



# **Report on the experiences and recommendations**

# on service design and facilitation methods

in the development of nursing services in Kazakhstan

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#### **SUMMARY**

Service design is a design approach nowadays used in healthcare to improve, for example, the quality of nursing services. It is all about making nursing more efficient, effective, and desirable. In addition, the approach is a patient-centered and creative tool but at the same time, a systematic process where especially nurse-developers are valued to enhance quality of clinical practice.

This report describes the nurse-developers' and nursing faculty members' experiences in the use of service design including facilitation methods and tools applied in the development of nursing services in Kazakhstan. The service design approach training was conducted in multiple webinars, two master classes and a seminar.

In this report the service design as an approach and technique is defined shortly, followed by the description of the methodological steps of the service design development process. Four phases, discovery, defining, developing, and delivery, are explained in the context of improving nursing services. Service Design tools that can be used in facilitating the development process have been adapted to better serve Kazakhstani nursing developers. The teaching and learning material package contain, in addition to this report, a set of lectures and a selection of service design tools with instructions and examples.

Finally, recommendations for the faculty members of universities as well as healthcare providers working in practice are proposed. Recommendations on how to utilize service design approach are meant to develop, enhance and increase the quality of nursing services for patients and their family members.

#### **Recommendation for the Medical Universities:**

- Service design approach and facilitating methods should be included in syllabus of nursing and medical education.
- Continuous training on service design approach should be organized and offered for healthcare providers including nurses working in primary healthcare sector.
- In order to succeed in service design projects, support should be provided to strong multidisciplinary collaboration between universities and healthcare organizations. Nurses who do clinical work should be involved in the development work from the beginning.
- Service design materials and tools with instructions should be available and updated to be used by staff members and healthcare providers.
- Providing a permanent venue for carrying out service design would help to succeed in the projects as facilitators.

#### Recommendation for healthcare organizations:

- Administration should show active support, encouragement, and interest in development and implementation process of service design projects.
- Every level of administration (top management, middle management, operative management) should be involved in the implementation process.
- Help and support for developing collaboration between university staff and healthcare professionals to work together in service design projects ought to be provided.

## 1. INTRODUCTION TO SERVICE DESIGN

Seeing nursing services through the eyes of the patients and their families is essential when developing new practices and methods in healthcare as well as re-designing existing services to make them better for users, i.e. patients and their families. It is highly important that we do not see patients as passive recipients of our services but empower them to actively participate in their own journey through the healthcare system. It has been proven that this kind of approach increases efficiency of services as well as improves patients' and their families' experiences of nursing services. It is noteworthy to highlight that patients usually are underestimated as key participants in making nursing services better. All above-mentioned issues are key factors in a service design approach. Applying design thinking is a creative way of developing and improving nursing services. Service design can be defined as the activity of planning and implementing change to improve the quality of nursing services. (Fry 2019.) It is a patient-centric approach in which patients, nursing personnel and university faculty members play a critical role in the design process. Specifically, front-line nurses should actively participate in service design projects.

"Service Design is about making a service meet users and customers needs. Understanding the people who will use a service helps to create solutions that work for them. Service design engages users throughout the design process so that decisions are made using evidence, not assumptions." (Moore 2020)

Fry (2019) has described five central pillars of service design approach to be user-centric, co-creation, iterative process, visuality, and holistic. **User-centric** means that a user will be put in the center of the service. Therefore, it is important to recognize how users experience the service in its wider context to understand their true motivations, social context, and habits. To achieve this, service design uses empathic approaches such as interviews, observation and field research. In terms of **co-creation**, stakeholders are invited to participate, not only in the design of the solution but also in the production and development of it. This phase is carried out in multidisciplinary teams where professional groups and patients are working together, and everyone can input their perspectives and experiences using ordinary language. More importantly, engagement and motivation of staff are crucial for a sustainable service implementation. (Fry 2019.)

The third pillar Fry (2019) mentions is an **iterative process.** This means that the key is not avoiding mistakes, but rather exploring as many mistakes as possible and learning from them. This is often done by making prototypes or probes of products or services and testing them on end-users and stakeholders. Service designers often use visual aids like sketches, pictures, or prototypes to communicate - this can be called **visual communication**. Encouraging all stakeholders to express themselves more visually can make ideas more tangible and less complex and support the communication between the actors involved. **Holistic services** examine the whole user journey and consider each touch point of that service. Service design methods like service blueprints, user journeys, and scenarios investigate the holistic customer experience and touch points. (Fry 2019.)

The aim of applying service design approach in nursing development is to help build and reinforce capacity of Kazakh medical university teachers to understand and recognize their role in the collaboration with healthcare personnel to identify mutual research interests, conduct research and disseminate findings. The responsible institutions for this development process were Jamk University of Applied Sciences (Jamk) and Karaganda Medical University (KMU). The activities have been facilitated in collaboration between European universities from Lithuanian University of Health

sciences (LSMU), Åbo Akademi University (ÅAU) and University Medical Center Utrecht (UMCU) as well as international expert from NUSOM.

