

Patient Experience on International Safety Goals Using Adapted Net Promoter Score - NPS-S

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Abstract

Objective: Assessing patients' perception of safety issues in health institutions is a challenge. The use of simple tools to quantify this perception would bring important benefits to the healthcare sector. Our aim is to describe the use of a traditional market tool for the evaluation of customer experience and satisfaction, the Net Promoter Score (NPS), to assess patients' perception of the practice of international safety goals in health institutions. **Methods:** Through a mobile application, we present to patients the basic concepts of the 6 international patient safety goals of the World Health Organization and at the end of each instruction, we request their evaluation, using the NPS tool with questions adapted to the patient safety scenario. We call this adapted NPS of Net Promoter Safety Score, NPS-S.

Results: During a 6 months period, 352 users download the app in more than 94 different healthcare services in Brazil and made 1719 evaluations about their safety experience, with the average NPS-S of 45%, that means a score in the improvement zone.

Conclusions: patient engagement is essential for the reduction of adverse events. In this study, the Net Promoter Safety Score adapted to patient safety issues, the NPS-S, was easy to understand by users and may be a very useful tool to translate patient perceptions into manageable data, helping health institutions to develop the culture of safety.

Keywords: Net Promoter Score; Patient safety; Patient Experience; Patient Assessment; Patient Engagement

Introduction

Medical errors are still one of the major challenges to be overcome by the health sector. According to data from the Patient Safety Movement Foundation, more than 200,000 patients die each year in American hospitals from adverse events [1]. The Center for Disease Control and Prevention (CDC) points out adverse events as the third cause of death in American hospitals, right behind the deaths from cardiac causes and cancer [2]. In Brazil, the situation is similar. According to the II Anuário da Segurança Assistencial Hospitalar, hospital mortality associated with adverse events was more than 235,000 deaths in 2017 [3].

Many initiatives were developed to mitigate this situation. Intensive training of healthcare teams, the use of technologies, and the development of the culture of safety for healthcare institutions are the tools that have enabled us to considerably improve the results in recent years [4].

Patient engagement is a strategy that always appears in the list of recommendations from experts that works for the development of patient safety, but the effective participation of patients and family members in their self-care is still quite limited and sometimes not promoted in healthcare institutions [5]. Among the various reasons for that, we mention the lack of practical tools that allow

the measurement of the users' experience of the health system in relation to international patient safety goals.

Net Promoter Score is a widely known tool in the market and was introduced by Heicheld in 2003 in order to measure the degree of customer loyalty with companies from all sectors, bringing reflections of their experience and satisfaction [6]. As this tool is easily understood by users and is already widely used in the health-care market to assess patient satisfaction with non-clinical aspects, we considered the possibility of adapting it to assess the patient's safety experience.

Our aim is to describe the use of a traditional market tool for the evaluation of customer experience and satisfaction, the Net Promoter Score, to assess patients' perception of the practice of international safety goals in health institutions.

Methods

Through a free mobile application, SAFETY4ME[®], available for IOS and Android platforms, we introduce to users the 6 international patient safety goals in a colloquial language, allowing easy understanding of the subject for the average person. The app uses gamification techniques within the storytelling in order to strengthen patient engagement during its use. Users check in, identifying the institution in which they are receiving treatment and access a trail where they receive information pertinent to international patient safety protocols.

At the end of each trail users are invited to report their experience with regard to the storytelling presented and to evaluate whether, during their treatment at that health institution, the patient safety recommendations presented were effectively applied.

To access user perception, we used the Net Promoter Score (NPS) tool adapted to issues related to patient safety. Net Promoter Score (NPS) is a tool that aims to measure the degree of loyalty of the customers of companies of any segment, bringing reflections of their experience and satisfaction. It was conceived in 2003 by Fred Heinchheld in his article The One Number You Need [6].

Through an analog-visual scale, users playfully expresses their perception of the issue on screen.

To track healthcare costumer perceptions of the patient safety protocols, we made a modification on the NPS questions, adjusting for patient safety inquiries.

