# Modifications of the CIDI in the National Comorbidity Survey: The Development of the UM-CIDI

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#### What is the CIDI?

The Composite International Diagnostic Interview (CIDI) is a non-clinician administered psychiatric diagnostic interview that was developed by ADAMHA and WHO to facilitate psychiatric epidemiologic research throughout the world. The CIDI generates diagnoses according to both the DSM-III-R and ICD-10 diagnostic systems. The CIDI is similar to the Diagnostic Interview Schedule (DIS). The two instruments have a similar layout and many questions are identical. The CIDI adds extra symptom questions which allow diagnoses to be made according to the criteria of ICD-10 as well as DSM-III-R. The DIS does not produce ICD-10 diagnoses. The main advantage of the CIDI over the DIS is that diagnoses can be made in ICD-10, thus allowing comparisons crossculturally. The CIDI has been translated into 18 languages and is being used in epidemiologic surveys throughout the world. Robins et al. (1989) provide an overview of the earliest version of the CIDI and its development. The current version of the CIDI is described by Cottler et al. (1991), Essau and Wittchen (1993), Rubio-Stipec et al. (1993), Wittchen (1993), and Wittchen et al. (1991). Extensive information on the reliability and validity of the CIDI is revised by Wittchen (in press).

#### What is the UM-CIDI?

The UM-CIDI was developed from the CIDI by a team of investigators from the University of Michigan (UM) in collaboration with Dr. Hans-Ulrich Wittchen from the Max Planck Institute of Psychiatry in Munich, Germany. Dr. Wittchen is a member of the WHO CIDI Editorial Committee and has been involved in WHO CIDI development and validation for the past decade. The UM-CIDI was developed for the U.S. National Comorbidity Survey (NCS). This memo discusses the differences between the original CIDI and the UM-CIDI. The memo is intended to be used by researchers who are interested in using the CIDI or UM-CIDI, but are unsure about which of the two instruments to use.

It should be stated at the onset that the CIDI and UM-CIDI are very similar and that thoughtful researchers may want to select parts of each in developing an instrument for their own studies. The CIDI is designed to be modular, which means that questions about particular diagnoses can be added or deleted depending on the focus of the investigation. The UM-CIDI deleted certain diagnoses that were not of interest to our research team. This means that researchers will have to use the original CIDI version of these sections if they want to include them in their data collection, even if they decide to go with the UM-CIDI for other sections. The UM-CIDI also modified the order of questions in the CIDI to improve instrument flow. It redesigned the stem question administration procedures to minimize the problem of a "no" response set and to maximize motivation for recall of lifetime episodes. It added a number of probe questions to clarify confusion about the meaning of certain CIDI questions. It simplified the use of CIDI "probe flow chart" questions. It probed symptoms in the depression and mania sections at the episode level, yielding more plausible data about the clinical significance of episodes of these disorders than in the original CIDI. Finally, it added a clinical reinterview phase to the schizophrenia section in order to deal with the problem of very low reliability found in the validation of diagnoses of psychosis in the ECA study (see below).

We feel that these changes made major improvements to the CIDI while still maintaining the main structure of the instrument. As you might imagine, there is disagreement on this matter. Some of the original participants in the CIDI development group would prefer that the original instrument was used

without any changes. Others approve of the instrument changing over time and of the particular changes made in the UM-CIDI. This memo is designed to provide information which will allow interested users to make their own informed decisions about the changes that we made in the UM-CIDI in order to move beyond this disagreement in expert opinion.

#### UM-CIDI modifications

A useful way to consider the differences between the UM-CIDI and the original CIDI is to begin with both instruments side-by-side and go through them together. It would be useful for the reader who has copies of both instruments to get them for reference before beginning this section of the Working Paper.