This report describes the experiences and recommendations on the use of service design and facilitation methods in Kazakhstan and how these were developed based on feedback from the participants and associated partners participating in workshops. The aim was to build the capacity of medical universities' nursing departments teaching staff on service design approach in nursing development.

## 2. METHODODOLOGY OF THE DEVELOPMENT OF THE SERVICE DESIGN TOOLS AND MATERIALS

First, three online webinars were organized in October and November 2021. The purpose of the webinars was to discuss relevant nursing research and development topics that arise from clinical practice and how to solve them together. During the webinars, developing the ideas of topics for nursing development projects in cooperation between practical healthcare and educational organization was discussed. The webinars allowed nursing staff to demonstrate their experience in their professional field and to increase their confidence in cooperation with the university staff.

Next, the Master Class titled "Service design in the development of nursing services" was held in Karaganda in December 2021. There participants learned the theory of service design approach and practiced each of the phases through a practical authentic nursing problem through shadowing and observing patients and nurses. The use of tools and facilitating methods helped to gain understanding of contemporary methodology on how nursing services can be developed based on customers' point of view and in collaboration with practitioners and end-users.

Then, in order to pilot the service design process and tools all trained participants were instructed to run through a nursing development project by using service design. The medical universities received instructions and the lecture and tools materials as electronic files. To support the phased progress of service design projects in medical universities in Kazakhstan, online webinars were organized in April and May 2022. Discussion and exchange of experiences among multi-professional development groups was organized. Also, consultation and help with solving the problematic issues of the groups were provided by European experts during the webinars.

After the online webinars, the Master Class titled "Applying service design in the development of nursing services in Kazakhstan" was held in Astana in September 2022. Participants had the opportunity to share the results of their service design projects and implementation experience in practice. Moreover, feedback on the usability of the service design tools and the experiences of the process was collected for the report preparation.

The final step was a seminar called "Service design and its application for nursing development" in Karaganda in November 2022. The seminar gathered academic staff and nursing research experts from different healthcare organizations (e.g., hospitals). During the seminar, participants discussed the effectiveness of methods proposed and reported. The purpose was to share experiences in the implementation and use of the service design method in Kazakhstan. Another goal was to initiate discussion, dissemination, and sustainability of the Teaching and Learning materials developed within the framework of the project. Figure 1 shows the phases and outcomes of the service design development process.

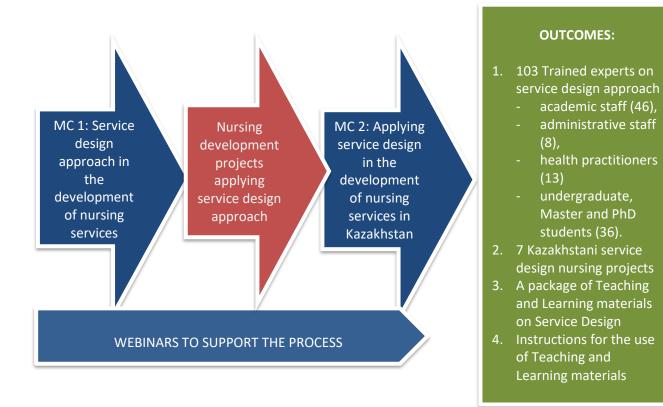


Figure 1. The phases and outcomes of the service design development process

This report contains the lectures 01-06 by the international experts on service design (See Annex 1). A glossary of the terminology was created based on the feedback (see Annex 2). The tools in this project have been modified mainly from the Finnish Tuulaniemi SDT - Service Design Toolkit (2012, 2018) and the Dutch Namahn and Flanders DC Service Design Toolkit (https://www.servicedesigntoolkit.org/downloads.html) to fit the Kazakhstani health care services to support facilitation of the nursing service design project (See Annex 1). Tools, as well as lectures, are divided according to the service design phases. Recommended tools for each tool are located at the end of the corresponding lecture. There is a separate PowerPoint slide set with instructions and examples on the use of tools. In addition, there is a set of lectures with examples of services design use in development of nursing (See Annex 1). The materials have been prepared as two sets: one in Russian for the developers and the other in both Russian and English for the university staff and master students to support internationalization.

## 3. PHASES OF SERVICE DESIGN AND FACILITATION OF EACH PHASE

There are several approaches to service design, but they all have activities that are common to all. As our approach, we have chosen the Design Councils "Double Diamond" model (Design methods for developing services). The service design process is divided into four distinct phases: Discover, Define, Develop, and Deliver.

