EPIQ Scoring Rules – Diagnoses (12/10/10)
Description
Diagnoses:
- Current Bipolar (Any), Page 2
- Current GAD, Page 3
- Current MDE, Page 4
- Current Panic Disorder, Page 5
- Programming code, Page 6

Notes:
- All analyses were done in the clinical validity sample of EPIQ consisting of n=206

Current Bipolar

To reshape our current bipolar diagnosis, first we had to redefine the ***lifetime mania variable***.

Variables:

M5g (how much of the time during the episode did your thoughts race through your mind so fast you could hardly keep track of them; all or most),
M5f (how much of the time during the episode did you talk so much that other people couldn't get their say; all or most),
M5k (how many days during the episode did you make any other bad decisions that cause problems for you; all or most),
M5b (how much of the time during the episode were you much happier than usual; all or most).

The sum of these 4 symptoms (dichotomies) was tabulated and split into categories based on a cross-tab with clinical lifetime mania: 0, 1, 2, 3+. Dummy variables for the count were created and modeled using clinical lifetime mania as our dependent variable.

LIFETIME MANIA

Group	Predicted Probability (LIFETIME MANIA)
1) M4=No and I7D=No & M0 = no(did not screen into section and did not endorse current or lifetime treatment for mania)	0.0000 None
2) M4=Yes and I7D=No & M0 = no: Count of 4 symptoms=0	0.0018 None
3) M4=Yes and I7D=No & M0 = no: Count of 4 symptoms=1	0.0254 Low
4) M4=Yes and I7D=No & M0 = no: Count of 4 symptoms=2	0.5153 Probable
5) M4=Yes and I7D=No & M0 = no: Count of 4 symptoms=3+	1.0000 Highly Probable
6) I7D=Yes or M0 = Yes (there were 15 of these people)	1.0000 Highly Probable

In our validation study, groups 4-6 were given a lifetime mania value = Yes. To define current bipolar we used the following: lifetime mania = Yes AND (current MDE = Yes (see page 4) OR M12 >= 4).

Current Bipolar scoring rule:

Group	Predicted Probability
Groups 1-3 (Above)	0.0000 None
Groups 4-6 (Above) and (current MDE = Yes or M12 >= 4)	1.0000 Highly Probable

Current GAD

Variables:

G2b (how often did you worry about things; all or most),
G2c (how often did you worry more than other people in same situation; all, most, some, or little),
G2d (how often did you worry about things others said you shouldn't worry about; all).

Among those with at least 1 of the 3 G2 series, we looked at the G2/G4 series and created nested dichotomies for each item. The best items are:

G2e (how often did you find it hard to control your anxiety or worry; all or most)
G4g (how often did you feel restless, tense, wound up, or on edge; all, most, or some)

Among those with at least 1 of the 3 G1 series and at least 1 of the G3 series, we looked at the G5 series and created nested dichotomies for each item.

G4f (how often did you have trouble relaxing; just about every day) was the only important variable.

Group	**Predicted Probability**
1) Those who endorsed 0 (dichotomies sum) from the G2 series.	0.0000 None
2) Those who answered 1+ from the G2/G4 series (dichotomies sum), but did not endorse G2e, G4g, or G4f	0.1662 Low
3) Those who answered 1+ from the G2 series and [did not endorse G2e but did endorse either G4g or G4f] OR [endorsed G2e and had a duration of < 3 months]	0.3639 Intermediate 1
4) Those who answered 1+ from the G2 series, endorsed G2e, endorsed either G4g or G4f, and had 3+ months of duration	0.4819 Intermediate 2

In our validation study, we defined those in group 4 as being current GAD = Yes

Current MDE

Variables (D2 Series):

D2a (how often in the past 2 weeks did you feel sad or depressed; all, most, some, or little),
D2c (how often in the past 2 weeks did you feel down or discouraged about things in your life; all or most)
D2d (how often in the past 2 weeks did you have little or no interest in things; all,most,little, or some).

Variables (D2/I4 Series):

D2f – (how often in the past 2 weeks did you have trouble making day-to-day decisions; all, most, or some),
D2g – (how often in the past 2 weeks did you have trouble falling asleep; all),
I4d – (how often in the past 2 weeks did you feel tired out or low in energy; all).

D2 Series = Sum of D2a, D2c, D2d dichotomies
D2/I4 Series = Sum of D2f, D2g, I4d dichotomies

Group	**Predicted Probability**
1) D2 Series = 0, 1	0.0029 None
2) D2 Series = 2 and D2/I4 Series = 0.	0.1692 Low
3) [D2 Series = 2 and D2/I4 Series = (1, 2, or 3)] OR [D2 Series = 3 and D2/I4 Series = 0]	0.5074 Probable
4) D2 Series = 3 and D2/I4 Series = (1, 2, or 3)	0.8589 Highly Probable

In our validation study, we defined those in groups 3 and 4 as being current MDE = Yes

Current Panic Disorder

Group (Group 1-4 are initialized to 0)	**Predicted Probability**

1) I7E, P3, and P4 are all no OR if (No 30 day panic attacks (2a,3b,4b are all no and 5a,5b and 5c are all 3-5) Group1=1   0.0000 None

