**Request for**

**Proposal- Response**

**RFP #BCCNP - UX Research & Sitemap**

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## 

## **ISSUED BY**

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**SECTION 1: Portfolio of Relevant Work History**

**Dr. Helen Monkman**

****[*Helen Monkman*](https://www.uvic.ca/hsd/hinf/faculty-staff/faculty/monkman-helen.php) *(PhD) is an Assistant Teaching Professor in the School of Health Information Science at the University of Victoria in Canada. She completed her PhD in the School of Health Information Science at the University of Victoria. She earned her BSc and MA in Experimental Psychology from Carleton University. Helen has a passion for consumer health informatics research. She advocates the importance of design in lowering demands on eHealth literacy and optimizing usability in systems for citizens. Helen’s research focuses on leveraging human factors for consumer health informatics to ensure systems are usable, understandable, and actionable. Her work informs both the design and evaluation of health information systems for citizens with an emphasis on designing for people with limited health and/or eHealth literacy. Helen has collaborated on a wide range of projects with various Canadian health organizations. These projects have included research on and evaluation of public health information systems, personal health records, electronic medication reconciliation, and human aspects of system interoperability. She has published over 20 articles and book chapters on various topics in health informatics.*

Table Dr. Helen Monkman's Relevant Work History/UX Solutions

| **Relevant Work History/ UX Solution** | **Organization Name** | **Description** | **Appendix** |
| --- | --- | --- | --- |
| Instructor | School of Health Information Science, University of Victoria | Helen instructs an undergraduate course on human factors and human computer interaction annually called HINF 350: Human Aspects of Health Care Information Systems. She has taught this course since 2015. Her students learn a variety of user-centred design methods (e.g., card sort, personas, heuristic evaluation, usability testing, design thinking) and develop and test prototypes of their own. | [Course Description](https://web.uvic.ca/calendar2020-01/CDs/HINF/350.html) |
| Consultant | CanBeWell  Dr. Cleo Mavriplis | Helen was conducted two heuristic evaluations and provided guidance on usability tests for the CanBeWell prototype to increase its usability and lower its demands on eHealth literacy. |  |
| Co-presenter | Presented at the Information and Technology for Communication in Health (ITCH) Conference, Victoria, BC, February 14 – 17, 2019 | Helen co-presented a workshop entitled: *Increasing Usage and Safety of Medication Alerting System by Improving Their Usability*  This workshop offered a presentation, discussion, and an opportunity for participants to apply methods to design new medication alerting systems with as few usability defects as possible or identify usability defects in existing systems so that they can be resolved and the systems improved. |  |
| Instructor | School of Health Information Science, University of Victoria | Helen developed an card sorting exercise called *Identifying Barriers to EMR Adoption* and incorporated it into HINF 310: Electronic Records and Decision Support Systems. Based on findings from a systematic review of all documented barriers to EMR adoption, Helen developed cards for the open card sort activity. The class organized and named the categories of the barriers. | Example of one group’s findings. |
| Research Associate | Paramed Home Health Care Services | Conducted a usability test on a mobile health (mHealth) application for nurses delivering home care. |  |
| Research Associate | IBM  BC Center for Disease Control and BC Ministry of Health | Conducted a heuristic evaluation and cognitive walkthroughs of a public health information system. |  |

**Dr. Gurprit Randhawa**

*Gurprit Randhawa is the Lead (Senior Manager) for Learning Strategy and Design in the Department of Learning and Performance Support at Island Health in Victoria, BC. In this role, she leads the design of evidence-based learning strategies to facilitate organizational changes, such as the adoption, use, and optimization of the electronic health record (EHR). Prior to this, Gurprit was the Manager for Clinical Improvements & Informatics at Island Health and led the Computerized Provider Order Entry (CPOE), EHR Adoption, Use, Research & Development (EAURD), and Provider Learning and Knowledge Translation (PLKT) teams. Gurprit has a B.Sc. (with Distinction) in Health Information Science, M.Sc. (with Thesis) in Health Informatics, and Ph.D in Health Informatics from the University of Victoria (UVic), as well as a graduate certificate in Learning and Teaching in Higher Education (LATHE) from UVic's Department of Educational Psychology and Leadership Studies. She is a Health Informatics Instructor at McMaster University, as well as an Adjunct Assistant Professor in the School of Health Information Science at the University of Victoria.*