# Double Diamond Design Process (Dolan 2021)

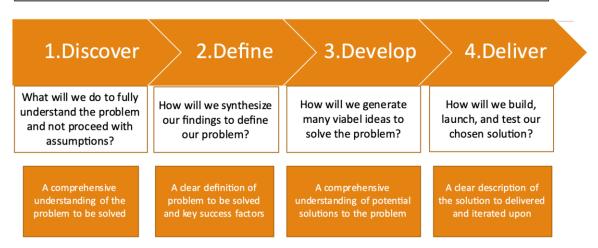


Figure 2. Double diamond service design process and its phases (Dolan 2022)

## 3.1 Facilitation of discovery phase

The discovery phase of the service design process is one of the most important and intensive ones. It is the first phase, and the purpose is to help to identify and understand the problems or challenges from end-users' perspective that will be addressed in the development project. This phase is not about confirming the ideas that the development team members of the project already have about the problems and the solutions. On the contrary, this phase helps team members to frame their understanding of existing problems and possible solutions around the patients' experiences and actual needs. The idea is to look at the broader view of the whole nursing / healthcare services and to uncover what is important to patients in their everyday life. This means that one should understand the aim of the patient and their journey through healthcare service in a polyclinic or in a hospital. Empathy is a key in the process, since the focus is on what patients feel and want to reveal. (Akama 2015, Ferreira et al. 2015, Simonse et al. 2019, Yates 2018)

Methods such as User Journey Mapping and User Shadowing are recommended to be utilized to uncover insights of patient experience and perceptions on healthcare services. Other methods such as different types of interviews and observations can also be used to capture patients' insights and to create a journey map for the discovery phase. Please see lecture 02 in the materials.

**User Journey Mapping** is a visual representation of a patient's journey through a nursing service, showing all the different interactions with healthcare providers they have. The idea is to focus on the key elements of the service from a patient perspective to identify so called "magic moments" and to find out are these "magic moments" parts that need to be improved. The aim is to identify touch points, the areas of problems in a service process and/or areas where new things can be added. It is vital that these are journeys of real healthcare and nursing service users, not an ideal user journey or a map of existing healthcare service processes. In other words, a mapping should explain

patients' actual experience of the nursing service, since the goal is to get a holistic view of the patient's pathway through the entire care and treatment phases. (Design methods for...n.d.)

**User shadowing** is a method in which service design team members spend time with the patients over certain periods observing what they are doing and why. The aim is to understand a patient's health journey and to identify the barriers and opportunities he/she may encounter. Shadowing may provide a real understanding of nursing service interactions and see the differences between what individuals say and what they do. (Design methods for...n.d.)

Before starting this phase, a service design team where roles are clearly defined and agreed for each person in the team should be established. There are three different types of roles: a facilitator, a leader, and a developer. Before starting the service design process, the facilitator makes plans, chooses and provides the tools (in paper copies or posters or flipcharts) and methods that will be used during the workshop, interviews, and shadowing. Organizing the workshop also requires organization and management of practical matters such as venue and timing. Furthermore, the facilitator must consider the number of participants that should attend the workshops, so that the results are as comprehensive as possible. The facilitator has no opinion on the issues; however, the facilitator guides the process, prepares all templates, gathers documentation of each step, and delivers the documentation to developers. The facilitators is usually one or two, never more than the developers. In discovery phase, the role of the facilitator is to coordinate, encourage, stimulate, and explain the principles of service design. Moreover, the facilitator connects all group members and gets them involved.

Each group should name a leader among themselves who prepares a schedule for the workshop, sends the agenda, takes responsibility of the group progress schedule, as well as ensures access to the hospital or polyclinic of which service is developed. The leader can be, for example, a nurse manager or a head nurse. The developers are people who are involved in the process in practice, such as clinical nurses and other professionals that are involved in provision of the service. They participate actively in every workshop and conduct interviews and observations, share practical experiences, and create new ideas and solutions. Then, service users should be identified, and they as well as the stakeholders, should be engaged into the service design process. The duration of the discovery phase depends on the project – it can vary from a few weeks to one-two months. However, it is crucial that the service design team commits time and effort to the discovery phase to ensure the successful delivery of service.

Tools of the discovery phase help to describe the purpose and the goals of the development project (See tools 1A-1G). Moreover, they help developers to define the methods for measuring results of services and to identify needs of the customers. It is also crucial to understand the service from the customer's point of view and what their customer wants to achieve and what they are not satisfied with. It helps to think about typical customers and to try to answer questions by putting oneself into their position.

It is equally important to prepare for interviews and shadowing to understand the users of the services and service providers. The developers should define what they need to know about the existing problems and the opinion of users on solving the problem. (e.g., The Scottish Approach... 2019.) This requires the developers to describe the needs and actions of service users and describe the actions of service providers and their points of contact before, during, and after receiving services.

Before data collection, it is needed to inform the interview and shadowing participants about the development project and to obtain their consent. A form of the consent, which agreed with the Local Bioethics Committee of the NCJSC "Karaganda Medical University", can also be found in the materials. The informed consent should be signed in

two copies, one copy is given to the patient/nurse, the other for the developers. (See Example of the informed consent, Tool 1G.)

In the Discovery phase, we recommend organizing two workshops within one month. The tools 1A-1B should be used in the first workshop, and the tools 1C-1G in the second workshop. Collecting customer data (shadowing & interviewing) takes place after these two workshops. Next, the facilitators collect the filled in forms from all development group members and make a summary of the data to be presented in the next workshop.

