CORE measure translation procedure

Depending on local resources and our time, a good translation can be done in a matter of six months. All translations must be done to these requirements. Some superb translations have been done to these procedures and people who were initially sceptical ("We've done good translations before, it doesn't need all this, just a translation and backtranslation.") have been completely converted to this way of doing translations which is congruent with a rapidly increasing proportion of good guidelines on translation (e.g. Wild *et al.,* 2005).

These requirements have also, sadly, emerged from some bitter experiences where a huge amount of time and good will was lost where either people did not understand the agreement from the start or deviated from it resulting in translations that were demonstrably bad and which had to be scrapped and restarted. It's better to get it right from the beginning than to get to a large scale psychometric exploration or even routine use and only then realise that a word is unclear in a significant minority of the population or that one phrase really only works for people familiar with English or well educated.

1. **Leadership of the translation project and logistics.**
   1.1. There must be one person who is willing to take the lead for the translation process who will liaise with Prof. Evans. That person must be a native speaker of the target language and sufficiently fluent in English to handle the liaison communication and must be able to devote significant time (allow a minimum of four hours a week) to the process and be able to link with Prof. Evans by Email, Skype and telephone weekly to monitor progress on the translation.
   1.2. Ideally that person should be interested in taking forward the process of supporting and encouraging use of the translation where the language is used. Where there may a commercially sustainable prospect of creating software support for use of the translated instruments we recommend discussion with CORE Information Management Systems as translation of their CORE-Net system (see www.coreims.co.uk) may be the best option.
   1.3. That person MUST read this document thoroughly, translate it into the target language (a google translate version can be sufficient to make sure at least that misunderstandings down to translation problems are identified).
   1.4. That person MUST liaise with Prof. Evans and agree a written plan for the particular translation before ANY work starts.
   1.5. A good translation (without psychometric exploration) will require significant input (four hours to a day) from at least 20 people. The biggest challenge is almost always finding unpaid volunteers to help, particularly the crucial lay people and people with limited education and who may not speak the target language as a first language (see field checking below). Psychometric exploration requires far less time but from far more people and is treated separately from the translation.
   1.6. It is ideal if the main work is coordinated by a masters student as their sole empirical dissertation work, or by a doctoral student as part of their doctorate. If psychometric exploration is also to be done, the translation and the exploration make a good complete doctoral project. Translations of the YP-CORE, LD-CORE and CORE-A are optional additions and where this is a masters student project we do not recommend doing more than the CORE-OM. If students are available, doing the CORE-OM, YP-CORE and LD-CORE as three parallel projects is ideal, particularly for Prof. Evans's participation in the focus groups (see below). It can be good to translate other measures in parallel, particularly when no other measures exist in official translations in the target language. Whatever the logistics, sole responsibility must sit with the one project leader.
2. **Independent forward translations**. This is the foundation and heart of a good translation.
   2.1. At least five, preferably more, ideally 8 to 13, fully independent forward translations will be made from the English original by people who speak good English but who have the target language as their first or equal first language. (Where an official translation already exists into a language either close to the target language, or a language spoken much more widely than English in the local setting, some translations may, if agreed, be from official CORE-OM translations but at least five must be from the original English version.) The best translations come from comparison of

differences between forward translations. Where large local lingustic variations exist within the target language, even if there is one "official form", it is best to have representatives speaking at least some of the variants contributing to the forward translations.

2.2. At least one of the independent forward translations must be by mental health professional who speaks and reads English competently.

2.3. At least one of the independent forward translations must by a professionally qualified interpreter or translator specialising in translation from English (and ideally familiar with health and mental health)

2.4. At least two of the independent forward translations must by lay people who speak and read English competently. It is particularly good if these people have first or second hand experience of mental health problems and of therapy.

3. Review of the translations: the "focus group".

3.1. All forward translations MUST be collated someone using a form that can be supplied by Prof. Evans to make comparison of the differences easy.

3.2. When that has been created and reviewed by that coordinator (often a student), the project lead and discussed with Prof. Evans so he has some understanding of the differences emerging, the next step is a "focus group" to review the differences and come up with an agreed penultimate draft translation.