*Gurprit’s research work focuses on electronic medical record adoption and use, end-user support, and system usability. She is currently pursuing her Executive MBA (EMBA) in Health & Safety Leadership at the University of Fredericton. Gurprit has received national recognition from COACH (Digital Health Canada) as the recipient of the Founding President’s Award (2010) for her likelihood of making a major contribution to advancing information technology in the Canadian health care system, as well as the Steven Huesing Award (2016) for reflecting the spirit, dedication and innovation that the founding president brought to the field of health informatics.*

Table Dr. Gurprit Randhawa's Relevant Work History/UX Solutions

| **Relevant Work History/ UX Solution** | **Organization Name** | **Description** | **Appendix** |
| --- | --- | --- | --- |
| Nurses Bargaining Act (NBA) Direct Patient Care Assessment Tool | Island Health | As the Lead for Learning Strategy & Design, provided a usability/content review of Intranet communication/website and education (e-learning module, Manager’s checklist) materials to implement the new NBA Direct Patient Care Assessment tool in 2020. |  |
| Code Hack | Island Health (Event Sponsors: CGI, Telus Health, Amazon Web Services, MSFHR) | As a participant, designed and developed a patient portal app prototype solution to meet end-user needs. | [Code Hack Presentation](https://drive.google.com/file/d/1VaKSYjxfNqe7ex8xVt4ivFlxgTPPF2gp/view?usp=sharing) |
| Interactive Learning Framework for Primary Care Networks/Team-Based Care | Island Health | As the Lead (Senior Manager) for Learning Strategy & Design in the department of Learning & Performance Support at Island Health, Gurprit is currently developing an Interactive Learning Framework using rapid prototyping with key stakeholders and learner audiences. Gurprit has developed a mock up of the Interactive Learning Framework, which will be used to develop a web app for nurses, physicians, medical office assistants, and Primary Care Network (PCN) managers and administrative personnel to receive orientation and onboarding for team-based care as a part of PCN facility/site (e.g., urgent primary care centre) openings. | [Interactive PCN Learning Framework Mockup](https://drive.google.com/file/d/1n8c2o8p2QrXcLyk6OWnG-nN-dVjEk-zX/view?usp=sharing) |
| Market Research | University of Fredericton | As an Executive MBA (EMBA) student, Gurprit has completed the EMBA 7025: Strategic Marketing course, which included developing and executing market research as a part of a brand strategy for a new (brand extension marketing proposal) product launch. |  |
| Teaching System Analysis & Evaluation/Usability Course | McMaster University | As an Instructor and Course Developer since 2016, Gurprit has taught usability as a part of HTH 109 (System Analysis & Evaluation). | [HTH 109 Course Outline](https://learnonline.ecampusontario.ca/Online-Courses/247068/mcmaster-university/hth-109-systems-analysis-evaluation) |
| Design of Video Tutorials for Electronic Medical Record Adoption | Divisions of Family Practice (BC Physicians using OSCAR EMR) | As a researcher, designed and developed evidence-based video tutorials to support physician’s use of electronic medical records for diabetes care. Identified and published new design principles. Published quantitative and qualitative research findings in *BMJ Health Care Informatics* and *ACI (Applied Clinical Informatics) Open*, respectively. | [Study Findings (article)](https://informatics.bmj.com/content/26/1/e100086)  [Design Paper (In Press)](https://drive.google.com/open?id=1R8WAkBFX6jO4HH5B-DxnirmSNzTevrAF) |
| Usability Principles for Computerized Provider Order Entry (CPOE) Design | Island Health | There is a dearth of evidence-based tools to design the safest Computerized Provider Order Entry (CPOE) system possible. As a researcher, developed an evidence-based list of usability principles for the design of the CPOE interface, which was validated with the Chief Medical Information Officer and CPOE team at Island Health. The list includes 11 usability principles that can be used to inform ongoing CPOE interface design and evaluation efforts to improve patient safety. The usability principles were presented at the Medinfo World Congress in Health Informatics in Lyon, France in August 2019, and are published in *Studies in Health Technology and Informatics.* | [CPOE Usability Design Principles](http://ebooks.iospress.nl/publication/52492) |
| Usability Evaluation Workshop | Island Health | In 2017, Delivered a workshop on conducting usability evaluations to 40 Nurse Informaticists at Island Health. Specifically, the [Emergency Wait Times website](http://www.edwaittimes.ca/Locations.aspx) for the Lower Mainland was evaluated. |  |
| Usable Tool Development for Nurses | Nursing Health Services Research Network (InspireNet) | As a Research Assistant, co-designed a usable tool for nurses to develop research competencies. | [Nurse Professional Development Tool](https://www.msfhr.org/sites/default/files/HSRP_Professional_Development_Tool.pdf)  [Health Services Research Pathway Project Report](https://www.msfhr.org/sites/default/files/HSRP_Final_Report.pdf) |
| Usability Testing | Fraser Health | As a consultant, conducted usability testing of an electronic medical record for two ambulatory care clinics using cognitive walkthroughs with physicians and nurses in Surrey, BC in 2012. The evaluation study results were published in *Studies in Health Technology and Informatics*. | [Usability Study Results (article)](http://ebooks.iospress.nl/publication/32347) |
| Usability and Human Factors Courses | University of Victoria | Completed two courses (HINF 461: System Evaluation and Quality Improvement in 2011 and HINF 575 (Human Factors in Health Care) in 2012, which included two usability testing assignments to evaluate the usability of websites using heuristic evaluation, cognitive walkthroughs, and usability testing with participants. | [Cognitive Walkthrough Part 1](https://www.youtube.com/watch?v=YV9zDsWumvY)  [Cognitive Walkthrough Part 2](https://www.youtube.com/watch?v=XFvxhu6sfNg)  [Post-Task Interview](https://www.youtube.com/watch?v=lacbqUr7t7k) |
| EHR Usability Feedback from Residential Care Team | Providence Health Care/Vancouver Coastal Health | After supporting the Go Live of an EHR at five residential care sites in Vancouver in 2009, gathered system improvement feedback from over 200 nurses (RNs and CNLs), social workers, occupational therapists, dietitians, and pastoral care workers to improve usability and system design. |  |