## 3.2 Facilitation of Defining phase

In defining phase, the findings of the previous, discovery phase, need to be analyzed, synthesized, structured, and mapped into a reduced set of problem statements. This phase finds answers to the following questions: "What have we found?", "What do our patients need and expect?", and "Why aren't we meeting these expectations?". The outcome of this phase is a clear definition of the problem based on mapping patient journey and shadowing that is solvable through a service design approach. The problem addressed should be in line with the organizational needs and objectives and solvable by those who are involved in provision of the service.

Analyzing data gathered in a service design process is different from a research process. First, the data have not been collected for research purposes but to provide insights and views of patients' needs and expectations. Thus, there is no need to use researchers or other university faculty members to analyze data in a scientific manner. What matters most is that developer-nurses will gain an understanding of patients' needs, expectations and experiences by going through the data by themselves. Secondly, those healthcare providers who are somehow involved in the service process under reviewing ought to participate in the analyzing process too. Developers and healthcare providers should together create a procedure to sort out repeated themes and other significant issues that arise from the data. Analyzers should take time for deep reflection concerning the main issues in the data and define these into clear and solvable real-world problems for developing further. After all, this is the final phase to produce a well-defined problem to be solved in later steps of the service design process. Please see lectures 03 and 04 in the materials.

There are several techniques to produce innovative and fresh ideas when improving nursing services. The **5WHYS** technique is one of them. The 5WHYS is quite a simple technique: when a problem is identified and defined well, developers try to find a root cause by asking "why" five times consequentially. Answers are expected from people who have hands-on experience of the problem in question. Although 5WHYS is a straightforward technique, it is a powerful tool to reveal the underlying causes of the defined problem. **Brainstorm** is another method to generate ideas. First, each participant collects their ideas individually, and then the participants start to share and build on top of each other's ideas to provide multiple possibilities. The aim is to explore a wide range of ideas and solutions without feeling limited and then to analyze, prioritize, and identify the most promising solutions, and define next steps. Importantly, during the forming of ideas, the facilitator should stimulate the participants, reminding them that there are no right and wrong ideas and that all ideas are good. **A mind map** is a visual illustration that represents the central topic or idea and its subtopics. It is a tool to think and analyze ideas and their related topics. The technique can be used when breaking down complex problems into simpler ones or brainstorming ideas and trying to find innovative solutions.

When defining the problem, a facilitator stays as an observer motivating and guiding the developers to analyze collected data with the leader. In addition, the facilitator fills gaps in the knowledge of service design, provides the needed tools and explains how to use them. Leader and developers together define the final goal. In terms of

facilitation, it is essential to encourage the team members to think of solutions without filtering ideas too much as well as support the team to make decisions without trying to influence decision-making.

Tools of the defining phase (See tools 2A-2D) help to describe the point of view of the end-users of the service and to determine issues they are not satisfied with during getting the services. In this phase, developers should select the most important problems of the end-users. Moreover, developers should create as many ideas for solving existing problems as they can. Facilitators should ensure that all members of the working group could work equally regardless of their position. Furthermore, at the stage of developing ideas, there should be no criticism of the ideas, and any ideas should be considered. Mind map could be used as a method for the solution formulation. To do this, a blank flipchart and markers could be used for a more colorful and understandable description.

In the Defining phase, as well as in the first phase, it is recommended to organize two workshops within one month. In the first workshop, it is necessary to discuss the results obtained in the first stage and prepare tools 2A-2C. At this point, you can go back to the tool 1A and update the goal and challenges to be addressed. Then, collecting solutions for each objective and filling out a 2D form takes place in the second workshop.

## 3.3 Facilitation of Developing phase

In the developing phase, concentration is on developing, testing, and refining potential solutions for the defined problem. It is vital to look at all possible solutions to the identified problems. Also, looking for potential options for nursing service delivery is important, not just how the services is currently delivered. Therefore, the goal is to challenge developer-nurses and other participants to push their ability for idea production and produce and generate as many innovative and creative ideas and solutions as possible. First, multiple solutions to meet your patients' needs and problems expressed in the defining phase need to be identified. Since service design is a customer-centered approach, the team members need to confirm that patients are still in the center of the design service process. At the end of this phase, there should be a decision on which of the options is likely to be the best at meeting patients' needs. This is an iterative process of developing, testing, and refining the product or service concepts until they are ready for implementation. The next phase is planning for delivery. The developing phase is finished when the design service team members are ready to go live and deliver the service. Please see lecture 05 in the materials.

**Use of personas** is particularly useful in a developing phase of service design. A user persona is defined as a fictional character based on current service users. They can be archetypes, which can be used to help design development against. Generally, personas are different types of patient-users that use nursing services. Creating different types of personas help developers to understand users' needs, behaviors, aims, and experiences. Also, personas can support recognizing that different patients have different needs and expectations that should be considered when designing problems and solutions for them. Constructing personas will help developers to ask relevant questions and give answers to the questions in line with the users that the services are designed for. For example, the questions "What are patient-users underlying needs that we are trying to fulfill?" and "How would our patient-users think and feel about the service?" To conclude, personas help to achieve the goal of creating a good user experience and providing it for the target patient-user group. More importantly, personas are based on actual data collected from multiple individuals in the discovery process. (Miaskiewicz & Kozar, 2011.)