3.3. Someone approved by CORE System Trust who has English as his or her first language and who is extremely familiar with the design of the CORE-OM must participate in this focus. This is usually but not necessarily Prof. Evans. As well as offering a chance for discussion of nuances of English and of the design choices that created the CORE-OM, this participation provides a crucial quality assurance for CST. Any translation process that has not involved a member of the CORE System Trust in this way is not an approvable process and risks wasting time and resulting in a translation that is unusable and a copyright violation.

3.4. Hence the availability of a CST nominee will be vital and may limit timing, equally, getting sufficient people in a room to create a good focus group is a challenge particularly when they are not being paid. Finally, where the project is being done by a student, it is vital to recognise that there will be submission dates forcing the timing of the group. It is vital that the logistics of this focus group are agreed very early in the design of the translation.

3.5. As long as one person in the room can speak English, the others do not need to.

3.6. One person, often the coordinator or the project leader, is a nominated "recorder" or "scribe" charged with typing up the agreed version of each part of the measure. It can be ideal to have that visible on a projection screen so all can easily see the agreed version.

3.7. Often the same person tries to keep notes on the issues that arose though it is probably ideal to have a second person responsible for this.

3.8. One person, ideally the project leader, should act as chairperson and facilitator of the group. There can be quite strong differences of opinion "That's ridiculous, that's an appallingly clumsy way to say that in xxxx" and there can be a problem of the most educated and linguistically skilled people coming to influence choices too powerfully. It is the task of the chairperson to keep reminding everyone that the objective is to get a translation that will work for the overwhelming majority of people who can understand the language, it is no good if it only works for highly educated people.

3.9. The task of the group is to review differences between the forward translations and chooses a preferred version for each part of the measure or (very often the case for at least some parts) comes up with a version that is agreed to be better than any of the ones in the forward translations.

3.10. The measure has a series of parts: the demographic details at the top, the introductory text, the time frame, the response options, the items and the thank-you and scoring text at the bottom. Each part has its own rather different translation challenges: the introduction can have the most free translation, the items need a moderately clear path from the English but need not be literal, the response levels must make sense to most people who will use the measure and be clearly distinct each from the other in frequency, the scoring section is only for practitioners and can be a bit more technical. It's usually best to start with the items from 1 to 34, then look a the other parts, then to review the whole again.

3.11. The group uses the English speaker(s) to ask any questions of the CST nominee. Typically these concern the meaning of the original English, nuances of English usage in the UK, or discussion

of choices between alternatives where it is clear no exact equivalent word or phrase exists in the target language.

3.12. However, as far as possible, the work of the group should be in the target language with he nominee just an appreciative observer.

3.13. At the end of the group all parts of the agreed penultimate version are reviewed to make sure they do work with each other.

4. **Field testing and back-translation**. Whilst the focus group usually creates a very good translation from the forward translations it is vital to do some final checking, the most important is field testing but back-translation occasionally throws up issues in the translation and must be independent of the forward translations and focus group.
   4.1. The penultimate translation from the focus group is given to a few professionals, ideally of different backgrounds to check. They should be asked to check the scoring instructions and information collection in the header of the measure and then to imagine as wide as possible a selection of their clients/patients completing the measure and point out any things they think might cause problems and any changes they think might improve the draft.
   4.2. More crucially, a diverse group of lay people should be asked to read through the measure and imagine completing it themselves or imagine someone they know who has struggled in life completing it (this helps maximise coverage of the population and protects confidentiality). They should be asked about any issues or difficulties they had with the language and asked to "talk aloud" what they think about each part of the measure: what they think it is asking.
   4.3. The composition of this group is crucial. It should include some teenagers and some elderly people, some people with little education and if the country has a substantial minority who use the target language but for whom it is not their firs language, some of them should be asked to participate thinking particularly about what fellow minority members might think. Where a country has major language differences (e.g. north versus south) or ethnic/cultural subgroup differences, every effort should be made to check across these.
   4.4. **Back-translation**. This is probably the area where a bilingual person with real familiarity with both contemporary culture and language in the target language *and in English* is particularly valuable as sometimes back-translations look odd at first and turn out to be odd due to lost or lacking familiarity with English, not a defect in the forward translation. This can occur in parallel with field testing or after any amendments have been made following the field testing.
5. **Agreement on final translation**. This can usually be done in a telephone or skype call between Prof. Evans, the project leader, the CST nominee if that wasn't Prof. Evans, and the local coordinator if that was someone other than the project leader. In preparation for this the following should be shared between these participants: (a) an English language summary of the differences between forward translations and the issues emerging the focus group and how they were resolved (having had someone making notes about these during the group helps this); (b) an English language summary of the composition of the field testing participant group and of any issues that arose from this; (c) the back-translation. The discussion looks at issues in (b) and (c), referring back to (a) and comes to a final agreed translation. Ultimately all language choices here are with the native speakers of the language, the CST participants are using this for final quality assurance and may chair/facilitate the discussions.
6. **Proof reading**. The agreed final version will provided to Prof. Evans and, if the target language is in a script he can typeset in his software, will be used to produce a PDF for each of the CORE-OM, CORE-SF/A, CORE-SF/B, GP-CORE, CORE-10, and CORE-5. Where the target language is not one he can handle the project leader will be responsible for finding a typesetting/printing company or person who can carry out this work. These are checked by Emails between the lead for the translation and Prof. Evans. It is strongly recommended that the final versions are proof read by people who have not previously been involved as it is very easy to see what you think should be there and not notice that something has been changed slightly in the typesetting. Checks are to ensure accuracy of translation is maintained and to ensure that no accents have been lost or layout changed in the transition to PDF format and to ensure that the appropriate people are credited correctly in the authorship information in the properties of the PDFs.
7. **YP-CORE.** The YP-CORE, a 10 item derivative measure designed for use with people between the ages of 12 and 18 turns out to require a similar but slightly different translation procedure. See below for