**Ms. Hanna Kerr**

*****Hanna Kerr is a Registered Nurse (RN) at Island Health and an Instructor with the Health and Human Services department at Vancouver Island University. She completed her BScN (with distinction) and MScN (with thesis) from Western University in Ontario. She was awarded the Ontario Graduate Scholarship in 2016 for her proposed research. Hanna’s thesis work consisted of a qualitative research study that examined the characteristics and behaviours of Registered Nurses who have utilized social media to amass substantial followings and subsequently gain microcelebrity status through their online presence. This was an observational, non- participatory study that enabled Hanna to develop the ability to conduct qualitative nursing research.*

*Hanna has significant experience in emergency nursing. She initially worked at London Health Sciences Centre in London, Ontario, which is a level 1 trauma centre. There, she acquired the emergency nursing skills to care for patients who were acutely unwell as well as those who had experienced major multisystemic trauma. Hanna gained a thorough knowledge of the scope of practice for Registered Nurses while working in a complex and multi- faceted environment.*

*Hanna brings a unique perspective to the proposed UX research project, as she has extensive experience using the College of Nurses of Ontario’s (CNO) website as an end-user. The CNO’s website is a multi- disciplinary resource as it is used by Registered Practical Nurses, Registered Nurses, and Nurse Practitioners. Hanna moved to British Columbia in November 2018, and transitioned to the role of a Registered Nurse in the emergency department of a small centre, Cowichan District Hospital, located in Duncan, BC. Through this transition, Hanna navigated the transition of being a Registered Nurse in Ontario to working in British Columbia. She learned first hand about the nuances of nursing in different provinces, and quickly adapted to the practice expectations of BCCNP.*