## Layout

The most obvious difference between the two instruments at first glance is the layout. The CIDI layout is designed to get a great deal of information into a small number of pages. This tight spacing creates opportunities for data entry errors that could be avoided by using more space between response options. The open layout and large boxed response options used in the UM-CIDI are a response to this concern. The UM-CIDI layout is based on procedures developed at the Institute for Social Research at the University of Michigan over the past 40 years. These procedures are known to minimize data entry errors.

In addition to the general approach of using a more open layout, the UM-CIDI also uses a number of special layout strategies to facilitate administration in particularly difficult sections of the instrument. The section on substance use disorders is a good example. The original CIDI uses a full page of the interview for each of 22 questions about symptoms of drug abuse or dependence. (See Section L in the October, 1991 version of the CIDI.) The general layout has one symptom question at the top of each page and probes for this question on the rest of the page. The probe questions are complex and require this full page. However, this layout causes problems for the majority of interviews in which all the drug abuse/dependence symptom questions are answered "no". The problem is that the interviewer has to turn a page after asking each question. The UM-CIDI removes this problem by creating a series of pages at the beginning of the section (questions G11-G29) which list all the symptom questions in sequence without their associated probes. This allows the interviewer to read the symptom questions from a single list and turn the page to the probe questions only after a symptom question is answered "yes". In the majority of interviews, where respondents answer "no" to all the symptom questions, it is possible to complete the entire drug abuse/dependence section by turning only one page.

#### Deleted diagnoses

After becoming accustomed to the differences in layout, the next thing the reader will notice in comparing the CIDI and UM-CIDI is that the latter includes fewer diagnoses than the former. This was a decision made for purposes of the NCS, where we deleted diagnoses that are measured with low reliability and those that were of secondary clinical significance for purposes of that survey. As noted above, the CIDI was designed as a modular instrument. This makes it a simple matter for a researcher wanting to use the

UM-CIDI to add additional diagnostic sections from the original CIDI in developing a modified instrument.

# Screening for psychosis

Previous research with the DIS has shown that this instrument has low reliability for diagnosing psychosis (Anthony et al., 1985; Helzer et al., 1985). As the CIDI questions concerning psychosis are identical to the DIS questions, we were especially concerned with this section in our pilot work. Based on extensive work with this section, we concluded that it is not possible to train lay interviewers reliably to make the subtle distinctions required to assess psychosis in the general population. There are two main problems in this regard. First, respondents often either misunderstand (eq, "Yes, I have wonderful hearing. I can hear lots of things that other people cannot hear.") or systematically normalize ("My husband and I are so close that we often know what each other are thinking, almost as if we could read each other's minds.") questions concerning psychotic experiences. Even when interviewers use clarifying probes (eg, "We don't mean a person who knows you well and can guess what you are thinking, but someone who literally reads your mind.") the number of positive responses to questions about psychotic experiences due to misunderstanding and normalizing are many times higher than those due to true psychosis.

Second, there are many people who have experiences which superficially appear to qualify as either hallucinations (such as thinking they saw a space ship or a ghost) or delusions (such as thinking they were followed) but which turn out not to qualify on closer examination. This means that there is a great burden on the interviewer to get detailed information about the experience and sort out real psychotic experiences from odd, but not psychotic experiences. Lay interviewers are not able to do this based on the short training period devoted to psychosis in standard CIDI training. Nor were we able to increase the reliability of lay interviewers in an expanded training session. Our sense is that some lay interviewers would be incapable of making these discriminations no matter how long we trained them, while others could do so after extensive training. We were unable to invest in the expensive screening of interviewers and training required for this purpose, though, in the NCS.

Based on this experience, we decided to use the CIDI questions concerning psychotic experiences to screen for possible cases and have clinical interviewers recontact all such respondents for a separate clinical interview concerning psychosis. We reasoned, based on previous epidemiologic research, that no more than 2% of respondents would meet diagnostic criteria for psychosis and that we would have to screen no more than 5% of the sample to find these cases. This turned out to be a fairly accurate estimate. As it happened, clinical review of the more than 1800 NCS respondents who endorsed at least one question concerning psychotic experiences resulted in slightly more than 600 who were rated as possibly psychotic. A separate clinical reinterview was carried out with these respondents. This reinterview will be the subject of a subsequent Working Paper.

