NUNAVIK HEALTH SERVICES SURVEY REPORT

Nunavik | Regional Clinical Plan

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INTRODUCTION

As part of the ongoing development of the Nunavik Regional Clinical Plan, the Nunavik Regional Board of Health and Social Services (NRBHSS) introduced a research project designed to obtain the opinion of users of the region's health and social services system. The research protocol includes three mechanisms for obtaining the opinion of users and subsequently measuring their experience as regards the quality and accessibility of healthcare services in Nunavik. This initiative is a manifestation of the NRBHSS' clear desire to ensure that all of its programs and services are culturally safe. This report, the first part of a three-phased research project, presents the results of a population survey.

The survey sought to gather information on the overall experience of patients, their experience with the healthcare services offered, and the gap between their expectations and the organization's standards.

During the research project's second phase, these results will be interpreted alongside the findings of the semi-directed interviews and the focus group results. These data will subsequently be added to the Nunavik Regional Clinical Plan as a means of ensuring the cultural safety of the decision-making process.

METHODOLOGY

QUESTIONNAIRE DESIGN

A specific questionnaire was designed to better measure the experience of users of the Nunavik health network. Based on the government's 2012 reference framework for evaluating the public health and social services network from a management perspective (*Cadre de référence ministériel d'évaluation de la performance du système public de santé et de services sociaux à des fins de gestion*)[1], we grouped together questions in a total of 10 categories to learn more about the perception of users regarding service accessibility and quality. We also drafted preliminary background questions on age group, gender, etc., to allow for analyzing results by interest group. The categories selected were the following:

SERVICE ACCESSIBILITY

1.1 **Equitable access –** Do users feel that the access enjoyed by their community members is equal to that in other communities and elsewhere in Québec?

1.2 **Access time –** Do they consider the waiting time for access to services reasonable?

1.3 **Orientation –** Do they know where to go and who to contact to obtain assistance?

SERVICE QUALITY

2.1 **Effectiveness –** Do users find the services effective? Or do they find them ineffective and even perhaps nearly non-existent?

2.2 **Security –** From the users' perspective, does seeking out help put them at risk?

2.3 **Responsiveness –** Once they have accessed the health network, do service providers easily adapt to service delivery in Nunavik?

2.4 **Community –** Is the flow of services simple?

2.5 **Cultural safety –** Do patients trust that service providers are making every effort to ensure their cultural safety?

2.6 **Communication –** Do communications within the health system enable patients to understand what is happening to them, what will happen moving forward, the options that were or are available to them? Can they make enlightened decisions?

2.7 **Relevance –** Do the services provided improve the health condition of patients?

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1   Reference framework for evaluating the public health and social services network from a management perspective (Cadre de référence ministériel d'évaluation de la performance du système public de santé et de services sociaux à des fins de gestion), ratified by the management committee on January 31, 2012.

It bears noting that the categories are not necessarily mutually exclusive, meaning that a given question might find itself falling in more than one category[2]. This overlap was required in order to analyze specific perspectives, and maintaining this approach was deemed important in spite of the statistical redundancy it generated[3]. *Communication and Cultural safety*, for example, are closely linked; this is illustrated in Figure 1. In terms of statistics, the Communication category should have been removed from the analysis; this did not occur because of it being necessary to measure the service delivery experience.

The survey consisted of 43 questions inspired by other specific user experience methodologies but adapted to reflect the Nordic reality. Its face validity was tested by an Inuit community worker to ensure that the questions were relevant and addressed the entire experience of Inuit users of the healthcare system. Lastly, five test respondents filled out the questionnaire and provided feedback. A few adjustments were then made to ensure the appropriateness of the language adopted, avoid redundancy and keep respondents interested during the time required to complete the entire questionnaire.