*Currently, Hanna works primarily as a program instructor at Vancouver Island University with the Practical Nursing and Health Care Assistant programs. In this role, Hanna has gained a robust understanding of the scope of practice for: Licensed Practical Nurses, Practical Nursing students, Health Care Assistants, and Health Care Assistant students. Hanna has guided Practical Nursing students in developing their understanding of the LPN scope of practice, teaching students how to navigate the BCCNP website to access the LPN practice and professional standards, as well as the LPN scope of practice document. Hanna has not only facilitated students’ ability to effectively access these documents, but implement the principles in a variety of practice settings, including long term care, community, and acute care. In addition to understanding the scope of practice, Hanna has educated students on the importance of not only knowing their scope and standards, but being able to apply those principles to the policies of the facility in which they are practising. Hanna has become proficient at teaching students how to apply BCCNP’s standards to Island Health policies and procedures in order to practice safely.*

*Hanna has a keen interest in the field of health informatics, which developed as a result of transitioning from a fully electronic hospital site (London Health Sciences Centre) to a primarily paper- based site (Cowichan District Hospital). She is currently taking courses in the Health Informatics Diploma program at McMaster University to develop her knowledge of the field.*

Table Ms Hanna Kerr's Relevant Work History/UX Solutions

|  |  |  |  |
| --- | --- | --- | --- |
| **Relevant Work History/ UX Solution** | **Organization Name** | **Description** | **Appendix** |
| Program Instructor | Vancouver Island University | Developed a robust understanding of the LPN and HCA scope of practice. Facilitates students’ learning of their scope and practice/ professional standards, as well as how to implement that in various practice settings. |  |
| Registered Nurse End-user of CPOE, electronic nursing documentation | London Health Sciences Centre | Participated as an end user in the implementation of fully electronic Cerner documentation. As well, worked as an end user with CPOE. Developed nursing skills in a complex and multi- disciplinary environment. |  |
| Registered Nurse | Island Health | Works as an end-user of primarily paper-based nursing documentation. Participating as an end user in the stepwise transition to electronic Cerner documentation.  Experienced the transition of working as a RN in Ontario to BC. |  |
| Master of Science in Nursing- Thesis | Western University | Lead investigator in a qualitative research study on the characteristics and behaviours of Registered Nurses who use social media to gain microcelebrity status. This paper has been accepted for publication with the *Journal of Medical Internet Research.* | [Thesis](https://ir.lib.uwo.ca/etd/6009/) |
| Health Informatics Diploma Program | McMaster University | Completed three health informatics courses (HTH 101, HTH 111, and HTH 120). These courses focused on the foundations of health informatics, including the electronic health record (EHR), principles of EHR implementation, as well as project management for health informatics. |  |

**Mr. Jordan Carlson**

*****Jordan is currently in his second year of the Bachelor of Engineering program at the University of Victoria, majoring in Electrical Engineering. His electrical engineering program emphasizes programming in Java and Python. It also focuses on computer architecture, a variety of development software, and engineering statistics. These courses include the use of assembly language and high-level programming, and lab equipment including compilation and IDE software. UVic SkillDevs and UVic’s Rocketry club’s electrical engineering division has complemented each of the skills in Jordan’s studies. UVic Rocketry offers mentorship and software, such as using instrumentation and control interfaces, and Linux embedded microcontrollers (programming in C and python). Jordan participates in semi-weekly meetings and is actively developing strategies to find usability issues in interfaces and hardware, and debug embedded and communications software.*

*Jordan’s interests have evolved from his previous decade of work experience in business, sales, and administration to include debugging and repairing software, electronics, appliances, and automotives. For the last four years, Jordan has held a supervisory position completing complex oil and gas operations while sustaining vigilant equipment repair, maintenance, and risk management. He has developed unparalleled work ethic, problem solving capabilities, communication skills, self-discipline, and the ability to work well both as a team and independently. Since then, he has developed new hobbies, working with a strong academic network on assembly level and high-level programming, software debugging, web security, app development, and network and server upkeep including in coding challenges and hackathons.*