In the developing phase, **a service blueprint** needs to be created. It is a description of what is needed to make patientuser's experience happen. For example, it answers the following questions: 1) What do nurses do to create and deliver service that is necessary but often invisible to patients? and 2) What are the internal processes, procedures, and activities that need to take place for the patient-users? While a journey map reveals every phase of the patient experience (frontstage), a service blueprint can also be defined as a kind of journey map where "backstage" of the service is added. By creating a service blueprint, it is possible to understand the back-end processes of nursing services and where nurses think things can be improved. Like user journey maps, service blueprints can be generated, for example, shadowing nurses as they communicate and guide their patients or conducting interviews with healthcare providers involved in the service. The blueprint is useful, since it identifies weaknesses and possible disorganizations in the current nursing service processes and above all, it links the user journey map together with the inner work processes of the organization in question. (Patricio et al. 2011.)

Developers should have certain level of knowledge before starting to develop. A facilitator should explain the instructions needed for each tool. When the personas and profiles of patients are made by using collected data, the facilitator should take care of that personas are syntheses of several interviewed service users, not for example real single patients. In addition, the facilitator prepares printed materials, flipcharts, markers, magazines, or laptops – all the material which is needed in the developing phase. Although, the facilitator gives directions how to proceed and takes care of reaching outputs, he/she does not manipulate the developers and leader. Visualizing the different behavior models, personas, and a service blueprint are important to understand the different needs of service users.

Tools of the developing phase (See tools 3A-3C) help to prepare customer profiles to understand their needs, behaviors, aims, and experiences depended on the dimensions for behavioral differences and opposites. It is recommended to have two dimensions and make this cross to each other creating four profiles of users with their behavioral differences and opposites. The next step should be creating personas with further description of their characteristics. Using pictures and photos from the internet can make the work easier and creative. Moreover, Persona templates include characteristics and short descriptions of profiles. Besides the facts of the customer/users, it is good to add a life credo for each profile, since it makes the process more creative and interesting. The developers are the best creators of that, because nobody could know their customer/patients better than them.

As written above, creation of service blueprint is a crucial part of the developing phase. It is recommended to prepare the plan. The developers should use blank flipcharts and colored paper to separate the patient's path "before", "during", and "after". Also, it is up to the developers to choose the form of the blueprint - it could be drawn, for example. It is important to remember that the blueprint describes the improved service pathway. An example of the service blueprint is presented in the materials (See Example of the Blueprint / Improved Care pathway, Tool 3C).

During the Developing phase, it is encouraged to organize two workshops. The first one should be dedicated to creating profiles and personas using the 3A and 3B tools. The second workshop, on the other hand, should be dedicated to the development of a Blueprint, an Improved care pathway, using the 3C tool.

## 3.4 Facilitation of Delivery phase

In a delivery phase, the result is ready to be launched. This means that a service or a product is finalized, produced, and ready to be put into practice. It should be confirmed that the measures to identify whether the changes have succeeded or not are defined before launching the service. In addition to this, it is important to confirm that the patient feedback system is properly organized concerning the service or the product. A review date should be agreed at this phase. Also, lessons learned (knowledge, skills, insights, tools, ways of working) from the development process should be shared with coworkers and managers.

In this phase, one needs to plan an evaluation of the service design process and its outcomes. A traditional way to evaluate is to focus on measurement and report the results of the service design project. However, success of the expected outcomes often depends on contextual factors, such as the environment, culture, human behaviors, and emotional reactions concerning interventions and outcomes. It is well known that if service design thinking is *Accelerating Master and PhD level nursing education development in the higher education system in Kazakhstan NO.618052-EPP-1-2020-1LT-EPPKA2-CBHE-SP* 

embedded into organizations, its impact can be measured via employees' motivation, engagement, team cooperation, and effectiveness. (Björklund et al. 2018; Foglieni et al. 2018.) In order to assess the results of the service design project, the representatives of medical universities and health care organizations ought to decide what indicators can be used to measure the changed service and how and when the data should be gathered. It should be noted that that changes and/or improvements should not be just a short-term task, but the continuum should be seen. For example, head nurses of departments should monitor and ensure that the changes made during the service design project are carried out

In the delivery phase, the facilitator should support the selected measurement tools and indicators. The workshop where the service users' feedback, changes in observed measures, and possible suggestions for improvement are handled must be organized. Clinical nurses have a key role in ensuring the continuation of the service design project and dissemination of the new practices. Therefore, the responsibility of the continuation should be given to them.

A realist evaluation framework, introduced by Pawson and Tilley (1997), is a good option for evaluating the improvement in service design projects. The framework is based on realism in which social world is seen as real. The basic idea is that the surrounding culture, economic, social, and political structures, as well as organizational and historical context may impact on whether interventions work in service design projects or not. Focusing on revealing why an intervention works or does not work, for whom it works, and under what circumstances and why is vital. By answering the above-mentioned questions, one is using the realist evaluation method. Please see lecture 06 - Delivering in the materials.

The Delivery phase includes two workshops over several months, depending on your aim. The first workshop should focus on planning how to implement and measure your improvements. Here the Tool 4A can be used to support the planning. After the service has been in use for at least 2-4 months, a second and final workshop where the results are analyzed and determined needs to be organized.

