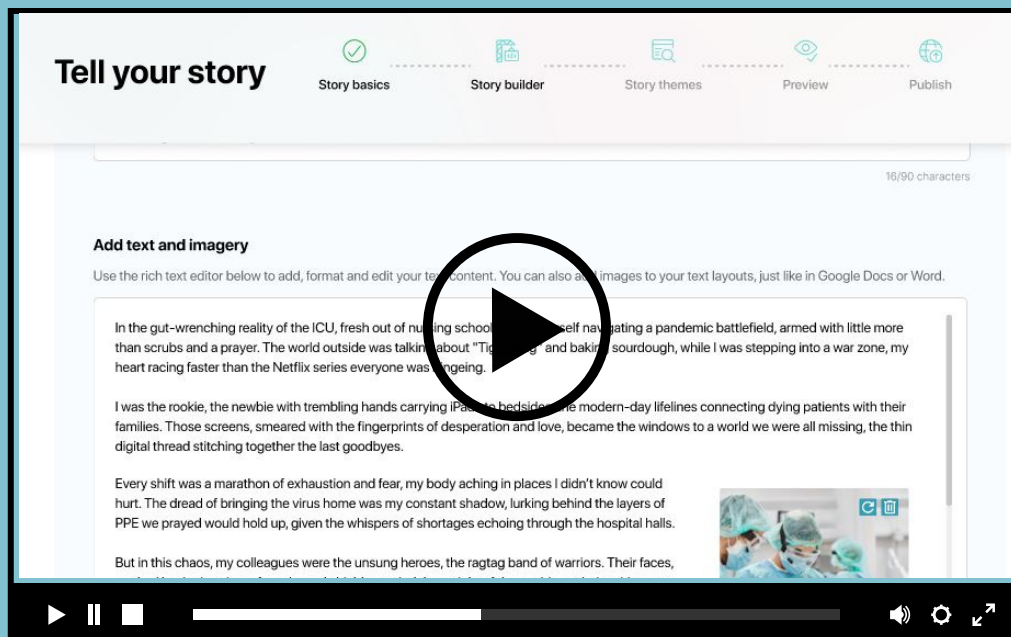
NEXT STEPS

MOVING FROM HIGH-FIDELITY PROTOTYPE TO FULL APP BUILD AND LAUNCH

As we move forward with Your Storyline, the following steps will be crucial to ensuring the successful build and implementation of the web-app:

- **Comprehensive Implementation Plan**: This plan will outline a clear path for the app's back-end development and rollout, including strategies for user adoption, training, and support. This may involve collaboration with HCP organizations to consider possibilities for the integration of the app into existing digital health ecosystems.

- **Secure Funding for Scale-up**: We will seek additional funding or partnerships to support the full-scale development and deployment of the app. This includes exploring opportunities for commercialization, if applicable, to ensure the app's sustainability and accessibility.

- **Evaluate Impact:** Once YSL is launched and available for download, we will implement a framework for ongoing evaluation of the app's impact on users' storytelling experiences, health outcomes, learning, and professional development. This will involve collecting and analyzing user feedback, usage data, and case studies.

- **Dissemination and Advocacy**: We intend to share the findings, lessons learned, and barriers, facilitators and success stories from the project through academic publications, conferences, and media to advocate for the broader adoption of storytelling in healthcare. Even at the prototype stage, the project has been featured in Canadian Nurse, (the publication of the Canadian Nurses Association), in a piece entitled: "Nurse researcher embraces arts-based healing, creates storytelling app" and the project lead appeared on the Nurses Voices podcast to discuss the importance of storytelling (see Eps 1, S1 of Nurses Voices: Storytelling in Nursing with Chantel Antone and Chantalle Clarkin).

- **Iterative Improvement**: Once the app is launched, we will establish a process for continuous improvement, based on user feedback, technological advancements, and evolving healthcare needs. This will ensure that Your Storyline app remains relevant, effective, and user-friendly over time.

By addressing these next steps, the YSL App project will move closer to achieving its goal of enhancing healthcare experiences through storytelling, ultimately leading to improved health outcomes and enriched professional practice for nurses and other healthcare providers.

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IN SUMMARY

Over the course of this project, we have successfully developed a comprehensive design and framework for the Your Storyline app, engaged in meaningful co-design with stakeholders, and produced impactful digital stories that underscore the potential of storytelling in health contexts. The completion of both low- and high-fidelity prototypes marks a pivotal achievement in bringing this concept to final production and launch.

This journey of development and testing allowed us to better understand the nuances of virtual storytelling and its application in healthcare. Our collaborative efforts with community members, healthcare professionals, UX designers, and research partners have enriched the project, allowing us to refine our methods and build a user-centered experience.

Your Storyline App is poised to be a transformative tool in healthcare, offering a digital platform for reflective practice, empathy, community, and shared understanding through personal narratives. Our next goal is to obtain the necessary support to finalize and launch the app. This project sets the stage for using health-focused storytelling to enhance healthcare experiences for professionals and, eventually, patients and caregivers.

ACKNOWLEDGEMENTS

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