

French Translation of the 2022 Version of the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) Statement

Jason Robert Guertin, Élodie Bénard, Marie-Claude Aubin, Vakaramoko (Karam) Diaby, Alice Dragomir, Eric Latimer, Jean-Éric Tarride, Don Husereau

Abstract

Introduction: The Consolidated Health Economic Evaluation Reporting Standards (CHEERS) Statement provides official reporting guidelines for the field of health economic evaluation. Revised in 2022, no French translation of these guidelines is currently available. Our goal was to produce this translation.

Methods: A team of 7 bilingual experts in the field of health economic evaluation and pharmacoeconomics was formed to take part in the translation process. A forward and backward French translation approach was used, to which we added a step to evaluate the “comparability of language” and the “similarity of interpretability” of the translated items compared to their original English version. Once a draft was produced by consensus, we submitted it for comments to an anonymous panel of external experts, which helped produce the final version.

Results: Following the approach we established, all 28 items included in the 2022 version of the CHEERS Statement were translated and approved by consensus by the experts participating in the process. The subsequent qualitative assessment made by the anonymous panel of experts identified certain modifications to be made to 4 of the items; these were then validated by the 7 experts.

Conclusion: We produced a French translation of the 28 items included in the 2022 version of the CHEERS Statement. This translation will help improve the transparency of health economic evaluations conducted in French-speaking countries.

For author information, refer to "Appendix 1: Author Information" on page [8](#).

Introduction

The body of literature in scientific research is constantly growing. The value of this literature depends on the quality of the information it contains. However, the quality of manuscripts can vary substantially, and the value of some manuscripts may be limited due to sparse information provided by authors. In order to improve the transparency of scientific publications, several groups have produced reporting guidelines (e.g., CONSORT,¹ PRISMA,² STROBE,³ and RECORD-PE⁴). Several scientific journals have adopted these guidelines and recommend them to authors who submit manuscripts to them.

In the context of health economic evaluation, the 2013 version of the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) Statement is generally recognized as providing the official reporting guidelines in the field.⁵ However, in January 2020, an international working group supported by the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) was established to update the CHEERS Statement. After several steps, including using a modified Delphi process to evaluate the wording of the 21 items that were initially included and to propose new items, a revised version was produced in English: the 2022 version of the CHEERS (CHEERS 2022) Statement, which now contains 28 items.⁶

While the publication of this update will certainly be beneficial, only an English version was originally produced, which presents limitations for the use of these guidelines in regions where English is not the official language. One solution to this problem is to translate these reporting guidelines into other languages. Until now, no French translation of the CHEERS Statement had been produced. Therefore, our aim was to translate the most recent version into French.

Methods

The translation of the reporting guidelines followed a forward and backward translation process, an approach frequently used when translating patient-reported data collection tools.⁷ This approach is recommended by ISPOR⁸ when translating documents, and was also used by another group for the Spanish translation of the CHEERS 2022 Statement.⁹

We identified a diverse group of bilingual (French and English) experts in health economic evaluation and pharmacoeconomics to undertake the translation of the CHEERS 2022 Statement. These experts were separated into 4 groups. Two experts (JET and VD) separately translated the 28 items from English into French. Once complete, a third expert (JRG) identified the discrepancies between the 2 drafts and then created a standardized French version of the items. The latter was separately translated back into English by 2 other experts (AD and EL). When these experts had completed the English translations, the discrepancies between their 2 versions were reassessed by JRG, who created a standardized English version of the translations. Finally, the standardized version of the English translations was compared to the original CHEERS 2022 items by 2 other experts (MCA and DH). These experts evaluated the “comparability of language” and the “similarity of interpretability” of the original items compared to the standardized version



of the English translation, using a scale from 1 (extremely comparable) to 7 (not at all comparable). Any item for which the average score of the 2 evaluators on 1 or the other criteria was greater than 3.00 was discussed between the 7 experts involved in the translation of the tool.