## 4. **RECOMMENDATIONS**

Based on the nurse-developers' and faculty staff's experiences the following recommendations on utilization and implementation of service design are proposed for different groups of professionals and organizations.

## **Recommendation for the Medical Universities:**

- Service design approach and facilitating methods should be included in syllabus of nursing and medical education.
- Continuous training on service design approach should be organized and offered for healthcare providers including nurses working in primary healthcare sector.
- In order to succeed in service design projects, support should be provided to strong multidisciplinary collaboration between universities and healthcare organizations. Nurses who do clinical work should be involved in the development work from the beginning.
- Service design materials and tools with instructions should be available and updated to be used by staff members and healthcare providers.
- Providing a permanent venue for carrying out service design would help to succeed in the projects as facilitators.

#### Recommendation for healthcare organizations:

- Administration should show active support, encouragement, and interest in development and implementation process of service design projects.
- Every level of administration (top management, middle management, operative management) should be involved in the implementation process.
- Help and support for developing collaboration between university staff and healthcare professionals to work together in service design projects ought to be provided.

#### Recommendation for nurses:

- Familiarise oneself with a service design approach and facilitating methods.
- Communicate actively and motivate middle and operative managers to support service design projects.
- Actively participate in service design project with the university staff.

#### Recommendation for nursing and medical students:

- Actively participate in the development projects to learn service design approach.
- Observe and engage in the interview and shadowing processes.

#### REFERENCES

Akama, Y. (2015). Service Design: From Insight to Implementation. *Design and Culture*, 7(2), 259-261.

Björklund, T., Hannukainen, P., & Manninen, T. (2018). Measuring the impact of design, service design and design thinking in organizations on different maturity levels. ServDes2018 - Service Design Proof of Concept Politecnico di Milano 18th-19th-20th, June 2018 (pp. 500-511). Linköping University Electronic Press.

Bulley, C., Baer, G., Mahal, D., Buckton, C., Donald, S., Lugton, K., Gillespie, D., & McCormack, B. (2021). Supporting families and carers of people living with multiple sclerosis: A rapid realist review and realist valuation. *International Journal of Care and Caring*, *5*(2), 263-282.

*Design methods for developing services.* (N.d). An introduction to service design and a selection of service design tools. Design Council.

https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/DesignCouncil\_Design%2520methods%2520f or%2520developing%2520services.pdf

Dickson, M., Riddell, H., Gilmour, F., & McCormack, B. (2017). Delivering dignified care: A realist synthesis of evidence that promotes effective listening to and learning from older people's feedback in acute care settings. *Journal of Clinical Nursing*, *26*(23-24), 4028-4038.

Dolan, T. (2021). Double Diamond Design Process. <u>https://www.kickframetoolbox.com/framework/double-diamond-design-process</u>

Ferreira, F. K., Song, E. H., Gomes, H., Garcia, E. B., & Ferreira, L. M. (2015). New mindset in scientific method in the health field: Design Thinking. *Clinics (Sao Paulo, Brazil)*, *70*(12), 770–772. <u>https://doi.org/10.6061/clinics/2015(12)01</u> Foglieni, F., Villari, B., & Visser, F.S. (2018). About evaluation in service design: As it is and how it could evolve. ServDes2018 - Service Design Proof of Concept Politecnico di Milano 18th-19th-20th, June 2018 (pp. 489-499). Linköping University Electronic Press.

Fry, KR. (2019). Why Hospitals Need Service Design: Challenges and methods for successful implementation of change in hospitals. In M.A. Pfannstiel & C. Rasche (Eds.), *Service Design and Service Thinking in Healthcare and Hospital Management. Theory, Concepts, Practice* (pp. 377-399). Springer.

Miaskiewicz, T., & Kozar, K. A. (2011). Personas and user-centered design: How can personas benefit product design processes?. *Design studies*, *32*(5), 417-430.

Moore, K. (2020). Service Design Toolkit. <u>https://digitalservices.maidstone.gov.uk/about-us/toolkits/service-design-toolkit</u>

Patrício, L., Fisk, R. P., Falcão e Cunha, J., & Constantine, L. (2011). Multilevel service design: from customer value constellation to service experience blueprinting. *Journal of service Research*, *14*(2), 180-200.

Pawson, R., & Tilley, N. (1997). An introduction to scientific realist evaluation. In E. Chelimsky & W. R. Shadish (Eds.), *Evaluation for the 21st century: A handbook* (pp. 405–418). Sage Publications.

Rycroft-Malone, J., Burton, C. R., Wilkinson, J., Harvey, G., McCormack, B., Baker, R., Dopson, S., Graham, I., Staniszewska, S., Thompson, C., Ariss, S., Melville-Richards, L., & Williams, L. (2015). Collective action for implementation: a realist evaluation of organisational collaboration in healthcare. *Implementation Science*, *11*(1), 1-17.