The reader will note that the UM-CIDI required extensive probing of examples of psychotic experiences (Section K) in order to provide the raw material used by clinical raters to classify respondents into those who are and are not possibly psychotic. Interviewers were asked to provide a full page of open-ended material with examples of each Section K question endorsed by a respondent. This compares to a single line about two inches long in the

WHO CIDI for a quick note concerning the content of the possibly psychotic experience. In other respects, the UM-CIDI and WHO CIDI schizophrenia sections are identical in wording and interviewer instructions. It is worth noting here that the NCS clinical reinterviews of psychotic experiences showed that we would have substantially overestimated the prevalence of schizophrenia, schizophreniform disorder, and other psychotic disorders (e.g., delusional disorder, atypical psychosis) if we had relied exclusively on the CIDI questions and lay interviewer symptom ratings. Based on this experience, we recommend that researchers who are interested in assessing these disorders in the general population either (i) use the same two-part interviewing strategy we used in the NCS, (ii) invest much more heavily than we were able to do in lay interviewer training, or (iii) use clinical interviewers. The third option is prohibitively expensive in a general population survey, especially in light of the fact that the sample must be very large to find enough true psychotics for reliable analysis. It is not clear to us how effective the second strategy could be if training was very extensive. We do know, though, that the first strategy can be implemented in a cost-effective fashion in a large general population survey, and this would be our method of choice if we were asked to make a recommendation for future studies of a similar sort.

## The lifetime review of consolidated stem questions

An important innovation in the UM-CIDI is the consolidation of diagnostic stem questions at the beginning of the instrument (questions B1-B7) in conjunction with an introduction designed to encourage honest reporting and serious lifetime review (question A54). This innovation was implemented in response to concerns about two problems in the original CIDI. First, pilot study results for the NCS using the original CIDI showed that respondents often failed to appreciate that serious memory search is required to give accurate responses to the CIDI stem questions about the lifetime occurrence of disorders. Second, respondent debriefing in the pilot tests showed that respondents rather quickly picked up on the logic of the stem-branch structure of many CIDI sections and realized that they could avoid being asked additional questions by answering "no" to diagnostic stem questions.

The consolidation of stem questions for a number of different disorders at the beginning of the UM-CIDI addresses both of these problems. By administering all these stem questions before any branch questions are asked, we avoid the respondent answering "no" simply to avoid further probes. Evidence from split ballot research shows that this innovation increases endorsement of the stem questions compared to the original CIDI. Furthermore, the consolidated stem questions are introduced by a question designed to increase honesty and serious memory search (question A54). Experimental evaluation shows that the use of questions of this sort significantly increases seriousness of memory search. A separate Working Paper is in preparation to report the results of these experiments.

The price paid for this increased response accuracy is that the UM-CIDI requires the interviewer to refer back to the original stem question responses throughout the entire interview. This problem is removed in CAPI (Computer Assisted Personal Interviews) administration, which is currently under development for the UM-CIDI. In paper-and-pencil administration, which was used in the NCS, the problem was handled by the use of a reference card that the interviewer filled out at questions B1-B7 and referred back to throughout the interview.

Reordering questions to improve logic and flow

Although the order of questions within diagnostic sections of the UM-CIDI is largely the same as in the CIDI, there are some cases where the order has been changed to improve logic or flow. The most extensive changes were made in the depression section, where questions about number and length of episodes over the past 12 months and in the respondent's lifetime were reordered and expanded. These changes were made, in large part, to accommodate the special interests of the NCS investigators in recent episodes of depression and in Seasonal Affective Disorders.