Table Mr. Jordan Carlson's Relevant Work History/UX Solutions

|  |  |  |  |
| --- | --- | --- | --- |
| **Relevant Work History/ UX Solution** | **Organization Name** | **Description** | **Appendix** |
| “MyHealth Story”: Entrepreneurship Project - Mobile App Wireframe | Island Health Code Hack 2020 | Developed wireframe and business strategy for patient portal app based on extensive assessment of patient and care worker needs. | [Wireframe Prototype](https://mransaw.hotgloo.io/share/vvYmQAFEcgTYijF) |
| Engineering student with focus on Java, Python, and web/mobile app development experience | UVic, independently creating apps with mentorship from professionals at CGI and Redbrick | Participated in coding challenges, front-end development with Javascript, React and React Native. | [Jordan’s GitHub Profile](https://github.com/Jordanrcarlson/) |
| Instrumentation UI software and IDE-driven/network software and hardware development | UVic Rocketry (student club) | Interpreted past projects and developed and coordinated new projects with consistent collaboration involving various disciplines. | [UVic Rocketry Wiki](https://web.uvic.ca/~rocketry/wiki/index.php?title=Instrumentation) |

**SECTION 2: Vendor Information**

**Who We Are**

Based in Victoria and Nanaimo, we are a grass-roots team of independent health services researchers who are passionate and committed to innovating health care, education, usability, and the user experience; we are enthusiastic about designing innovative solutions for advancing health care for all Canadians.

**Our History**

We have organically come together to respond to this Request for Proposal (RFP) as a research team. Helen and Gurprit have known each other as peers for 10 years; they are alumni (did their Master’s and PhD studies together) and colleagues (faculty and adjunct faculty) from the University of Victoria’s School of Health Information Science. Their recent collaborations include coordinating and teaching guest lectures for Health Informatics students.

Gurprit and Hanna have worked together at McMaster University in a learning and teaching capacity in Health Informatics since 2019. They are both health care professionals who work at Island Health.

Gurprit and Jordan recently met at Island Health’s Code Hack 2020 competition in Victoria, BC. Together, they worked in an interdisciplinary team to innovatively design, develop/prototype, and pitch a solution (mobile app) to a health care problem in less than 23 hours. Their strong teamwork and leadership experience inspired them to collaborate on new innovation opportunities to improve health care for clinicians.

**About the Team**

|  |  |
| --- | --- |
| **Number of Years in Business** | This is our first year collaborating together as a team of four. To date, Gurprit has worked with all members of the team in various capacities. |
| **Service Offerings** | We offer the following services:   * Research design, data collection, data analysis, and report writing * Business consulting * Software development * Meeting facilitation |
| **Number of Staff** | We are a team of four with the ability to recruit additional team members (clinical and technical), as needed. |
| **Expert Services Offered** | We offer the following expert services:   * Usability evaluation * Qualitative and mixed methods research * Mobile app design and development * Health Informatics consultation * Program planning and evaluation * Learning analysis and design |
| **Head Office** | We are located in Victoria and Nanaimo, BC. The head office (Gurprit’s office) is located at:  145 Battleford Avenue  Victoria, BC V8Z 1K6 |
| **Ability to Pay for Ongoing Operations** | As we work remotely from our home offices, we will be able to sustain ongoing operations. |

**SECTION 3: Solution Proposal**

**Background:** The current BCCNP website was organized without the benefit of UX research. Some efforts have been made by BCCNP to harmonize the content on the website; however, it needs to be designed through the lens of user experience (UX).

**Purpose/Objectives:**

1. Evaluate the effectiveness of the current BCCNP website, including the site map.
2. Apply UX best practices to organize the content of the BCCNP website to ensure that it optimizes visitors’ web experience.
3. Involve multiple stakeholder perspectives during each stage of the design process to ensure consistent quality in results.
4. Prepare a report for BCCNP that includes the methodology, summary, findings and recommend an evidence-informed site map for the new website.

**Research Questions (RQ):**

1. To what extent does the current BCCNP website apply each of Nielsen’s usability heuristics?
2. How do users currently use the BCCNP website?
3. What is the current experience of BCCNP website visitors by stakeholder role (i.e., LPNs, RNs, NPs, RPNs, midwives, employers, educators, applicants, board/committee members)
4. Which content is used most commonly, and can users easily find what they need?
5. What are the usability issues with the current BCCNP website?
6. How can the usability/UX of the BCCNP website be improved?

**Methodology:**

* This proposalbids on **Option 1**.
* A **mixed methods** (qualitative and quantitative) research design will be applied.