Figure 1

Example: Based on fall prevention instructions, would you recommend this healthcare provider to someone who needs care?.

We call this adaptation the Net Promoter Score of Patient Safety, or simply NPS-S.

Based upon user response, we calculated the NPS-S using the following formula:

$$\text{NPS-S} = \% \text{ Promoters} - \% \text{ Detractors}$$

The results obtained could range between -100% to 100% and this percentage represents different zones according to this graphic.

Figure 2

During the first half of 2020, we released the app on social media in Brazil and started collecting data sent by users in a Microsoft business intelligence system – Power BI[®]. This information was consolidated by institution, region of Brazil and international safety goal.

Results

From February to July 2020, we promoted the SAFETY4ME app[®] on social networks in order to boost its use by users of the health system while receiving care or after their treatment. In this period of 6 months, 352 organic downloads were made in several cities of Brazil, as illustrated in the map below.

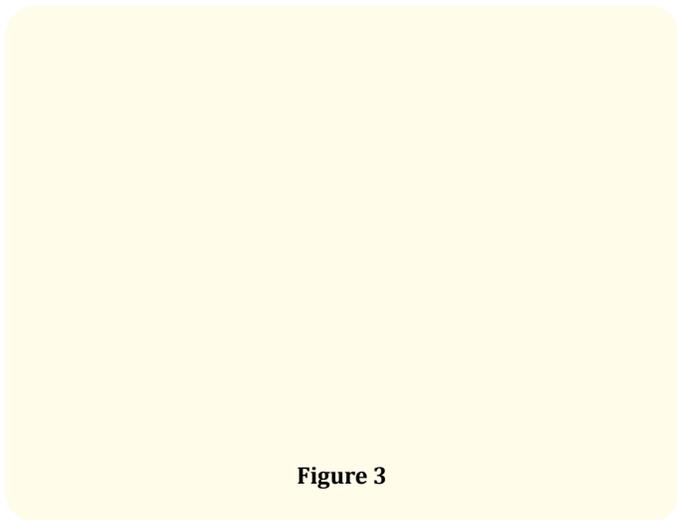


Figure 3

Because of the General Data Protection Law, the application did not ask user’s identification, contact or any other sensitive data. During the application check-in process, users only informed on which institution they were receiving treatment and their perceptions about the execution of safety goals in this institution.

These 352 downloads generated 1719 evaluations from 94 health institutions in Brazil, mostly hospitals (73.4%).

n of downloads	352
n of evaluations	1719
n of institutions	94 (100%)
Hospitals	69 (73.4%)
Clinics	25 (26.6%)

Table 1: Sample.

The overall evaluation obtained through the consolidation of all user evaluations of the health system indicated an NPS-S of 45% in the improvement zone.

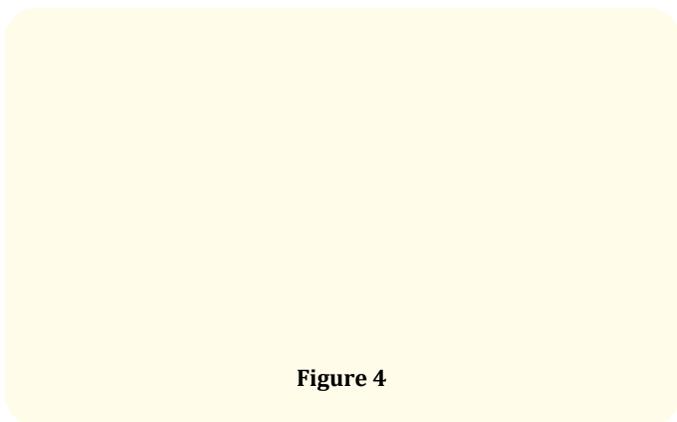


Figure 4

Those evaluations can be separated by the 6 international patients safety goals. Below you can find users perception regarding each protocol.