The following table illustrates the correlation between variables, based solely on the structure of the categories:

The green cells depict categories that are also closely linked by the questionnaire's structure alone. The relations below, moreover, are already very strong, also due to this structure:

- Cultural safety and Communication (r=0.47)
- Cultural safety and Security (r=0.37)

The score for each category serves as the indicator for measuring whether the user experience meets expectations (of users as well as the organization itself). The survey process was structured according to the CAHPS methodology[4], albeit adapted to the Nunavik setting. Scores for each category were obtained by first dichotomizing the answer to each question[5] then generating an average (per category). It must be noted that these scores are generally lower than what would be expected from a satisfaction survey; it is seemingly important, when considering user experience, to mostly measure improvement and gap (compliance) rather than striving to obtain a singular value.

Table 1. Correlation between the structure of the themes.

	COMMUNICATION	EFFECTIVENESS	RESPONSIVENESS	CONTINUITY	ORIENTATION	SECURITY	EQUITABLE ACCESS	ACCESS TIME	CULTURAL SAFETY	RELEVANCE
Communication	1,00	0,05	0,01	0,00	0,00	0,18	0,02	0,04	0,47	0,00
Effectiveness	0,05	1,00	0,02	0,11	0,03	0,00	0,04	0,15	0,01	0,12
Responsiveness	0,01	0,02	1,00	0,01	0,00	0,06	0,12	0,01	0,04	0,00
Continuity	0,00	0,11	0,01	1,00	0,57	0,01	0,03	0,19	0,03	0,04
Orientation	0,00	0,03	0,00	0,57	1,00	0,00	0,02	0,18	0,00	0,02
Security	0,18	0,00	0,06	0,01	0,00	1,00	0,00	0,01	0,37	0,04
Equitable access	0,02	0,04	0,12	0,03	0,02	0,00	1,00	0,03	0,05	0,02
Access Time	0,04	0,15	0,01	0,19	0,18	0,01	0,03	1,00	0,02	0,03
Cultural Safety	0,47	0,01	0,04	0,03	0,00	0,37	0,05	0,02	1,00	0,01
Relevance	0,00	0,12	0,00	0,04	0,02	0,04	0,02	0,03	0,01	1,00

2   More to the point, Communication is fully imbedded in the Cultural safety category (in a clear example of the structure's redundancy), yet the latter is more fleshed out than the Communication category.

3   A factorial analysis would have been the best approach to determine how the data gathered adhere to the proposed structure, but the structure's unique nature did not accommodate the model's convergence.

4   https://www.ahrq.gov/cahps/index.html

5   1 = compliant (with expectations); 0 = non-compliant

QUESTIONNAIRE ADMINISTRATION

It was decided to allow respondents to fill out the questionnaire either online or on paper. Copies of the paper version were available at Nunavik CLSCs and other health centres (14 locations in all). Participants were asked to complete the survey between April 12 and May 12, 2018. This period was specifically chosen because it was not during the spring hunting and fishing season, a time when many of the region's residents are traditionally absent from their villages and communities.

A few days before the start of the survey (distribution of paper versions and onset of online access), radio announcements, social media posts and traditional (paper) ads were broadcast or published in the 14 Nunavik villages. Frequent reminders were also issued over the radio and on social media during the entire questionnaire administration period. A contest was even organized to encourage yet more people to participate.

An online version was created and made available on the NRBHSS website. Facebook posts and links also facilitated access to the survey and distribution of the questionnaire. The site was also used to compile results from the paper versions at the end of the survey period.

Online results were monitored on a weekly basis to tabulate the number of respondents and ensure that they were representative of the region's population in terms of gender, age group and community. At the end of the administration period, the degree of representativeness for these three variables was considered adequate. It was deemed preferable to have a high number of beneficiaries of the James Bay and Northern Québec Agreement responding to the survey, as this would more closely match Nunavik's current population. We considered the percentage of 84% (of respondents who were beneficiaries) as acceptable.

RESULTS

RESPONDENTS

A total of 438 respondents filled out the questionnaire.