**Sample/Participants:**

* Two representatives from each BCCNP department: registration, practice-education, governance, professional conduct, and quality assurance.
* LPNs, RNs, NPs, RPNs, midwives, employers, educators, applicants, board/committee members.
* Other participants, as requested by BCCNP.

**Approach:** An **iterative user-centred design approach** will be used to elicit feedback from users to develop, test, and validate the solution.

**Data Collection:**

***Note:*** *In light of the current COVID-19 pandemic, the team is prepared to perform all interviews and wireframe sessions remotely through video-conferencing, remote card sort software, and screen-sharing software.*

The data collection procedure is outlined as follows in Table 5, including the research question (RQ#) it addresses and associated design phase(s):

Table Data Collection with Iterative Design Phases

| **Data Collection Phase** | **UX Research Method** | **Description** | **No. of Research Team Members** | **No. of Participants** | **Location** | **RQ#** |
| --- | --- | --- | --- | --- | --- | --- |
| *1* | *Heuristic Evaluation* | First, a **heuristic evaluation** (i.e., usability inspection) of the BCCNP website will be conducted by two team members to identify usability issues. This will help to create a baseline understanding of approximately 80% of the usability issues with the current website. The heuristic evaluation will help to inform the design and development of the facilitator guides for the user interviews. | 3 | 0 | Virtual | 1, 3 |
| ***DESIGN PHASE 1:***   1. ***Analyze data*** *from Heuristic Evaluation.* 2. ***Review/Refine Objectives*** *and Research Questions.* 3. ***Develop*** *Facilitator Guides/Scripts* | | | | | | |
| *2* | *Semi-Structured Interviews with BCCNP Departmental Members* | To evaluate the current user experience of BCCNP website users who are BCCNP employees, qualitative data will be collected through recorded **semi-structured interviews**. The interviews will be conducted by a nurse researcher and usability/software engineer. | *2* | *10 (Two representatives from each department: registration, practice-education, governance, professional conduct, quality assurance)* | *Virtual* | *2, 3* |
| *3* | *Semi-structured Interviews with BCCNP’s Stakeholders* | To evaluate the current experience of BCCNP’s key stakeholders (i.e., LPNs, RNs, NPs, RPNs, midwives, employers, educators, applicants, board/committee members), semi-structured interviews will be conducted. | *2* | *8 (As requested in the RFP. However, we would recommend at least two interviews per user role identified, totaling 18 interviews)* | *Virtual* | *2, 3* |
| *4* | *Card Sorts with All Stakeholders* | To evaluate the current experience and issues with the BCCNP website, a card sorting exercise (using 25 cards) will be conducted in small groups (up to 8). Approximately, 18 participants will be accomodated in 5 card sort sessions. Additional card sort sessions may need to be scheduled based on the number of participants. | *2 (1 Facilitator and 1 Moderator to ask about the sorters selections).* | *18+ (Additional participants included at request of BCCNP)* | *Virtual* | *2, 3* |
| ***DESIGN PHASE 2:***   1. ***Analyze*** *Interview and Card Sort Data* 2. ***Design Sitemap.*** 3. ***Design*** *Wireframe mockup to ensure user needs and project objectives are met.* | | | | | | |
| *5* | *1:1 User Testing Wireframing Sessions with BCCNP Participants* | Ensure initial objectives are satisfied with BCCNP participants in wireframing sessions. Then refine the wireframe with stakeholder interview results and UX expert inputs. Request input from participants as required throughout the design process. | *1* | *10* | *Virtual* | *3* |
| ***DESIGN PHASE 3:***   1. ***Analyze*** *Feedback from Wireframing Sessions.* 2. ***Refine*** *Sitemap* 3. ***Refine*** *Wireframe.* | | | | | | |
| *6* | *Email Feedback* | Request feedback from BCCNP participants on updated wireframe. | *1* | *10* | *Virtual* | *3* |
| ***DESIGN PHASE 4:***   1. ***Analyze*** *Feedback from Email(s).* 2. ***Refine*** *Sitemap.* 3. ***Refine*** *Wireframe.* | | | | | | |
| *7* | *1:1 User Testing Mockup Sessions with BCCNP’s Stakeholders* | Ensure initial objectives are satisfied with stakeholders. Seek feedback for refining website. | *1* | *8-18* | *Virtual* | *3* |
| ***DESIGN PHASE 5:***   1. ***Analyze*** *Feedback from Mockup Sessions.* 2. ***Refine*** *Sitemap.* 3. ***Refine*** *Wireframe.* | | | | | | |
| *6* | *Email Feedback* | Request feedback from BCCNP stakeholders on updated wireframe. | *1* | *10* | *Virtual* | *3* |
| ***DESIGN PHASE 6:***   1. ***Analyze*** *Feedback from Email(s).* 2. ***Refine*** *Sitemap.* 3. ***Refine*** *Wireframe.* | | | | | | |
| *7* | *Finalize Wireframe and Submit* | Request confirmation/validation of the final wireframe draft from BCCNP. | *4* | *BCCNP RFP Contact (Ms. Elizabeth Bruce)* | *Virtual* | *3* |
| ***PREPARE FINAL REPORT*** | | | | | | |