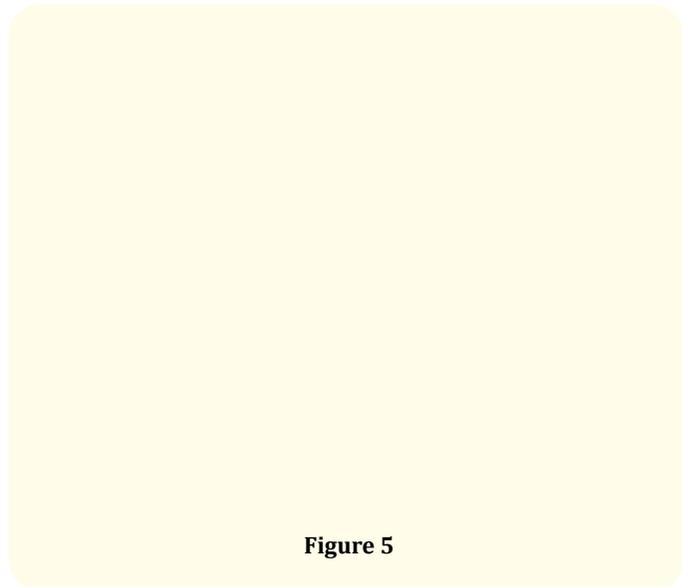


Figure 5

1. Abertta Contagem
2. Alice Fischer Cirurgiã Plástica e Cranio-maxilo-facial - RS
3. ARS CVRANDI - SP
4. CAI - Centro de Atendimento Integrado - RS
5. CAPSi- GHC Centro de Atenção Psicossocial à Infância e à Adolescência - RS
6. Centro de Saúde São Francisco - MG
7. Centro Diagnóstico Cardiológico - Unimed Birigui - SP
8. Centro Médico Brooklin - SP
9. Centro Médico Osasco - SP
10. Clínica Aura Odontologia e Saúde - RS
11. Clínica Boghos Unidade Sul - CE
12. Clinoson - RS
13. COR-Centro de Oncologia e Radioterapia - RS
14. HCOR
15. Hospital Aliança
16. Hospital Ana Costa
17. Hospital Antônio Targino
18. Hospital Banco de Olhos
19. Hospital Beneficente Nossa Senhora de Fátima
20. Hospital Cardio Pulmonar
21. Hospital da Bahia
22. Hospital de Caridade e Beneficência de Cachoeira do Sul

23. Hospital de Clínicas Caieiras	63. Hospital São Paulo - PI
24. Hospital de Clínicas de Passo Fundo	64. Hospital São Paulo - SP
25. Hospital de Clínicas de Porto Alegre	65. Hospital São Sebastião Mártir
26. Hospital de Pronto Socorro	66. Hospital Tacchini
27. Hospital Delphina Rinaldi Abdel Aziz	67. Hospital Unimed Araxá
28. Hospital Dia e Pronto Atendimento Unimed Vale do Sinos	68. Hospital Unimed BH
29. Hospital Dilson Godinho	69. Hospital Unimed Erechim
30. Hospital Divina Providência	70. Hospital Unimed Governador Valadares
31. Hospital Dona Balbina	71. Hospital Unimed Juiz de Fora
32. Hospital Ernesto Dornelles	72. Hospital Unimed Nordeste - RS
33. Hospital Estadual Vila Alpina	73. Hospital Unimed Noroeste/RS
34. Hospital Estrela	74. Hospital Unimed Pelotas
35. Hospital Evangélico Goiano	75. Hospital Unimed Petrópolis
36. Hospital Evangélico Sorocaba	76. Hospital Unimed Poços de Caldas
37. Hospital Fêmina	77. Hospital Unimed Vale do Caí
38. Hospital Florianópolis	78. Hospital Universitário Ciências Médicas
39. Hospital Geral de Novo Hamburgo	79. Hospital Vitor Lang Caçapava do Sul
40. Hospital Geral de Parauapebas HGP Manoel Eivaldo Benevides Alves	80. HUCAM - Hospital Universitário Cassiano Antônio de Moraes (Hospital das Clínicas)
41. Hospital Governador Celso Ramos	81. INCOR - Instituto do Coração de Caldas Novas / Hospital e Maternidade Nossa Senhora Aparecida
42. Hospital Humanitas Unimed	82. IOVALE - Instituto de Olhos do Vale - SP
43. Hospital Madre Teresa	83. IVI SALVADOR MEDICINA REPRODUTIVA S/A - BA
44. Hospital Mãe de Deus	84. Núcleo Unifácil - Porto Alegre - RS
45. Hospital Maria Auxiliadora	85. Posto de Saúde Marina - RS
46. Hospital Moinhos de Vento	86. Pronto Atendimento Unimed Porto Alegre - Canoas - RS
47. Hospital Monte Sinai	87. Psiconeuro - PB
48. Hospital Municipal Nossa Senhora da Conceição	88. Rejomal - Caruarú
49. Hospital Nossa Senhora da Conceição	89. Santa Casa de Misericórdia de Juiz de Fora
50. Hospital Nossa Senhora da Oliveira (HNSO)	90. Sobam
51. Hospital Novo Atibaia	91. Suksteris - Núcleo de Medicina - RS
52. Hospital Prontomed	92. UMC Uberlândia Medical Center - MG
53. Hospital Regina	93. Unimed São José do Rio Preto - Espaço Viver Bem - SP
54. Hospital Regional Santa Lúcia	94. UPA STM - PA
55. Hospital Samaritano SP	
56. Hospital Santa Paula	
57. Hospital São Bernardo	
58. Hospital São Camilo - Unidade Ipiranga	
59. Hospital São João Evangelistas Unidade 2	
60. Hospital São José	
61. Hospital São Lucas Copacabana	
62. Hospital São Lucas da PUCRS	