The maximum margin for error with this number of responses is 4.7%.

Table 2. Representativeness of respondents.

	OBJECTIVE	RESPONDENTS
COMMUNITY		
Akulivik	5%	3,23%
Aupaluk	2%	1,38%
Inukjuak	13%	17,28%
Ivujivik	3%	3,92%
Kangiqsualujjuaq	7%	2,76%
Kangiqsujuaq	6%	2,76%
Kangirsuk	4%	7,37%
Kuujjuaq	20%	25,12%
Kuujjuaraapik	5%	7,37%
Puvirnituq	14%	6,91%
Quaqtaq	3%	4,38%
Salluit	11%	9,45%
Tasiujaq	3%	3,46%
Umiujaq	4%	4,61%
AGE		
14-18	14%	4,60%
19-34	38%	39,54%
35-54	33%	40,00%
55 +	16%	15,86%
GENDER		
Male	50%	24,83%
Female	50%	75,17%

The objectives in terms of representativeness were generally met, and this for almost all variables. However, the percentage of youth between 14 and 18 years of age was less than what we had hoped. And while we were hoping to have an equal number of men and women responding, the percentage of women was significantly higher.

ANALYSIS OF RESULTS

In this section, we considered the overall results and broke them down by category.

AVERAGE SCORES PER CATEGORY

The table below provides details of the average scores per category (with red depicting the two categories with the lowest average scores and green the two with the highest average scores) as well as the standard deviation and data for the quartiles.

Tableau 3. Statistics by category.

| CATEGORY	AVERAGE SCORE	STANDARD DEVIATION	1ST QUARTILE	MEDIAN	3rd QUARTILE
Communication	88%[6]	23%	83%	100%	100%
Effectiveness	54%	21%	38%	57%	71%
Security	82%	18%	75%	86%	92%
Continuity	72%	19%	63%	75%	88%
Responsiveness	65%	26%	50%	67%	86%
Equitable Access	43%	33%	20%	40%	60%
Access Time	63%	18%	50%	67%	80%
Orientation	89%	20%	80%	100%	100%
Cultural Safety	77%	18%	73%	82%	90%
Relevance	72%	29%	50%	80%	100%

OBSERVATIONS

- With the exception of the categories Equitable access and Effectiveness, the majority of respondents appeared satisfied (the expectations of over 75% of the respondents, in fact, were met by over 80%).

- The variable "I feel that I am in good health" had an important statistical impact on all of the results.

- Users who felt as though they were "in good health" had higher scores than the ones who did not:
The vast majority of respondents were beneficiaries; as such, the results obtained are representative of the Inuit population, with little variation observed between the overall results and the results attributed solely to beneficiaries.

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6   This result can be interpreted as meaning that on average, 88% of the elements associated with the *Communication* category were perceived as meeting the expectations of users.

THE 25TH PERCENTILE (PER CATEGORY)

The graph below illustrates the score applicable to the 25th percentile (for each category). This indicator attests to the minimum score obtained for the majority of respondents (75% of them). It also allows us to assess whether most respondents did in fact have a good experience. As an indicator, it is less variable and stronger than the average or the median.