Rycroft-Malone, J., Seers, K., Eldh, A. C., Cox, K., Crichton, N., Harvey, G., Hawkes, C., Kitson, A., McCormack, B., Mcmullan, C., Mockford, C., Niessen, T., Slater, P., Titchen, A., van der Zijpp, T., & Wallin, L. (2018). A realist process evaluation within the Facilitating Implementation of Research Evidence (FIRE) cluster randomised controlled international trial: an exemplar. *Implementation Science*, *13*(1), 1-15.

Simonse, L., Albayrak, A., & Starre, S. (2019). Patient journey method for integrated service design. *Design for Health*, *3*(1), 82-97.

The Scottish Approach to Service Design (SAtSD). (2019). Designed in-house by the Scottish Government Digital Directorate <u>https://resources.mygov.scot/service-design/SAtSD.pdf</u>

Tuulaniemi, J. (2012). SDT Service design Toolkit. <u>https://slidelegend.com/process-and-templates-sdt-service-design-toolkit\_59eaeca71723dd0c46c75172.html</u>

Tuulaniemi, J. (2018). Palvelumuotoilu. Talentum.

Williams, L., Rycroft-Malone, J., Burton, C., Edwards, S., Fisher, D., Hall, B., McCormack, B., Nutley, S., Seddon, D., Williams, R. (2016). Improving skills and care standards in the support workforce for older people: a realist synthesis of workforce development interventions. BMJ Open, 6(8), e011964.

Yates, P. (2018). Design Thinking: Can it enhance nursing research? Cancer Nursing, 41(4), 344-345

### ANNEXES

# Annex 1. Material set of lectures and tools for facilitating service design project for nursing development

### List of lectures that are available in two versions Russian and English and Russian

Lecture 01 Service design methodology and process Lecture 02 Discovery Phase Lecture 03 Defining phase Lecture 04 Generating ideas Lecture 05 Developing phase Lecture 06 Delivery phase Lecture 0A Example. Service Design NICU Parent Education Lecture 0B Example. Personas Lecture 0C Example. Patient Journey Method for Integrated Service Design

#### List of tools that are available in two versions Russian and English

1A Define: the development challenge
1B The customer's service pathway
1C Select your tools and design your development project (optional)
1D See your service trough the customer eyes
1E Framing
1F User Journey Plan Observation: documentation of user journey during shadowing and interviewing
1G Informed consent
2A Empathy map
2B The customer point of view
2C Mind map
2D Forming solutions
3A USER profiles
3B Persona template
3C Blueprint / Improved Care pathway
4A Collect information, improve and productize your service

# Annex 2. Service Design Glossary

Term	Synonym	Explanation	Термин	Синонимы	Объяснение
Service design		"As a specific method or approach"	Сервис дизайн		«Как особый метод или подход»
Users	Clients; Customers; End-users	In a design context, the term "user" would commonly refer to people using a product or a service [1]	Пользователи	Клиенты; покупатели; Конечные пользователи	В контексте сервис дизайна термин «пользователь» обычно относится к людям, использующим продукт или услугу [1]
Service		a government system or private organization that is responsible for a particular type of activity, or for providing a particular thing that people need [2]	Сервис	услуги	государственная система или частная организация , отвечающая за определенный вид деятельности , или за предоставление конкретной вещи, в которой нуждаются люди [2]
Nursing service		Nursing services provided in healthcare organizations [3] Nursing service is the part of the total health organization which aims at satisfying the nursing needs of the patients/community. In nursing services, the nurse works with the members of allied disciples such as dietetics, medical social service, pharmacy etc. in supplying a comprehensive program of patient care in the hospital. [4]	услуги		Сестринские услуги, оказываемые в организациях здравоохранения [3] Сестринское обслуживание является частью общей организации здравоохранения, целью которой является удовлетворение потребностей пациентов/сообщества в уходе за больными. В сестринских службах медсестра работает с членами смежных групп, таких как диетологи, медико- социальная служба,

Service- provide rs	the provider	The role of the service provider is performed by medical workers, medical organizations, as well as nurses [5]	Услугодатель	Поставщик	аптека и т. д., В рамках комплексной программы ухода за пациентами в больнице. [4] В роли поставщика услуг выступают медицинские работники, медицинские организации, а также медсестры [5]
Persona s;	Archetypes	Personas are a design tool for bringing users to life. Personas represent people as types of users. They describe the users' activities, goals, behaviors and attitudes. Personas are based on real information and research about users [6].	Персоны;	Архетипы	Персоны         —         это           инструмент         дизайна           для         оживления           пользователей.         Персоны           Персоны         представляют           людей         как         типы           пользователей.         Они           описывают         деятельность,         цели,           поведение         и           отношение         пользователей.           Персоны         основаны         на           реальной         информации         и           и исследованиях         о         пользователях [6].
Prototy pe		the first design of something from which other forms are copied or developed [7] In the design, it is the early version of a solution to be tested and improve	Прототип		первый дизайн чего- либо, из которого скопированы или разработаны другие формы [7] В дизайне это ранняя версия решения, которое нужно протестировать и улучшить.
empath Y		the ability to understand and share the feelings of another. [8]	Эмпатия		способность понимать и разделять чувства другого. [8]