Most other instances of reordering were done with issues of logic and flow in mind rather than because of special interests in expanding the questions already in the CIDI. A good example involves the decision to ask about phobia before asking about panic disorder in the UM-CIDI rather than the reverse order used in the original CIDI. Our main reason for doing this was that it made it easier to elaborate the probes for overlap between panic and phobia by asking respondents who met criteria for panic disorder whether their attacks occur exclusively in the context of exposure to the phobic stimuli reported earlier. The original CIDI questions along the same lines are more awkward and, by necessity given the order of questions, less detailed.

Adding questions and rewriting questions to clarify response

Debriefing of pilot respondents in the NCS pinpointed several areas of confusion in the original CIDI. These problems have been corrected in the UM-CIDI either by adding clarifying probe questions after the original CIDI questions or, in some cases, rewriting the original CIDI questions. We attempted to use the first of these two strategies whenever possible in order to maintain the integrity of the original CIDI. In some cases, though, this was not possible, and we were forced to rewrite a CIDI question.

An example of the use of a clarifying probe question: Our pilot work uncovered a number of cases where respondents who appeared to be phobic failed to meet diagnostic criteria because they answered "no" to the single question in the CIDI about duration. This question (B31 and B51) asks "Did (any of these/this) strong unreasonable fear(s) continue for months or even years?" The phrasing of this question led some respondents to interpret it as asking about the duration of the acute distress associated with exposure to a phobic stimulus rather than to the number of (typically) years the respondent has had a phobic reaction to this stimulus. As a result of this confusion, a number of people answered "no" even though their phobic reactions were of long duration. One respondent with a disabling fear of bridges (she refused to cross a bridge for any reason, became very distraught when she saw a bridge, and because of these reactions experienced considerable difficulty in traveling from one part of her community to another and was unable to take vacations) answered: "No, I am only afraid when I get near a bridge or see a bridge. It never went on for a full month." The UM-CIDI added a clarifying probe to all "no" responses to clarify misunderstandings of this sort.

An example of rewording: As noted above, we tried to avoid rewording CIDI questions whenever possible. In some cases, though, the original question was so confusing that we had no choice. In the mania section, for example, the original CIDI asks the question about the respondent's longest episode (question F20) just before the question about the number of episodes the respondent had in his lifetime (question F19). The juxtaposition of these two questions and the vague wording of the question about lifetime number of

episodes lead to serious confusion on the part of respondents who were debriefed in the NCS pretests. The exact wording of the two questions is as follows:

- F19: "What's the longest spell you've ever had when you felt (high/irritable) and had several of these other experiences like (list several PRB 5's in F1-F12)?"
- F20: "In your lifetime, how many spells like that have you had?" (Emphasis not in original)

The reason for the confusion should be clear to the reader; namely, that respondents can misinterpret question F20 as asking about how many episodes they had in their lifetime that were as long as their longest episode. The actual intent of the question was to ask about the number of episodes in their lifetime that met the two day minimum duration for manic episodes specified in the CIDI. We rewrote this question to clarify this intent. Our question reads:

"In your lifetime, how many spells have you had that lasted two days or more when you felt (KEY PHRASE TWO) and also had some of the other things circled on Page 4?"

Adding clarifying notes in the interview schedule

The CIDI training manual includes a number of important instructions that the interviewer is expected to memorize and implement in the interview without the benefit of written prompts, scripts, or instructions. This imposes an unnecessary burden on the interviewer. The UM-CIDI lightens this burden by reproducing these instructions in the interview schedule itself. For example, question B18 asks the respondent about taking "medications" without offering a definition of this term. The definition is included in the CIDI interviewer training manual but not in the interview schedule itself. As the reader will see by referring to this question on page 12 of the attached interview schedule, the UM-CIDI includes a boxed definition in the instrument as an aid to the interviewer. A great many similar definitions can be found throughout the interview. For example, "unreasonably strong fear" is defined in question B8, the phrase "tell a doctor" in question B15, the word "drug" in question B27, and so on.