Table 2: List of Evaluated Institutions.

Discussion

True patient engagement in their care remains a great challenge, but at the same time presents an excellent opportunity to change this scenario. One of the difficulties for patient engagement is the absence of a tool that translates in a simple and objective way the user’s perception of the health system regarding patient safety [7].

According to the Salzburg Statement on Moving Measurement into Action: Global Principles for Measuring Patient Safety: “Despite the innovative approaches to patient safety measurement being developed, tested and used, health care still lacks universally accepted, standard methods for measuring, understanding and improving the safety of patients. Poorly devised or utilized measures currently accessible to the field carry the potential for unintended negative consequences, including overburdening those who collect and analyze metrics or overspending resources on areas with less opportunity for impact” [7].

The Net Promoter Score (NPS) has been used by various industries because it is user-friendly [8]. The theoretical basis of its use is that the tool demonstrates the degree of customer loyalty in relation to the service/company in question. The NPS has been also used by hospitals and health insurance companies, but with a focus on hospitality, hygiene and punctuality [9].

Precisely because it is an easy tool to implement and understand by its user, we believe that its adaptation to evaluate patient safety aspects would be of great value to the entire sector. In addition to expanding its current use in the health market, it would come to contemplate patient safety aspects that remains open. Moreover, as the Salzburg Statement proposes, it would give patients a voice, quantifying their perceptions of safety in manageable numbers.

The option to make these assessments available in a mobile application, brings the possibility of the user receive instructions on patient safety before evaluating the service on screen. In addition, to compiling these assessments in real time dashboard, allows the healthcare managers to use it in their daily routine.

In our study, the users did not receive any instructions how to use the application and how to evaluate the institutions. They were invited to download the app and start to use it. As you can see, during a six months period, 352 downloads were made in 94 different institutions in Brazil, generating 1719 evaluations. As a result, you can find an overall NPS-S of 45% and all the safety goals, except goal 1 – patient identification, with similar results on the improvement zone. Our understanding is that we have a big opportunity to improve our processes and deliver a better experience for our patients if the institutions start to use the NPS-S to evaluate their safety protocols.

Conclusion

In this initial experience, the use of the NPS tool adjusted for patient safety aspects, NPS-S, seems to be easy to understand by

users and translated their perception of patient safety in manageable scores. More detailed studies are recommended, but we believe that the expansion of the use of NPS-S is promising and can help health institutions to engage patients.

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