Following consensus by the team of experts on the French translation of the CHEERS 2022 items, the translation was opened for comment to an international French-speaking community via an online survey hosted on the servers of the REDCap platform of the Centre de recherche du CHU de Québec-Université Laval. The survey was initially sent to a list of 35 French-speaking individuals, including professionals with expertise in health economic evaluation and pharmacoeconomics; these individuals were identified via the authors' professional networks, in addition to a list drawn up by the Unité de soutien SRAP du Québec.¹⁰ After completing the survey, respondents were asked to suggest other potential respondents (i.e., snowball sampling). During this process, the original English version and the French translation were submitted for comments. Respondents were asked to comment on the items' "quality of translation" on a scale from 1 (very appropriate) to 7 (not at all appropriate). They were also invited to suggest modifications to the French translation of the items, if necessary. Any item for which the average score was greater than 3.00 was re-examined by the experts involved in the original translation, for discussion and potential revision.

This survey was approved by the Comité d'éthique de la recherche du CHU de Québec-Université Laval (authorization number 2022-6227).

Results

After the creation of a preliminary version of the French translation of the CHEERS 2022 Statement by our 7 experts, this version was submitted for comment to a group of 35 experts in health economic evaluation and pharmacoeconomics on June 28, 2022. Of the 35 people invited to comment on our translation, 9 agreed to participate (26% participation rate). All respondents rated the quality of the translation of the 28 items and judged that the French translation of 7 items (items 3, 4, 5, 9, 15, 16, and 22) was potentially problematic (the average scores of these items ranged from 3.00 to 3.63).

The 7 experts who participated in the translation of the CHEERS 2022 Statement revised these 7 items based on the comments received and, by consensus, decided to modify the translation of 4 items (items 3, 4, 15, and 22). None of the other translations were changed at this stage. [Table 1](#) presents the final version of the French translation of the CHEERS 2022 Statement, as accepted by our 7 experts.

Table 1: French Translation of the Items Included in the CHEERS 2022 Statement

Section / Sujet	Item	Guide pour l'élaboration des rapports	Rapporté dans la section
Titre			
Titre	1	Identifier l'étude comme une évaluation économique et préciser les interventions comparées	
Résumé			
Résumé	2	Fournir un résumé structuré qui met en évidence le contexte, les méthodes clés, les résultats et les analyses alternatives	
Introduction			
Contexte et objectifs	3	Donner le contexte de l'étude, la question de l'étude et sa pertinence pratique pour la prise de décision sur les politiques de santé ou la pratique	
Méthodes			
Plan d'analyse médicoéconomique	4	Indiquer si un plan d'analyse médicoéconomique a été élaboré et où il est disponible	
Population à l'étude	5	Décrire les caractéristiques de la population à l'étude (telles que la tranche d'âge, les données démographiques, socioéconomiques ou cliniques)	
Cadre et lieu	6	Fournir des informations contextuelles pertinentes qui peuvent influencer les résultats	
Comparateurs	7	Décrire les interventions ou les stratégies comparées et pourquoi elles ont été choisies	
Perspectives	8	Indiquer la ou les perspectives adoptées par l'étude et pourquoi elles ont été choisies	
Horizon temporel	9	Indiquer l'horizon temporel de l'étude et pourquoi il est approprié	
Taux d'actualisation	10	Rapporter le ou les taux d'actualisation et justifier ces choix	
Sélection des résultats	11	Décrire quels résultats ont été utilisés comme mesures des bénéfices et des inconvénients	
Mesure des résultats	12	Décrire comment les résultats utilisés pour saisir les bénéfices et inconvénients ont été mesurés	
Évaluation des résultats	13	Décrire la population et les méthodes utilisées pour mesurer et évaluer les résultats	
Mesure et valorisation des ressources et coûts	14	Décrire comment les coûts ont été valorisés	
Devise, date du prix et conversion	15	Indiquer les dates d'estimation des quantités et des coûts unitaires des ressources ainsi que la devise et l'année de conversion	
Justification et description du modèle	16	Si la modélisation est utilisée, décrivez-la en détail et expliquez pourquoi elle est utilisée. Indiquez si le modèle est accessible au public et où il peut être consulté	