Figure 1. Scores (per category) for 75% of respondents (25th percentile.)
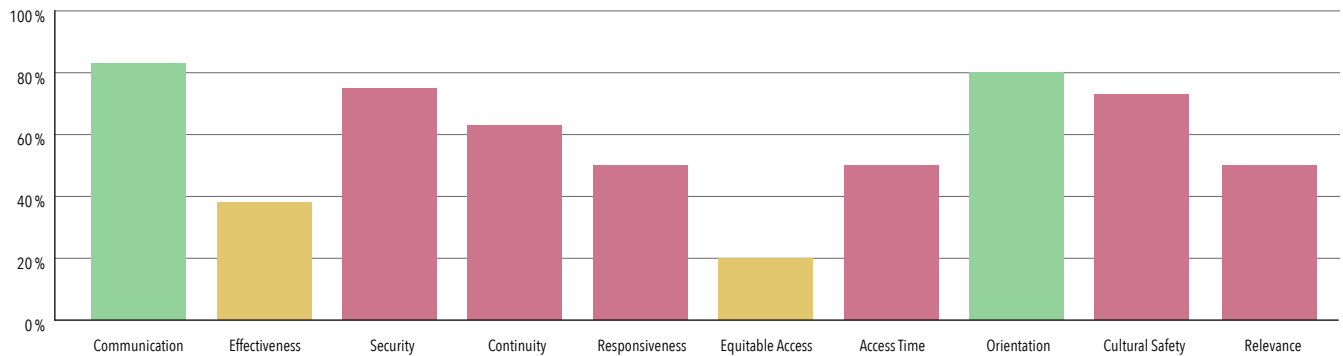
It was also noted that the expectations of patients for the categories Communication and Orientation were met by a percentage of nearly 80%. While these results may be quite surprising to most of the people working in Nunavik, a closer look at the responses to individual questions will make it possible to identify those areas with room for improvement. For example, as regards the Communication and Cultural safety categories, around 87% of the respondents felt safe, well-informed and able to understand the explanations received. However, about 11% of the people did not feel safe, nor did they properly understand what was explained to them; others in this latter group professed to have received no explanations whatsoever regarding their health condition. From an organizational perspective, this latter group comprises the persons for whom we will need to improve our performance.

That being said, it is also key that we put this graph into perspective, particularly vis-à-vis the objectives that we as an organization are striving to achieve. In this particular case, Effectiveness and Equitable access are the two categories with the most dismal results. A mere 18% of Nunavimmiut believe that they have access to the same healthcare services as elsewhere in Québec, and only 36% feel that they have an access similar to that enjoyed by the residents of Nunavik's other communities.

DETAILS REGARDING THE SCORES

The following three tables make it possible for us to better understand the average results by community and age group, and by whether or not respondents are beneficiaries.

Figure 2. Details regarding the average scores by community[7].

THEMES	AKULIVIK	AUPALUK	INUKJUAK	IVUJIVIK	KANGIQSUALUJJUAQ	KANGIQSUJUAQ	KANGIRSUK	KUUJJUAQ	KUUJJUARAAPIK	PUVIRNITUQ	QUAQTAQ	SALLUIT	TASIUJAQ	UMIUJAQ	GRAND TOTAL
N of respondents	14	6	75	17	12	12	32	108	32	29	19	41	15	20	432
Communication	98,8%	93,1%	89,0%	89,0%	94,4%	88,3%	89,6%	84,8%	86,7%	90,8%	86,4%	92,6%	72,7%	86,2%	88,0%
Access Time	71,1%	47,2%	64,1%	64,2%	60,6%	61,1%	64,0%	60,2%	63,0%	68,6%	70,7%	65,5%	66,7%	56,3%	63,3%
Equitable access	61,3%	30,0%	45,9%	41,7%	19,9%	42,4%	32,2%	38,4%	35,8%	68,0%	47,6%	50,2%	33,0%	35,4%	42,6%
Security	88,5%	70,9%	83,2%	81,4%	82,3%	81,1%	81,2%	78,7%	80,0%	87,6%	84,2%	87,2%	75,1%	78,3%	81,8%
Orientation	94,6%	85,0%	88,9%	89,1%	90,4%	82,5%	89,2%	88,0%	88,8%	94,0%	94,7%	93,9%	90,7%	88,5%	89,8%
Continuity	81,3%	62,5%	71,8%	68,3%	70,2%	70,1%	71,7%	72,3%	70,6%	76,4%	75,1%	75,7%	70,0%	73,1%	72,6%
Responsiveness	82,7%	46,7%	64,8%	80,6%	51,1%	58,5%	70,6%	58,5%	66,5%	75,8%	71,4%	69,5%	70,7%	57,2%	65,5%
Effectiveness	69,7%	32,4%	54,9%	51,9%	45,7%	50,0%	52,3%	52,3%	49,3%	64,6%	58,8%	58,7%	54,3%	50,6%	54,3%
Cultural Safety	88,4%	70,4%	78,0%	78,5%	78,0%	74,5%	78,7%	74,5%	75,1%	83,5%	78,6%	81,3%	69,6%	72,3%	77,3%
Relevance	86,4%	46,7%	70,5%	66,8%	65,0%	72,5%	70,1%	72,4%	63,9%	79,7%	70,5%	78,5%	61,0%	70,0%	71,4%