2) Group 1=0 and   0.0327 Low1
  (a) P2 OR P3a OR P4a are in (1, 2) OR
  (b) P2 OR P3a OR P4a >= 3 but the sum of symptoms in the P7 series < 5 OR
  (c) The sum of symptoms in P7 >= 5 but P9 is > 10 minutes
 If the 2a 2b or 2c are met group 2 =0

3) Group 1 and 2 = 0 and P9 is <= 10 minutes but P5A, and P5B and P5C are not in (1,2) Group 3 = 1   0.1062 Low2

4) Group 1 and 2 and Group 3=0 and P5A or P5B or P5C are in (1,2) Group4=0   0.5954 Probable

In our validation study, we defined those in group 4 as current panic disorder = Yes

Note that in the above table each group works from the group before. For example, group (2a) passes group (1) (either I7E is yes or P1 is yes or P2 is yes). The same idea applies to group (2b) from (2a), (2c) from (2b), (3) from (2c), and (4) from (3).

EPIQ Scoring Rules – Modified Diagnoses (12/10/10)
Programming

MDE scoring
DSUM1=0
IF D2A=1-4 THEN SDUM1=DSUM1+1
IF D2C=1-2 THEN DSUM1=DSUM1+1
IF D2D=1-4 THEN DSUM1=DSUM1+1

DSUM2=0
IF D2F=1-3 THEN DSUM2=DSUM2+1
IF D2G=1 THEN DSUM2=DSUM2+1
IF I4D=1 THEN DSUM2=DSUM2+1

If dsum1=0-1 then MDE = None (0.2%)
Else If dsum1=2 and dsum2=0 then MDE = Low (16.9%)
Else If (dsum1=2 and dsum2=1-3) OR (dsum1=3 and dsum2=0) then MDE = Probable (50.7%)
Else If (dsum1=3 and dsum2=1-3) then MDE= Highly Probable (85.9%)

GAD Scoring
GSUM1=0
If G2b=1-2 then GSUM1= GSUM1+1
If G2c=1-4 then GSUM1= GSUM1+1
If G2d=1 then GSUM1= GSUM1+1

GSUM2=0
If G2e=1-2 then GSUM2= GSUM2+1

GSUM3=0
If G4g=1-3 then GSUM3= GSUM3+1

GSUM4=0
If G4f=1 then GSUM4= GSUM4+1

If GSUM1=0 then GAD = None (0.0%)
Else If GSUM1=1-3 and GSUM2 = 0 and GSUM3=0 and GSUM4=0 then GAD = Low (16.6%)
Else If GSUM1=1-3 and [(GSUM2=0 and (GSUM3=1 or GSUM4=1)) OR (GSUM2=1 and G6=1-2)]
then GAD= Intermediate 1 (36.4%)
Else IF GSUM1=1-3 and GSUM2=1 and G6=3-6 then GAD= Intermediate 2 (48.2%)

Panic Disorder Scoring
If (I7e=No and P3=No and P4=No) OR
{P1 = 1 AND P2a = 0 and (P5a and P5b and P5c = 3-5)} OR
{P3 = 1 AND P3b = 0 and (P5a and P5b and P5c = 3-5)} OR
{P4 = 1 AND P4b = 0 and (P5a and P5b and P5c = 3-5)} then Panic Disorder = None (0.0%)

Else If [(P2 or P3a or P4a =1-2)
OR {(P2 or P3a or P4a >=3) and P7 count of yes responses < 5}
OR {(P2 or P3a or P4a >=3) and (P7 count of yes responses >= 5) and (P9= 11-20 or 20 mins or longer)}] then
Panic Disorder = Low1 (3.3%)

Else if {(P9 = less than 1 min or 1-5 mins or 6-10 mins) AND (P5a = 3-5 and P5b=3-5 and P5c=3-5)} then Panic disorder = Low2 (10.6%)

Else if (P5a=1-2 or P5b=1-2 or P5c=1-2) then Panic Disorder = Probable (59.5%)

Lifetime Mania and Bipolar Scoring
M5sum=0
If M5g=1-2 then M5sum=M5sum+1
If M5f=1-2 then M5sum=M5sum+1
If M5k=1-2 then M5sum=M5sum+1
If M5b=1-2 then M5sum=M5sum+1

If M4=no and I7d=no and M0=no then group =1
Else if M4=yes and (I7d=no and M0=no) and M5sum=0 then group=2
Else if M4=yes and (I7d=no and M0=no) and M5sum=1 then group=3
Else if M4=yes and (I7d=no and M0=no) and M5sum=2 then group=4
Else if M4=yes and (I7d=no and M0=no) and M5sum=3 or 4 then group=5
Else if I7d=yes OR M0=yes then group=6

Lifetime Mania
If group=1-2 then Lifetime Mania = None (0.0-0.2%)
Else If group=3 then Lifetime Mania = Low (2.5 %)
Else if group=4 then Lifetime Mania = Probable (51.5%)
Else If group=5 or 6 then Lifetime Mania = Highly Probable (100%)

Current Bipolar
If group=4-6 and {(MDE=Probable or Highly Probable) OR M12 >= 4 days} then Current Bipolar = Highly Probable (100.0%)
Else Current Bipolar = None (0.0)