Section / Sujet	Item	Guide pour l'élaboration des rapports	Rapporté dans la section
Analyses et hypothèses	17	Décrire toute méthode d'analyse ou de transformation statistique des données, toute méthode d'extrapolation et toute approche pour valider tout modèle utilisé	
Caractérisation de l'hétérogénéité	18	Décrire toute méthode utilisée pour estimer comment les résultats de l'étude varient pour les sous-groupes	
Caractérisation des effets distributifs	19	Décrire comment les impacts sont répartis entre les différents individus ou les ajustements effectués pour refléter les populations prioritaires	
Caractérisation de l'incertitude	20	Décrire les méthodes permettant de caractériser toute source d'incertitude dans l'analyse	
Approche pour assurer la participation des patients et des autres parties prenantes de l'étude	21	Décrire toute approche pour impliquer les patients ou les bénéficiaires de services, le grand public, les communautés ou les parties prenantes (par exemple, les cliniciens ou les payeurs) dans la conception de l'étude	
Résultats			
Paramètres de l'étude	22	Rapporter tous les intrants analytiques (par exemple, les valeurs, les étendues, les références), y compris les hypothèses d'incertitude ou de distribution	
Résumé des résultats principaux	23	Rapporter les valeurs moyennes pour les principales catégories de coûts et de résultats d'intérêt et les résumer dans la mesure globale la plus appropriée	
Effet de l'incertitude	24	Décrire comment l'incertitude des jugements analytiques, des intrants ou des projections affecte les résultats. Rapporter l'effet du choix du taux d'actualisation et de l'horizon temporel, le cas échéant	
Effet de l'engagement avec les patients et les autres personnes concernées par l'étude	25	Rapporter si la participation des patients/bénéficiaires de services, du grand public, de la communauté ou des parties prenantes a influencé l'approche ou les résultats de l'étude	
Discussion			
Résultats de l'étude, limites, généralisabilité et connaissances actuelles	26	Rapporter les principaux résultats, les limites, les considérations éthiques ou d'équité qui n'ont pas été prises en compte, et la manière dont ils pourraient avoir un impact sur les patients, la politique de santé ou la pratique	
Autres informations pertinentes			
Source de financement	27	Décrire comment l'étude a été financée et tout rôle du bailleur de fonds dans l'identification, la conception, la réalisation et le rapport de l'analyse	
Conflits d'intérêts	28	Rapporter les conflits d'intérêts des auteurs conformément aux exigences de la revue ou de l' <i>International Committee of Medical Journal Editors</i>	

Discussion

In this study, we undertook a series of steps aiming to translate into French the items included in the CHEERS 2022 Statement, recently produced by Husereau et al.⁶ Using a forward and backward approach, as recommended by ISPOR and used by other groups,^{8,9} a first version of the translation was produced. Then, a qualitative assessment of our translation was carried out by a group of experts using an anonymous survey, with the aim of improving the final version.

It is important to note that our group recognizes that there may be linguistic differences between French-speaking regions, and therefore it is difficult to create a single document that can be used by all French speakers. For this reason, we have strived to create a group of bilingual experts from various regions (North America, Europe, and Africa), including some ($n = 3$) for whom French is not their first language. To promote translation into international French of the CHEERS 2022 items, we also invited French-speaking experts from various backgrounds to comment on the preliminary version of our translation. Although the participation rate for this qualitative assessment was relatively low, some of the comments received led to changes in our translation, which we believe improved its overall quality.

In conclusion, we offer via this paper a French translation of the checklist items included in the CHEERS 2022 Statement. Given that only the checklist items have been translated, and not their associated descriptions, we recommend that this translation be used in conjunction with the original English publication⁶ in order to make it easier for users to understand the different items.