**Key Data Collection Techniques:**

* Participants will be asked to comment on the current site and subsequently the prototype using the “*I like… I wish… What if...”* method. This will allow us to identify what is successful, as well as what could be improved at every touchpoint with users. We will determine what the most common use cases are for the website to ensure that these features have priority in the information architecture.
* We will develop the information architecture using **card sort testing** and usability tests (i.e., **1:1 user testin**g with wireframe and mockup).
* **WebEx Meeting Centre** will be used to host virtual interviews and screen-sharing, which will be recorded. Chat functionality will be enabled to facilitate participants’ participation across the introversion-extraversion spectrum.
* **OptimalSort** will be used for virtual card sorting.
* **Wireframe** using HotGloo prototyping software will be used to ensure interactivity, collaboration with participants, and a variety of UX elements to utilize. Its interface provides the ability to implement feedback and changes with a brief turnaround time, and its testing software enables an accurate view of the app’s appearance, along with its usable features. A wireframe with the initial objectives will first be created, and the team will configure it to be the best approximation to the possible website. Each interview will allow for a perspective of changes to be implemented to the wireframe, and several iterations of it will be modified until a final, cohesive one is created and agreed upon. The card sorting, wireframe, and user testing sessions will be video-recorded.

Table 6 below summarizes how each research question will be answered during data collection.

Table Research Questions Mapped to Data Collection Method

|  |  |
| --- | --- |
| **Research Question (RQ)** | **Data Collection Method** |
| 1. To what extent does the current BCCNP website apply each of Nielsen’s usability heuristics? | Heuristic Evaluation (Usability Inspection) |
| 2. How do users currently use the BCCNP website?   1. What is the current experience of BCCNP website visitors by stakeholder role (i.e., LPNs, RNs, NPs, RPNs, midwives, employers, educators, applicants, board/committee members) 2. Which content is used most commonly, and can users easily find what they need? 3. What are the usability issues with the current BCCNP website? | Interviews, Card Sort |
| 3. How can the usability/UX of the BCCNP website be improved? | 1:1 User Testing (Wireframe & Mockup Sessions), Email Feedback |

***Note:*** *All BCCNP data will be stored in data centres within Canada.*

**Data Analysis:**

* **Qualitative data** (interviews, card sort notes, email feedback, etc.) will be analyzed in NVivo using thematic analysis.
* **Quantitative data** (e.g., scores from heuristic evaluation)will be analyzed using descriptive statistics in Microsoft Excel.

**Project Communications & Report Writing:**

* The research team will stay in close contact with BCCNP to provide updates and progress throughout the project.
* Within three to five working days after data collection, BCCNP will be presented with a report that includes the interview results, methodology, summary, findings and recommendations.
* The research team would also be pleased to provide a presentation of the project findings and to answer any questions/provide clarifications about the report.

