Supplementary Materials 1

Standardized script for survey presentation

Thank you for agreeing to participate. I am a physician and a PhD candidate in Biostatistics and this study constitutes part of my PhD thesis work. The purpose of this study is to document experts' beliefs about risk factors for falls in community-dwelling older people, in order to translate physicians' experience into tools for Bayesian statistical analyses. Therefore, the following questions do not imply "right" or "wrong" answers. You are kindly invited neither to search literature nor talk to other colleagues if you are not sure about the answers: you should place the requested "X"s according to your own experience.

The questionnaire is divided in two sections

a) physician's characteristics: few questions to characterize your professional experience

b) fall risk factors elicitation: five risk factors are presented, the first is a guided procedure and the remaining 4 should be filled in with the same procedure. At the end of the questionnaire you will be asked to verify and revise the answers.

This is a phone number to call in case of clarification needed: XXX XXXXXXX.

Thank you for your participation.

Silvia Deandrea

Prior Elicitation

Two community-dwelling persons are 75 years old and they are of the same sex. One (mr/mrs Brown) uses benzodiazepines, the other (mr/mrs Smith) does not use benzodiazepines. Think about the risk to fall at least once in the following 12 months. Consider any fall, not only injurious ones.

Question 1

Do Brown and Smith have a different fall risk?

□ Yes
□ No

If the answer is <u>NO, go to question number 7</u>

Question 2

Which one is more prone to fall in the following 12 months?

□ Brown (uses benzodiazepines)
□ Smith (does not use benzodiazepines)

Question 3

What is the difference in the probability of experiencing a fall between the subject at higher risk to the other?

□ The risk is increased, but not doubled → go to question number 4
□ At least doubled, but not reaching three-fold → go to question number 5
□ At least three-fold → go to question number 6

Question 4

This is a graphical representation of the increase of the fall risk difference between the two subjects, where 1.0 means no difference, 1.5 a 1.5-fold risk for one of the subjects (or a +50% increase), 2.0 a two-fold risk (or a +100% increase), 3.0 a three-fold (or a +200% increase) and so on. The blue section is the range that you provided in question 3 and that corresponds to a risk increase which is lower than two-fold.

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Now you should indicate using this line:

a) with a first "X" the value that you think the most probable into the blue range (the more the "X" is put toward right, the more your estimate is near two-fold; the more the "X" is put toward left, the more your estimate is near no difference between the two subjects). For example, if you would say that the difference between Brown and Smith with respect to fall risk is a bit higher than 1.5 fold, you should place the "X"s as follows:

I______I______I______I_X_____I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

b) There may be some uncertainty around your estimate of risk increase. You may believe that the risk increase could be a little lower or a little higher. You should indicate with two further "X"s the lower and higher boundaries of your estimate for which you believe there is very little probability that the true estimate could be greater. For example, if you would say that it is as unlikely the situation of no difference between Brown and Smith as the situation of a three-fold risk increase, you should place the other two "X"s as follows:

I______I______X_____I_X_____I______I______X______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

It is not required that the further two "X" are put in the highlighted range.

Please put the three "X"s on the following line:

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Go to question number 8

Question 5

This is a graphical representation of the increase of the fall risk difference between the two subjects, where 1.0 means no difference, 1.5 a 1.5-fold risk for one of the subjects (or a +50% increase), 2.0 a two-fold risk (or a +100% increase), 3.0 a three-fold (or a +200% increase) and so on. The blue section is the range that you provided in question 3 and that corresponds to a risk increase between two-fold and three-fold

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Now you should indicate using this line:

a) with a first “X” the value that you think the most probable into the blue range (the more the “X” is put toward right, the more your estimate is near three-fold; the more the “X” is put toward left, the more your estimate is near two-fold). For example, if you would say that the difference between Brown and Smith with respect to fall risk is a bit higher than 2.5 fold, you should place the “X” as follows:

I______I______I______I______I______I__X____I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

b) There may be some uncertainty around your estimate of risk increase. You may believe that the risk increase could be a little lower or a little higher. You should indicate with two further “X”s the lower and higher boundaries of your estimate for which you believe there is very little probability that the true estimate could be greater. For example, if you would say that it is as unlikely the situation of no difference between Brown and Smith as the situation of a three-fold risk increase, you should place the other two “X” as follows:

I______I______X_____I______I______I__X___X______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

It is not required that the further two “X”s are put in the highlighted range.