References

1. Schulz KF, Altman DG, Moher D, Group C. CONSORT 2010 statement: updated guidelines for reporting parallel group randomised trials. *BMJ*. 2010;340:c332. [PubMed](#)
2. Page MJ, McKenzie JE, Bossuyt PM, Boutron I, Hoffmann TC, Mulrow CD, et al. The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *PLoS Med*. 2021;18(3):e1003583. [PubMed](#)
3. von Elm E, Altman DG, Egger M, Pocock SJ, Gotzsche PC, Vandebroucke JP, et al. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. *Ann Intern Med*. 2007;147(8):573-7. [PubMed](#)
4. Langan SM, Schmidt SA, Wing K, Ehrenstein V, Nicholls SG, Filion KB, et al. The reporting of studies conducted using observational routinely collected health data statement for pharmacoepidemiology (RECORD-PE). *BMJ*. 2018;363:k3532. [PubMed](#)
5. Husereau D, Drummond M, Petrou S, Carswell C, Moher D, Greenberg D, et al. Consolidated Health Economic Evaluation Reporting Standards (CHEERS)—explanation and elaboration: a report of the ISPOR Health Economic Evaluation Publication Guidelines Good Reporting Practices Task Force. *Value Health*. 2013;16(2):231-50. [PubMed](#)
6. Husereau D, Drummond M, Augustovski F, de Bekker-Grob E, Briggs AH, Carswell C, et al. Consolidated Health Economic Evaluation Reporting Standards 2022 (CHEERS 2022) Statement: Updated Reporting Guidance for Health Economic Evaluations. *Applied health economics and health policy*. 2022.
7. Maneesriwongul W, Dixon JK. Instrument translation process: a methods review. *Journal of advanced nursing*. 2004;48(2):175-86. [PubMed](#)
8. Wild D, Eremenco S, Mear I, Martin M, Houchin C, Gawlicki M, et al. Multinational trials-recommendations on the translations required, approaches to using the same language in different countries, and the approaches to support pooling the data: the ISPOR Patient-Reported Outcomes Translation and Linguistic Validation Good Research Practices Task Force report. *Value Health*. 2009;12(4):430-40. [PubMed](#)
9. Augustovski F, García Martí S, Espinoza MA, Palacios A, Husereau D, Pichon-Riviere A. Estándares Consolidados de Reporte de Evaluaciones Económicas Sanitarias: adaptación al español de la lista de comprobación CHEERS 2022. *Value in health regional issues*. 2022;27:110-4. [PubMed](#)
10. Cartographie des ressources en économie et évaluation économique en santé. Québec, Québec: Unité de soutien-SRAP du Québec; Août 2018.

Appendix 1: Author Information

Correspondence

Jason Robert Guertin, PhD
Centre de recherche du CHU de Québec-Université Laval
Axe Santé des Populations et Pratiques Optimales en Santé
Hôpital du Saint-Sacrement
1050 chemin Sainte-Foy, local J1-11
Québec, Quebec G1S 4L8
Telephone: (418) 682-7511, extension 82516
jason.guertin@fmed.ulaval.ca

Author Affiliations

Jason Robert Guertin, PhD,^{1,2,3} Élodie Bénard, MSc,^{1,2,3} Marie-Claude Aubin, PhD,⁴ Vakaramoko (Karam) Diaby, PhD,⁵ Alice Dragomir, PhD,⁶ Eric Latimer, PhD,^{7,8} Jean-Éric Tarride, PhD,^{9,10,11} Don Husereau, PharmD, MA¹²

¹Faculté de médecine, Université Laval, Québec, Canada; ²Centre de recherche du CHU de Québec-Université Laval, Québec Canada; ³Centre de Recherche en Organogénèse Expérimentale de l'Université Laval/LOEX, Québec, Canada; ⁴Hoffmann – La Roche, Mississauga, Canada; ⁵Otsuka Pharmaceutical Companies, US; ⁶Faculté de pharmacie, Université de Montréal, Montréal, Canada; ⁷Department of Psychiatry, McGill University, Montréal, Canada; ⁸Douglas Research Centre, McGill University, Montréal, Canada; ⁹Faculty of Health Sciences, McMaster University, Hamilton, Canada; ¹⁰Centre for Health Economics and Policy Analysis (CHEPA), McMaster University, Hamilton, Canada; ¹¹Programs for Assessment of Technologies in Health (PATH), St. Joseph's Healthcare Hamilton, Hamilton, Canada; ¹²Faculty of Medicine, University of Ottawa, Ottawa, Canada.

Acknowledgements

We would like to thank the individuals who agreed to anonymously respond to our survey for their time and their many relevant comments.

This article is subject to copyright and other intellectual property rights and may only be used for non-commercial, personal use, or private research and study. This material is made available for informational purposes only and no representations or warranties are made with respect to its fitness for any particular purpose. This article should not be used as a substitute for professional medical advice or for the application of professional judgment in any decision-making process. Users may use this document at their own risk.

This article – unlike others published in the journal – was submitted by an author group outside CADTH. It was reviewed internally, revised by the corresponding author, and accepted for publication in the journal. Care has been taken to ensure that the information presented is original and has not been submitted elsewhere.