A look at the average results by community shows that the place of residence has a negligible impact on the respondents' perception of the healthcare system. Whether respondents live in a large community such as Kuujjuaq, which has a hospital, or a small village with limited services such as Tasiujaq, the averages for the different categories are quite similar. This table also makes it possible to quickly spot any local or regional factors. For example, we can see that access time is more of a thorny issue in Aupaluk and Umiujaq than elsewhere in Nunavik; this is a good indicator that we should look at this more closely.

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7   Colour codes are used to make it easier to quickly understand the results (Green: > 80%; Orange: 60% - 80%; Red: < 60%). This graph is also appended to this document in a more visually accessible format.

DETAILS REGARDING THE SCORES

Figure 3. Details regarding the average scores by age group.

THEMES	14-18	19-34	35-54	55 +	GRAND TOTAL
N of respondents	18	171	174	69	432
Communication	94,1%	86,8%	87,6%	90,4%	88,0%
Access Time	58,7%	61,4%	63,5%	68,9%	63,3%
Equitable Access	48,2%	34,2%	43,2%	60,7%	42,6%
Security	80,6%	79,5%	82,6%	85,7%	81,8%
Orientation	88,9%	88,6%	90,2%	91,9%	89,8%
Continuity	76,6%	72,0%	72,6%	73,3%	72,6%
Responsiveness	77,5%	61,8%	65,4%	71,6%	65,5%
Effectiveness	55,5%	51,8%	53,6%	61,8%	54,3%
Cultural Safety	77,9%	75,4%	78,1%	79,8%	77,3%
Relevance	75,8%	69,8%	70,8%	75,7%	71,4%

The average results by age group also make it possible to observe that this variable has a very limited impact on users' perceptions with regard to the various categories. Taking a closer look at the details, however, reveals interesting information. For example, we can see that respondents aged 55 and over appear more satisfied with regard to the Equitable access category. Could this be due to a better dissemination of information on programs and services? Or might it be because the programs and services targeting them directly are more accessible throughout Nunavik? The more comprehensive analysis of services which will be conducted as part of the Nunavik Regional Clinical Plan should shed more light in this regard.

Figure 4. Details regarding the average scores by beneficiaries of the James Bay and Northern Québec Agreement.

THEMES	NON	OUI	GRAND TOTAL
N of respondents	66	366	432
Communication	92,1%	87,2%	88,0%
Access Time	62,2%	63,5%	63,3%
Equitable Access	49,2%	41,4%	42,6%
Security	83,5%	81,4%	81,8%
Orientation	91,3%	89,5%	89,8%
Continuity	75,7%	72,1%	72,6%
Responsiveness	63,8%	65,8%	65,5%
Effectiveness	59,3%	53,3%	54,3%
Cultural Safety	81,8%	76,5%	77,3%
Relevance	78,9%	70,1%	71,4%

The average results for beneficiaries (or those who are not beneficiaries) illustrate how this particular variable has little impact on the perception of users.

STATISTICAL DISTRIBUTION OF RESPONDENTS

This section provides further details, for each of the categories, on the category definition, the distribution of respondents, a statistical summary of this distribution, as well as the analyses carried out and observations made.