**Timeline of Research Activities:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Phase/Task** | **March** | **April** | **May** |
| **Heuristic Evaluation** | March 21, 2020 |  |  |
| **Initiate User Recruitment** | March 21, 2020 |  |  |
| **Develop Facilitator Guides and seek feedback from BCCNP** | March 23, 2020 |  |  |
| **Finalize Facilitator Guides** |  | April 10, 2020 |  |
| **Complete Participant Recruitment & Scheduling of Interviews (BCCNP)** |  | April 23, 2020  (Note: can be initiated earlier if participants are recruited sooner) |  |
| **Conduct Interviews and card sorts** |  | April 25-27, 2020 |  |
| **Transcribe and Analyze Interview Data** |  | April 28-May 1, 2020 |  |
| **Propose site map** |  |  | May 5, 2020 |
| **Facilitate Wireframe Sessions and 1:1 user mock up sessions** |  |  | May 6-20, 2020 |
| **Analyze Data and prepare Final Report** |  |  | May 21-28, 2020 |
| **Submit Final Report** |  |  | May 29, 2020 |

**SECTION 4: Client References**

Table Client References

|  |  |  |  |
| --- | --- | --- | --- |
| **Reference Name** | **Title** | **Organization** | **Telephone Number** |
| Dr. Cleo Mavriplis | Assistant Professor Family Medicine Faculty of Medicine  Dr. Mavriplis can speak to Helen’s ability to guide and conduct user experience research and quickly provide actionable reports on the research. | University of Ottawa | (613) 230-7788  CMavriplis@bruyere.org |
| Dr. Aviv Shachak | Associate Professor  Institute of Health Policy, Management, and Evaluation (IHPME)  Dr. Shachak was Gurprit’s PhD Co-Supervisor. He can speak to Gurprit’s evidence-based design of software video tutorials. | University of Toronto | (416) 978-0998  aviv.shachak@utoronto.ca |

**SECTION 5: Pricing**

Table 8 below outlines the pricing/fees in hourly rates and hours for each project task. The total estimated project fee is **$5,960**.

Table Pricing/Fees by Team Member (Hourly Rates and Estimated Hours)

|  | **Number of Hours by Team Member Role** | | | |
| --- | --- | --- | --- | --- |
| **Project Task** | **Researcher**  **(Helen)** | **Researcher**  **(Gurprit)** | **Research Analyst**  **(Hanna)** | **Usability/**  **Software Engineer**  **(Jordan)** |
| **Project Management** | 0 | 2 | 0 | 5 |
| **Heuristic Evaluation** | 1 | 2 | 2 | 2 |
| **Develop facilitator guides/scripts** | 1 | 3 | 2 | 5 |
| **Facilitating Interviews (10)** | 0 | 0 | 0 | 10 |
| **Stakeholder Interviews (8)** | 0 | 8  (Additional one-hour interviews can be scheduled) | 0 | 8 |
| **Card Sorts (5)** | 0 | 1  (Observe first card sort session to refine me) | 5 | 5 |
| **Site Map Preparation** | 0 | 3 | 5 | 20 |
| **Facilitate User Testing wireframe Sessions (10)** | 0 | 0 | 0 | 10 |
| **Facilitate User Testing mock-up sessions (10)** | 0 | 0 | 0 | 10 |
| **Data Analysis** | 3 | 10 | 0 | 10 |
| **Report Writing** | 0 | 10 | 0 | 5 |
| **Hourly Rate** | 150 | 50 | 40 | 30 |
| **Total Hours** | 5 | 39 | 14 | 90 |
| **Sub-Total** | $750 | $1,950 | $560 | $2,700 |
| **Total Team Fees** | $5,960 | | | |

Table Research Project Scale Questions

|  |  |
| --- | --- |
| **Research Project Scale Questions** | **Response** |
| **What is the incremental cost to add resources?** | Additional hours for resources can be added based on additional team member hours required, as follows:   * Mr. Jordan Carlson: $30/hr * Ms. Hanna Kerr: $40/hr * Dr. Gurprit Randhawa: $50/hr * Dr. Helen Monkman: $150/hr |
| **If fewer resources are required than originally provisioned, do the costs decrease accordingly?** | Yes. |
| **What is the process and timeframe to change the available resources?** | Resources can be added/removed via an email or phone request. |
| **What is the commitment term of the contract?** | March 20-May 29,2020. |
| **If BCCNP wishes to exit the contract, what charges would be incurred to do so?** | No. |
| **In the event that the deliverables are inadequate, what are the exit options?** | BCCNP can exit at any time. |