The probe flow chart

Readers familiar with the DIS will know about the "probe flow chart," an ingenious device developed by Dr. Robins and her associates to simplify probing of symptoms for severity and for exclusions due to use of alcohol, drugs, medications, or physical illness. The probe flow chart questions are written on a card that interviewers can hold in their free hand during the interview and refer to whenever the CIDI requires symptom probing. The interview schedule itself does not include the probe flow chart questions but, rather, uses a brief notation guide to tell interviewers which probes to use and to provide a very small amount of space to record answers.

We had concerns about this procedure due both to the fact that DIS and CIDI interviewers (the probe flow chart is the same in the two instruments) tend to probe from memory rather than checking the chart consistently and to the fact that probing can be burdensome for respondents. Therefore, we devised a series of procedures which made it unnecessary to use the probe flow

chart in the UM-CIDI.

Probing symptoms versus episodes

The CIDI diagnostic sections on depression and mania use a flow logic quite different from the other sections in that they begin by asking respondents about long lists of symptoms in a lifetime recall framework without requiring any clustering of these symptoms. The lifetime reports about these individual symptoms are probed for exclusions (i.e., cases where the symptoms were due to use of medications, alcohol, drugs, or to physical illness). Respondents who report a sufficient number of lifetime symptoms that are not always due to these exclusions are then asked a question about clustering of these symptoms in time (question E34 in the depression section and F15 in the mania section). These questions do not ask about clustering at times when the exclusion criteria do not apply. The respondent is then asked about the symptoms during the episode in the respondent's lifetime when he/she had the most symptoms. If the number of symptom groups recorded as occurring in this "worst" episode equal or exceed the number required to meet diagnostic criteria for depression or mania, the respondent is coded as having a lifetime history of this disorder even though there are no exclusion probe questions asked about this worst episode. Failure to probe symptoms at the episode level for exclusion leads to overdiagnosis of depression and mania. This problem is resolved in the UM-CIDI by probing symptoms at the episode level rather than probing the initial symptom questions.

The "second chance" to report depression and mania

Another special feature of the CIDI depression and mania sections is that respondents are given a second chance to endorse the diagnostic stem questions if they report the lifetime occurrence of enough other symptom groups to meet criteria for the disorder. This is a radical departure from other clinical interviews for depression and mania (e.g., the SADS, the SCID, and the PSE), which all ask a small number of stem questions and skip out respondents who answer "no" to all these questions. This same skip-out strategy is used in the CIDI sections for GAD, panic and phobia, where respondents who say "no" to a single stem question in each section are skipped to the next section and coded as not meeting criteria for these particular disorders.

The reason the CIDI (and the most recent versions of the DIS) uses this radically different strategy for depression and mania is that early work with the DIS discovered that a number of respondents who say "no" to the depression and mania stem questions subsequently change their minds either later in the same interview or on reinterview. The second chance option was created to help capture these people. The number of people who are classified as cases of MD or mania increases by about 5% (for example, from .065 lifetime prevalence to .068) when this second chance is allowed.

We excluded this second chance option in the UM-CIDI for several reasons. First, pilot work for the NCS showed that the changes discussed above concerning commitment probes and pulling up stem questions to the beginning of the interview do a much better job of stimulating recall of episodes than the second chance strategy. Second, the number of new cases added by using the second chance strategy was very small in the ECA and even smaller when used in conjunction with our changes, which means that it does not add much. Third, the second chance option is enormously costly in terms of interview time. For example, rather than administer the D1-D44 series of

questions in the UM-CIDI to only the subset of respondents who are positive on the stem questions for depression (B3-B5a), the second chance option would require us to administer these questions to all respondents. We feel that the benefit of reducing the interview length by 10 minutes more than justifies the loss of the very small number of people who would be screened in as cases of depression. (The latter are so small that their inclusion would change the lifetime prevalence rate by less than .001, which is trivially small in relation to the precision of the aggregate estimates in even very large surveys.)