COMMUNICATION

Definition: Do communications within the health system enable patients to understand what is happening to them, what will happen moving forward, the options that were or are available to them? Can they make enlightened decisions?

Figure 5. Distribution and statistics: Communication.
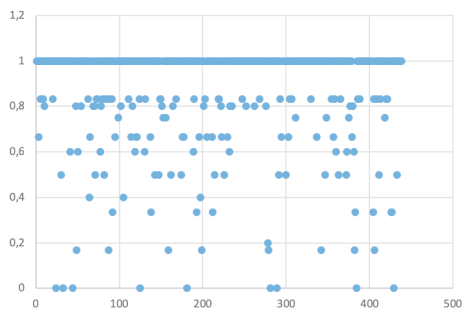
Mean: 88%
Stand. dev.: 23%

1st Quartile: 83%
Median: 100%
3rd Quartile: 100%

EFFECTIVENESS

Definition: Do users find the services effective? Or do they find them ineffective and even perhaps nearly non-existent?

Figure 6. Distribution and statistics: Effectiveness
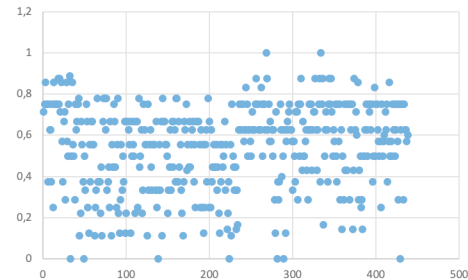
Mean: 54%
Stand. dev.: 21%

1st Quartile: 38%
Median: 57%
3rd Quartile: 71%

OBSERVATIONS

- One of the categories for which expectations are most often met (88%).

- 75% of respondents had a score of 83% or more.

OBSERVATIONS

- One of the categories for which expectations are the least often met.

- Statistically inferior results in terms of psychological and psychosocial problems.

- Impact due to the community: Akulivik (70%) is more touched (higher) than the others.

SECURITY

Definition: From the users' perspective, does seeking out help put them at risk?
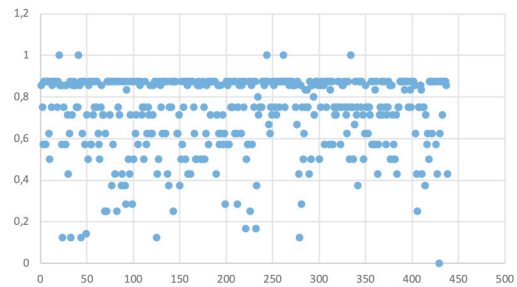
Figure 7 Distribution and statistics: Security
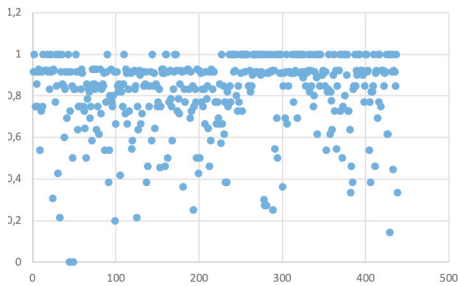
Mean: 82%
Stand. dev.: 18%

1st Quartile: 75%
Median: 86%
3rd Quartile: 92%

Slight impact depending on where (which coast) respondents live: Hudson (84%) Ungava (79%).

CONTINUITY

Definition: Is the flow of services simple?

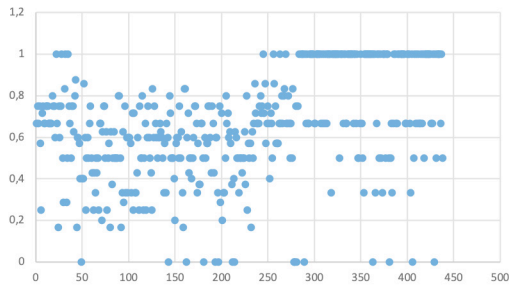Figure 8 Distribution and statistics: Continuity

Mean: 72%
Stand. dev.: 19%

1st Quartile: 63%
Median: 75%
3rd Quartile: 88%

RESPONSIVENESS

Definition: Once they have accessed the health network, do service providers easily adapt to service delivery in Nunavik?