specific guidance on that. Where the logistics of getting a CST nominee into the focus group are challenging owing to costs of flights, accommodation and the nominee being able to give up the time, it can be very advantageous to translate the YP-CORE and perhaps some other measures in parallel with translating the CORE-OM so that the focus groups for all translations can be put together into the one trip for the nominee.

8. **CORE-A**. Where adapted versions of the CORE-A assessment (CORE-TAF) and end of therapy (CORE-EoT) forms are required, these can be translated easily with one translator. The issues here are more of adaptation and fit to the local demographics, problem spectrum and services. Some categories such as previous service use and ethnicity may need radical adaptation to fit the target locality. This can be agreed with Prof. Evans by telephone calls and Emails.
9. Everyone involved in the translations must give agreement in writing placing the copyright of the translated version with CORE System Trust on the understanding that it will be made available by CST under the Creative Commons Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0) (see: http://creativecommons.org/licenses/by-nd/4.0/).
   Acknowledgement to the translators will be agreed before the PDFs are mounted on the internet. See agreement forms below.

Costings

Whilst no formal charges are made by CST for translations nor are we able to pay for translations it has to be recognised that there are costs, both in time and also some that are usually actual costs. The actual costs are usually to pay the professional interpreter/translator for the forward translation and for the reverse translation if that is done by a professional, similarly, some other forward translators may need to be paid either their commercial rate for the time involved including the time in the focus group, others may not want a commercial rate of pay as the eventual translation will be made available for free but may need support for travel costs or feel rewarded by an honorarium. Two other costs are: (1) to enable the CST representative be able to come to the focus group including travel & accommodation and; (2) £300 to cover the costs of making up the PDFs, this last can be waived by CST where it is genuinely likely to hold up or prevent a translation happening and will be waived where the typesetting costs are paid by the local project lead where the typesetting cannot be done by CST.

Determining psychometric properties of the translation and “normalisation”

Once the translation has been completed as above, the measure may be used and distributed. However, the psychometric properties and distributions, non-clinical and clinical, will differ between different translations and locations. Translations done to the above criteria should be safe for use but clearly scores become much more usefully interpretable after psychometric exploration and estimation of pertinent referential clinical and non-clinical distributions in the target language and cultural settings.