#### The Respondent Booklet

The UM-CIDI makes use of a Respondent Booklet (RB), a pamphlet containing a variety of visual response cues which the respondent holds in his or her hand throughout the interview. The respondent sometimes is asked to look at a list in the RB at the same time the interviewer is reading a CIDI question about this same list (as in the case of the questions about phobias). At other times the respondent is asked to circle a series of symptoms in the RB (as in the case when the interviewer is reviewing all the symptoms of depression reported by the respondent). In the case of questions about traumas that can lead to PTSD, a numbered list is used in an effort to avoid respondent embarrassment at reporting such events as being raped or abused. By using the list, the interviewer is able to ask "Did event number five ever happen to you?" without ever having to use the word "rape."

We believe that this extensive use of visual cues substantially improves the accuracy of reporting. Visual cues of this sort are not part of the standard CIDI. It should be noted that the use of visual cues requires a study population with a high literacy rate, a condition that obtains in the U.S. but not in all countries in which the CIDI was designed to be used. In cases where the respondent is illiterate, the UM-CIDI makes provisions for the interviewer to read the materials contained in the RB.

## Errors in the NCS Version of the UM-CIDI

We were one of the first groups to use the final version of the CIDI, and there was some confusion about final coding rules when we went into the field. As a result of this confusion, we made several skip logic errors in the version of the UM-CIDI that was used in the NCS. The two most serious errors were corrected in the NCS by recontacting respondents who had been interviewed before the errors were detected. The other errors were not detected until the fieldwork had ended. These errors have been removed from all versions of the UM-CIDI dated January, 1992 or later, but they appear in earlier versions of the instrument. A separate errata sheet is available to describe these errors and to show how to correct them in future studies. This errata sheet will be updated when and if we find other errors.

## The CIDI Diagnostic Program and UM-CIDI Conversion Program

The World Health Organization has developed a computer program which can be used to input CIDI data and generate DSM-III-R and ICD-10 diagnoses. The NCS staff developed a separate computer program that maps UM-CIDI responses into a format that will be accepted by the WHO/CIDI diagnostic program. We would be happy to make our mapping program available to people who are interested in using the UM-CIDI in their work so they can generate CIDI diagnoses.

#### Training in the UM-CIDI

A number of people have asked us to send them a copy of the UM-CIDI and the NCS training materials. We are happy to share the instrument and to have other researchers use it in their work. However, we feel a responsibility to maintain some quality control on the use of this extremely complex instrument, and, to this end, we have established the following procedures for using the instrument.

#### Comparing the UM-CIDI with the WHO CIDI

Interested researchers are encouraged to compare the UM-CIDI with the WHO CIDI and evaluate which one is likely to meet their needs. To this end, we include a photo reduced copy of the sections of the interview schedule from the NCS that were based on the WHO version of the CIDI in Appendix A to this Working Paper. We do not include a copy of the WHO CIDI, but this can be obtained from the World Health Organization or from Dr. Lee Robins at the CIDI training center in the Department of Psychiatry, Washington University, St. Louis, Missouri.

Along with the UM-CIDI, Appendix A includes the relevant pages from the Respondent Booklet (referred to as the "RB" in the interviewer instructions) from the NCS. A parenthetical reference of the sort "(RB P.6)" at the beginning of a question is an instruction to the interviewer to tell the respondent to turn to page 6 in the booklet before reading the question. The Interviewer Reference Card (a two-sided cardboard card that is reproduced here in photo reduced form on a single side of a page) is also included. The interviewers in the NCS kept this card in their hands throughout the interview as a reference card for various purposes. You should be able to get the basic idea of how to use the card by following the interviewer instructions carefully as you move through the interview schedule.