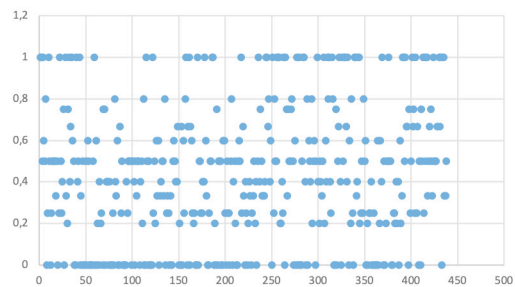Figure 9. Distribution and statistics: Responsiveness.

Mean: 65%
Stand. dev.: 26%

1st Quartile: 50%
Median: 67%
3rd Quartile: 86%

Slight impact depending on where (which coast) respondents live: Hudson (69%) Ungava (62%).

EQUITABLE ACCESS

Definition: Do users feel that the access enjoyed by their community members is equal to that in other communities and elsewhere in Québec?

Figure 10. Distribution and statistics: Equitable access.

Mean: 43%
Stand. dev.: 33%

1st Quartile: 20%
Median: 40%
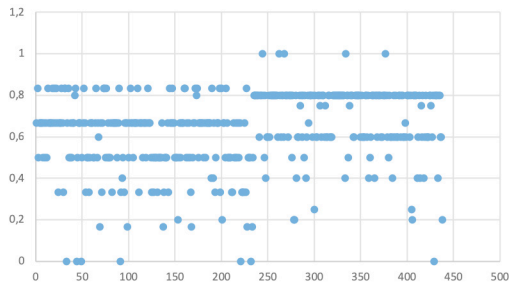3rd Quartile: 60%

OBSERVATIONS

- One of the categories with the lowest rate in terms of meeting expectations.

- Impact of age:
  "19-34" - 35%
  "55+" - 61%.

- Impact depending on where (which coast) respondents live: Hudson (48%) Ungava (37%).

ACCESS TIME

Definition: Do they consider the waiting time for access to services reasonable?
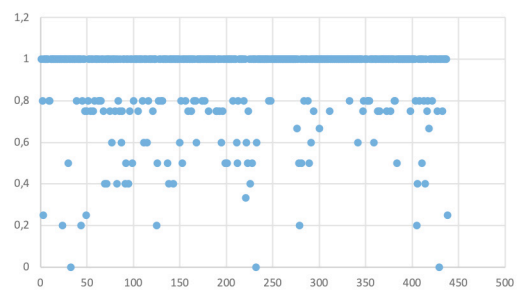
Figure 11. Distribution and statistics: Access time.

Mean: 63%
Stand. dev.: 18%

1st Quartile: 50%
Median: 67%
3rd Quartile: 80%

ORIENTATION

Definition: Do they know where to go and who to contact to obtain assistance?
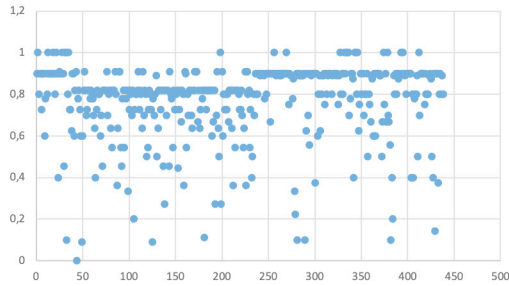
Figure 12. Distribution and statistics: Orientation.

Mean: 89%
Stand. dev.: 20%

1st Quartile: 80%
Median: 100%
3rd Quartile: 100%

CULTURAL SAFETY

Definition: Do patients trust that service providers are making every effort to ensure their cultural safety?