Wherever an approved translation has been completed to CST procedure (above), we recommend the following as minimum exploration and are keen to try to support both the work involved and publication of findings. This is often best conducted by creating local Practice Research Networks (PRNs, see e.g. Audin *et al.,* We are keen to collaborate, check and extend psychometric analyses and to support joint publication of findings *where this is logistically reasonable for us and the local practitioners/researchers.*

Minimum sufficient exploration

1. The CORE-OM (and shorter versions if these are to be widely used as well) should be used by at least 100 people representative of the target clinical population and item data checked for good internal reliability. This forms a basic check on reliability and provides the the “reliable change” criterion (Jacobson and Truax 1991; Evans, Margison et al. 1998). This can be subsumed within (3) and (4) below or run as an initial check, and (3) and (4) only done if this initial reliability check suggests it is appropriate to continue.
2. At least 40 people should take part in a test-retest reliability check with test-retest interval in the range 1 week to 1 month. There are advantages in having more than two repeats and if people moderately fluent in English and the target language can be found, translation stability across change of language can be checked.
3. At least 200 people representing the clinical population served should complete the CORE-OM prior to interventions. At least 200 people representative of the comparable general population should complete the CORE-OM. These two samples allow estimation of the “clinically significant change” criterion for the service setting (Jacobson and Truax 1991; Evans, Margison et al. 1998).

Much larger samples than those are needed for precise estimation of generalisable CSC criteria but n = 2x200 provides a starting estimation with robustly determined confidence intervals. CST can advise on other exploration, quantitative and qualitative, suitable for various kinds of student project from undergraduate to doctoral work.

Authorship of psychometric explorations

Must always be agreed before commencing collaborative work and be congruent with publication guidance on authorship. It should be reviewed regularly as work progresses and clear updates on initial agreements should always exist in Email form.

Appendix 1: References

Audin, K., J. Mellor-Clark, M. Barkham, F. Margison, G. McGrath, S. Lewis, L. Cann, J. Duffy and G. Parry (1999). "Practice research networks for effective psychological therapies." Journal of Mental Health 10(3): 241-251.

Evans, C., B. Dolan and A. Toriola (1997). "Detection of intra- and cross-cultural non-equivalence by simple methods in cross-cultural research: evidence from a study of eating attitudes in Nigeria and Britain." Eating and Weight Disorders 2: 67-78.

Evans, C., F. Margison and M. Barkham (1998). "The contribution of reliable and clinically significant change methods to evidence-based mental health." Evidence Based Mental Health 1(3): 70-72.

Jacobson, N.S. and P. Truax (1991). "Clinical significance: a statistical approach to defining meaningful change in psychotherapy research." Journal of Consulting and Clinical Psychology 59(1): 12-19.

Wild, D., Grove, A., Martin, M., Eremenco, S., McElroy, S., Verjee-Lorenz, A., & Erikson, P. (2005). "Principles of good practice for the translation and cultural adaptation process for Patient-Reported Outcomes (PRO) measures: report of the ISPOR task force for translation and cultural adaptation." Value in Health, 8: 94-104.

Appendix 2: Agreement to lead or coordinate translation of CORE instruments

I ……………………………………………………………………………………. wish to
[lead | coordinate] [*delete which does not apply*] translation of the following:

[*please tick which you are willing and feel able to lead with or help with]*

Instrument	tick
CORE-OM and its derived shortened self-report measures	
YP-CORE, 10 item measure for young people aged 13-16	
CORE-LD, measure related to the CORE-OM for adults with mild to moderate learning difficulties	
CORE-TAF & CORE-EoT, therapist completed assessment forms for beginning and end of therapy	

Into [*insert target language*] …………………………………

I understand the process of translation that is detailed in the rest of this document and agree to this process.

Signed: ………………………………………………………………………………
Date: …………………

Contact details:
Email addresses: ………………………………………………………………………………..
Phone numbers: ………………………………………………………………………………..
Skype ID (recommended): ………………………………………………………………………………..
Address: ………………………………………………………………………………..
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Any other contact details or information relevant …

Appendix 3: Assigning copyright on translation of CORE instruments

I ……………………………………………………………… have helped with the translation of (tick which applies):

Instrument	tick
CORE-OM and its derived shortened self-report measures	
YP-CORE, 10 item measure for young people aged 13-16	
CORE-LD, measure related to the CORE-OM for adults with mild to moderate learning difficulties	
CORE-TAF & CORE-EoT, therapist completed assessment forms for beginning and end of therapy	

into [*insert target language*] ………………………………..

This is to confirm that I transfer all claims on copyright ownership of the translation to the CORE System Trust on the condition that it will be made available by CST under the Creative Commons Attribution-NoDerivatives 4.0 International (CC BY-ND 4.0) (see: http://creativecommons.org/licenses/by-nd/4.0/).