iterative	Iterative process	(of a process) that involves repeating a process or set of instructions again and again, each time applying it to the result of the previous stage [9]	Итеративный	Итеративный процесс	(процесс), который включает повторение процесса или набора инструкций снова и снова, каждый раз применяя их к результату предыдущей стадии [9]
		doing something, again and again, usually to improve it [9]			делать что-то снова и снова, обычно для улучшения [9]
		It is going back and forth during the steps or processes of the design to improve the actions/solutions			Это движение вперед и назад во время этапов или процессов проектирования для улучшения действий/решений.
stakeho lders		A stakeholder is any "individual or group who is responsible for or affected by health- and healthcare-related decisions that can be informed by research evidence" [10]	Заинтересован ные стороны		Заинтересованная сторона — это любое «частное лицо или группа лиц, которые несут ответственность за решения, связанные со здоровьем и здравоохранением, или на которые они влияют, и которые могут основываться на данных исследований» [10]
Service Bluepri nt	Improved service process description	is a diagram that visualizes the relationships between different service components — people, props (physical or digital evidence), and processes — that are directly tied to touchpoints in a specific customer journey-[11]	Сервис план	Улучшенное описание процесса получения услуг	это диаграмма, которая визуализирует отношения между различными компонентами услуги — людьми, реквизитами (физическими или цифровыми доказательствами) и процессами — которые напрямую связаны с

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			точками взаимодействия в конкретном пути клиента. [11]
touch points	Touch point is the interaction between the service user and the provider person or organization (nurse, .) Touchpoints are the moments where your customers interact with your organization [12]	Точки взаимодействи я	Точка соприкосновения — это взаимодействие между пользователем услуги и лицом или организацией, предоставляющей услуги (медсестра, .) Точки соприкосновения — это моменты, когда ваши клиенты взаимодействуют с вашей организацией [12]

## References

- Forshaug, A. K., & Sigurjónsson, J. B. (2015). User involvement in design of health care services. In DS 82: Proceedings of the 17th International Conference on Engineering and Product Design Education (E&PDE15), Great Expectations: Design Teaching, Research & Enterprise, Loughborough, UK, 03-04.09. 2015 (pp. 226-231).
- 2. https://dictionary.cambridge.org/dictionary/english/service
- Institute of Medicine (US) Division of Health Care Services. Nursing and Nursing Education: Public Policies and Private Actions. Washington (DC): National Academies Press (US); 1983. Chapter I, Nursing Services and Nursing Education: An Overview. Available from: <u>https://www.ncbi.nlm.nih.gov/books/NBK218533/</u>
- 4. All India Institute of Medical Sciences. (N.d.). Staffing Hospital Nursing Services in Different Unit. <u>https://www.aiims.edu/aiims/nursingservices/NURSING%20SERVICES.htm#:~:text=Nursing%20service%20i</u> <u>s%20the%20part,medical%20social%20service%2C%20pharmacy%20etc</u>.
- 5. Navarro C. (2013). Le rôle de l'infirmière parmi les prestataires de santé à domicile [The role of the nurse among home health care service providers]. *Soins* 48(775), 47-49.
- 6. New Zealand Government. (2021). Personas. <u>https://www.digital.govt.nz/standards-and-guidance/design-and-ux/service-design/service-design-tools/personas/</u>
- 7. <u>https://www.oxfordlearnersdictionaries.com/definition/english/prototype?q=prototype</u>
- 8. Riess, H. (2017). The science of empathy. *Journal of patient experience*, 4(2), 74-77. doi: 10.1177/2374373517699267.
- 9. <u>https://www.oxfordlearnersdictionaries.com/definition/english/iterative</u> <u>https://dictionary.cambridge.org/dictionary/english/iterative</u>
- Petkovic, J., Riddle, A., Akl, E.A., Khabsa, J., Lytvyn, L., Atwere, P., Campbell, P., Chalkidou, K., Chang, S.M., Crowe, S., Dans, L., Jardali, F.E., Ghersi, D., Graham, I.D., Grant, S., Greer-Smith, R., Guise, J.M., Hazlewood, G., Jull, J., Katikireddi, S.V., Langlois, E.V., Lyddiatt, A., Maxwell, L., Morley, R., Mustafa, R.A., Nonino, F., Pardo, J.P., Pollock, A., Pottie, K., Riva, J., Schünemann, H., Simeon, R., Smith, M., Stein, A.T., Synnot, A., Tufte, J., White, H., Welch, V., Concannon, T.W., & Tugwell P. (2020). Protocol for the development of guidance for

stakeholder engagement in health and healthcare guideline development and implementation. *Systematic reviews*, *9*(1), 1-11. doi: 10.1186/s13643-020-1272-5.

- 11. Sarah Gibbons. (2017, August 27). Topics: service design,omnichannel,Design Process,Customer Journeys,customer service,Managing UX Teams.
- 12. Fonteijn, M. (2020, Janurary 14). What are Touchpoints and how to use them in a Customer Journey Map. <u>https://www.servicedesignshow.com/what-are-touchpoints-and-how-to-use-them-in-a-customer-journey-map/</u>