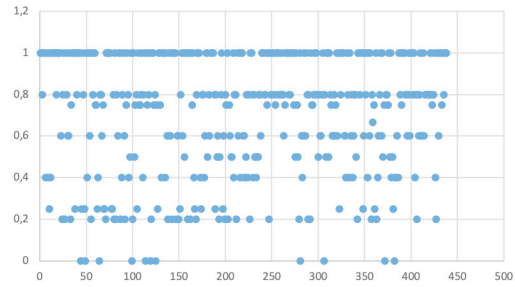Figure 13. Distribution and statistics: Cultural safety.

Mean: 77%
Stand. dev.: 18%

1st Quartile: 73%
Median: 82%
3rd Quartile: 90%

Impact due to beneficiary (or not): Yes (74%) No (83%).

RELEVANCE

Definition: Do the services provided improve the health condition of patients?

Figure 14. Distribution and statistics: Relevance.

Mean: 72%
Stand. dev.: 29%

1st Quartile: 50%
Median: 80%
3rd Quartile: 100%

INTERACTIONS

This section considers the possible interactions between the categories (in light of the data gathered). This being said, it was previously revealed that some categories are inevitably linked by virtue of the questionnaire's structure. Caution must be used when interpreting these relationships (depicted in yellow in the table below).

The following table presents the correlation coefficients. The closer a digit is to 1, the stronger the links between categories. A correlation of 0, however, indicates that there is no correlation between the categories. A colour scale, with hues ranging from white (weak correlation, i.e., close to 0) to dark green (strong correlation, i.e., close to 1) is used to facilitate understanding. Orange is used to designate the relationships due in large part to the questionnaire's structure and which should therefore not be taken into account.

Table 4. Correlation coefficients between the categories

	COMMUNICATION	EFFECTIVENESS	RESPONSIVENESS	CONTINUITY	ORIENTATION	SECURITY	EQUITABLE ACCESS	ACCESS TIME	CULTURAL SAFETY	RELEVANCE
Communication	1,00	0,29	0,30	0,46	0,43	0,64	0,08	0,19	0,80	0,36
Effectiveness	0,29	1,00	0,28	0,48	0,28	0,50	0,20	0,53	0,48	0,60
Responsiveness	0,30	0,28	1,00	0,25	0,24	0,41	0,20	0,25	0,40	0,17
Continuity	0,46	0,48	0,25	1,00	0,67	0,53	0,07	0,39	0,47	0,61
Orientation	0,43	0,28	0,24	0,67	1,00	0,52	0,06	0,51	0,45	0,19
Security	0,64	0,50	0,41	0,53	0,52	1,00	0,16	0,49	0,82	0,48
Equitable Access	0,08	0,20	0,20	0,07	0,06	0,16	1,00	0,14	0,12	0,09
Access Time	0,19	0,53	0,25	0,39	0,51	0,49	0,14	1,00	0,38	0,15
Cultural Security	0,80	0,48	0,40	0,47	0,45	0,82	0,12	0,38	1,00	0,40
Relevance	0,36	0,60	0,17	0,61	0,19	0,48	0,09	0,15	0,40	1,00

We note that most of the categories are moderately related; the one exception is *Equitable access*, which is pretty much unrelated to any of the other categories.

CONCLUSION

This user survey, which is the first phase of the research project detailed in the Nunavik Regional Clinical Plan, made it possible to gather data on the experience of patients, and more specifically, their perception of service accessibility and quality in Nunavik at this time.

The high participation rate, statistically speaking, makes it possible to appropriately interpret the results. The data revealed herewith made it possible to identify the categories or areas that are or are not in line with the organization's standards and the expectations of users. These data will at a later point be considered alongside the results of semi-directed interviews and of focus groups, as planned for the next two phases of the research project.

Overall, the user experience increasingly meets expectations in the Communication and Orientation categories, and is less likely to meet expectations in the Effectiveness and Equitable access categories.