Signed: ………………………………………………………………………………
Date: ………………………..

Please tick one of the following and provide any contact details you want to appear on the web page about the translation.

	Tick
I do not wish that my name be noted in the acknowledgements of all the help that made this translation possible.	
I wish that my contribution be noted with my name and [optional] the following contact details in the web source for the translation:	

Appendix 4: Translating YP-CORE (Young Persons' CORE)

YP-CORE is a ten item measure partly derived from the CORE-OM and an earlier pilot measure: "teen-CORE". Three of the items are identical to items in the CORE-OM and some are very close to CORE-OM items but slightly simplified in wording, see box below. The frequency anchors for the scoring are exactly the same as for the CORE-OM and the time frame: "over the last week" is exactly the same. The YP-CORE is tested in the UK on ages 11 to 16 and is probably fine for use between the ages of 10 and 18 (though between 16 and 18 it may be as wise to use the full CORE-OM).

YP-CORE items

1. I've felt edgy or nervous
2. I haven't felt like talking to anyone
3. I've felt able to cope when things go wrong
4. I've thought of hurting myself
5. There's been someone I felt able to ask for help
6. My thoughts and feelings distressed me
7. My problems have felt too much for me
8. It's been hard to go to sleep or stay

Where possible the YP-CORE should be translated at the same time as the CORE-OM. A similar methodology of multiple independent forward translations, a focus review group, final field testing and back-translation is used as for the CORE-OM but doing this at the same time as the CORE-OM makes things simpler and more efficient. The required steps are as follows.

1) The process have a clear leader who may or may not be the same person as for the CORE-OM but should be someone who has involvement with, and clinical work with, children and/or adolescents.
2) At least one, preferably two, people who were in the review group for the translation of the CORE-OM should be involved, contributing forward translations and part of the review group.
3) There should be at least six independent forward translations and the translation of the CORE-OM should be available to the review group (but only after the independent forward translations have been completed). One translation should be by a professional interpreter or translator if possible.
4) All translators must provide written confirmation that they understand that the copyright of the final translation will be held by CORE System Trust and not themselves but that CORE System Trust will credit them for the work (if they want this) and will always make the translation available for anyone to reproduce on paper free of charge provided only that it is not changed in any way. (I.e. our standard licence terms for all CORE instruments.)
5) At least three forward translations, preferably more, should be by young people in the age range 11 to 16. However, CST recognise that in some countries it may be difficult or impossible to find young people with the necessary competence and confidence to do a fully independent translation into English. If so, the next best option is for a younger person to work with an adult or older young person giving their view on options offered by the other.
6) A group of at least five people including the lead, at least one person from the review group that did the translation of the CORE-OM and at least three younger people should review all the forward translations together with the same CST nominee as for the CORE-OM. The agreed translation of the CORE-OM should be available to them to check. The process of the group is as for the CORE-OM group (see above) but every attempt should be made to prioritise the views of the younger people to ensure that the final language of the translation is tuned to their age group. It is ideal but not essential that one of those younger people should have had had previous psychological distress but the invitation should be for the group to think that everyone struggles at some point in their adolescence and to think about people they have known to have had struggles. In many countries it works well to have young people in the group who have not done forward translations and who may not even speak English at all to ensure that the views of the younger people are heard, provided that the group is chaired to stay on task.

7) After that group work, the agreed measure should be given by members of the translation team to some people in the age range 11 to 16 who should be asked *not* to complete it as themselves but to talk through how they think someone they know who has perhaps had psychological difficulties might feel as that person would read it and try to complete it. Ideally a few young people who have had psychological problems or been in family therapy that may have been for another "identified patient" should be involved at this stage. All should be asked:
    a. Is this clear?
    b. Is any of it not very clear or odd?
    c. Could it be improved in wording?
8) Either at the same time as this "talk aloud" checking or after, a back-translation by an independent person should be obtained.
9) Finally, but not a requirement of the translation being approved, it is strongly recommended that at least the following psychometric checks are conducted:
    a. test-retest reliability check in a non-clinical sample ideally with a good number of participants spread across the age range 11-16
    b. internal consistency is checked in samples of at least 40 in age groups 11-12, 13-14, 15-16
    c. referential data are obtained or a process starting to accumulate them started for those age groups for both clinical and non-clinical populations.