We have not included NCS training materials in the appendix. Some of these materials were taken from the WHO training materials, and we have been asked by our WHO CIDI trainers not to distribute these documents. Other training materials were developed specifically for the NCS and would probably not be useful for other applications.

#### Using the UM-CIDI

If your comparison of the two documents leads you to decide that the UM-CIDI is for you, we are happy to have you use the instrument. However, we ask you to attend a training session on the use of the UM-CIDI before trying to use it on your own. We offered the first such session in April of this year for three groups of investigators who are using our instrument in state or local surveys. The second training session will be offered next month. We plan to offer a yearly training session in future years if there is enough interest in the instrument. We also have a trainer who is able to travel to your site to offer a special training program. Contact the NCS Study Coordinator if you are interested in learning more about regularly scheduled training sessions or special training sessions for your staff.

You should know that WHO has official CIDI training centers throughout the world. Centers in the US include those at the University of Connecticut

and Washington University. If you are interested in using the WHO CIDI rather than the UM-CIDI, you should attend a training session at one of these sites. We do not compete with sites in offering WHO CIDI training but exclusively offer training for people who want to use the UM-CIDI. We should mention that there is overlap between the two groups. Dr. Wittchen is the chief UM-CIDI trainer at our regularly scheduled training sessions. He is also a member of the WHO CIDI Editorial Committee and a CIDI trainer.

Why use the UM-CIDI rather than the WHO CIDI?

Most of the people who have decided to use the UM-CIDI rather than the original WHO CIDI in their research have been attracted by one of two things. First, we made a number of changes that we think substantially improve the instrument. Second, US national norms are available for the UM-CIDI but not for the WHO CIDI. There are actually two types of norms worth noting. One set comes from the NCS, where we interviewed a nationally representative household sample of 8098 respondents aged 15-54. The survey had an 82% response rate. A public use data tape with DSM-III-R and ICD-10 diagnoses for all NCS respondents will be available in two years. The other set of national norms will soon be available as part of the Conditions Module of the redesigned National Health Interview Survey (NHIS). The NHIS is the largest ongoing national health survey in the U.S. Designed by the National Center for Health Statistics and administered by the U.S. Bureau of the Census, the redesigned NHIS will interview a nationally representative sample of over 1000 respondents each week throughout the year beginning January 1, 1996. There will be a set of mental health screening questions in the core NHIS, and a more extensive set of questions designed to generate diagnoses of major depression, generalized anxiety disorder, panic disorder, phobia, and alcohol/drug abuse/dependence in the Conditions Module. Both sets of NHIS mental health questions are based on the UM-CIDI and developed on the basis of reanalysis of the NCS. The more extensive questions are a short-form of the UM-CIDI which can be mapped onto the full UM-CIDI to generate national norms on an ongoing basis from successive years of the NHIS. Our annual UM-CIDI training sessions include an overview of these new short-form UM-CIDI NHIS questions.

The UM-CIDI is also being used in a number of other large-scale epidemiologic surveys that could provide norms for other studies. These include a general population survey of over 10,000 respondents in Ontario, Canada fielded in 1991, a nationally representative survey of 10,000 respondents in Mexico scheduled for 1994, and large general population surveys of Chinese-Americans and Mexican-Americans. The UM-CIDI has been translated into Chinese and Spanish and will soon be available in a computerized version that will allow CAPI (Computer-Assisted Personal Interview) administration.

## Future developments

We are continuing to carry out methodological research to improve the UM-CIDI. Some of this work is based on collaborative studies with cognitive psychologists about problems in comprehension, motivation, and memory. Other work is based on the results of validation studies carried out in the NCS in which we compared the diagnoses generated by the UM-CIDI with those generated by clinical reinterviews. We also plan to update the instrument to make diagnoses according to the definitions and criteria of DSM-IV and to expand the number of diagnoses included in the instrument. We will prepare written documents concerning these updates as they appear. Contact the NCS Study Coordinator for more details.

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# APPENDIX A