Please put the three “X”s on the following line:

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Go to question number 8

Question 6

This is a graphical representation of the increase of the fall risk difference between the two subjects, where 1.0 means no difference, 1.5 a 1.5-fold risk for one of the subjects (or a +50% increase), 2.0 a two-fold risk (or a +100% increase), 3.0 a three-fold (or a +200% increase) and so on. The blue section is the range that you provided in question 3 and that corresponds to a risk increase greater than three-fold:

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Now you should indicate using this line:

a) with a first “X” the value that you think the most probable into the blue range (the more the “X” is put toward right, the more your estimate is near three-fold; the more the “X” is put toward left, the more your estimate is near two-fold). For example, if you would say that the difference between Brown and Smith with respect to fall risk is a bit higher than 3.5 fold, you should place the “X” as follows:

I______I______I______I______I______I______I______I_X____I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

b) There may be some uncertainty around your estimate of risk increase. You may believe that the risk increase could be a little lower or a little higher. You should indicate with two further “X”s the lower and higher boundaries of your estimate for which you believe there is very little probability that the true estimate could be greater. For example, if you would say that it is as unlikely the situation of no difference between Brown and Smith as the situation of a four-fold risk increase, you should place the other two "X"s as follows:

I______I______X_____I______I______I_____I______I_X____X______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

It is not required that the further two "X"s are put in the highlighted range.

Please put the three "X"s on the following line:

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Go to question number 8

Question 7

This is a graphical representation of the increase of the fall risk difference between the two subjects, where 1.0 means no difference, 1.5 a 1.5-fold risk for one of the subjects (or a +50% increase), 2.0 a two-fold risk (or a +100% increase), 3.0 a three-fold (or a +200% increase) and so on. You stated that there is no difference between Smith and Brown, and the "X" that you see on this line is the graphical representation of your believe:

I______I______X______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

b) There may be some uncertainty around your estimate of risk increase. You may believe that the risk increase could be a little lower or a little higher. You should indicate with two further "X"s the lower and higher boundary of your estimate for which you believe there is very little probability that the true estimate could be greater. For example, if you would say that it is as unlikely the situation of a two-fold risk increase for Smith vs Brown and vice versa, you should place the other two "X"s as follows:

I______X______X_____I______X______I_____I______I_____I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

If you would indicate intermediate point you should place the "X" between two numbers as follows

I____X_I_____I this would mean that your estimate is near but not equal to four-fold
3.5 4.0 4.5

Please put the three "X"s on the following line:

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Question 8

Now, please repeat the same procedure (three "X"s) for the case of two persons with more than 80 years old (the previous question was about 75 years old subjects):

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Now you will be asked to repeat the same procedure for other 4 possible risk factors for falls.

Question 9

Two community-dwelling persons are 75 years old and they are of the same sex. One (mr/mrs Brown) is urinary incontinent, the other (mr/mrs Smith) is not incontinent. Think about the risk to fall at least once in the following 12 months.

Write down whether one of those two persons is more prone to fall and place three "X"s on the line like in the previous example:

□ Brown (incontinent)
□ Smith (not incontinent)

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 **1.0** 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Now place the three "X"s considering that the two subjects are older than 80 years:

I______I______I______I______I______I______I______I______I______I______I______
0.0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0 4.5 5.0

Question 10 and following:

The same procedure for the other risk factors

At the end of the questionnaire

Please take a moment to review your answers. Do they reflect what you truly believe? If not, please feel free to revise the placement of "X"s.

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Supplementary Materials 2

TABLE

POINT ESTIMATES AND LOWER AND UPPER LIMITS GIVEN BY THE EXPERTS

	FEMALE SEX, 75 YEARS OLD			FEMALE SEX, 80 YEARS OLD			HISTORY OF FALLS, 75 YEARS OLD			HISTORY OF FALLS, 80 YEARS OLD			INCONTINENCE, 75 YEARS OLD			BENZODIAZEPINES, 75 YEARS OLD			ANTIEPILEPTICS, 75 YEARS OLD		
Geriatrician 1	1.20	0.80	1.85	1.40	0.80	1.85	1.20	0.85	2.10	1.25	0.85	1.70	1.25	0.80	1.85	1.10	0.80	2.00	1.25	0.80	1.85
Geriatrician 2	1.00	1.00	1.75	1.00	1.00	1.50	3.00	2.50	4.00	3.50	3.00	4.50	2.50	2.00	3.00	2.25	1.50	3.50	3.00	2.00	3.50
Geriatrician 3	1.50	1.00	2.50	1.50	1.00	2.50	2.00	1.00	3.50	2.50	1.00	3.50	1.50	0.50	2.00	1.50	1.00	2.50	1.50	0.50	2.00
Geriatrician 4	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.00	3.00	2.50	1.00	4.00	2.00	0.50	3.00	1.50	1.00	2.50	1.50	0.50	2.50
Geriatrician 5	1.50	0.80	2.00	1.15	0.70	1.80	2.50	2.00	3.30	3.00	2.80	4.00	1.25	1.20	2.20	2.75	2.00	4.00	3.25	3.00	4.00
Geriatrician 6	2.00	1.70	2.30	2.15	1.85	2.50	1.50	1.00	2.15	2.00	1.65	2.50	2.25	1.85	2.70	2.50	1.50	2.60	2.35	2.00	2.65
Geriatrician 7	1.50	1.25	1.75	2.25	2.00	2.50	2.00	1.75	3.00	2.50	2.00	3.50	2.00	1.50	2.50	1.50	1.25	2.00	1.50	1.25	2.00
Geriatrician 8	2.40	1.75	3.20	3.35	2.75	3.80	2.70	2.40	3.20	2.80	2.30	3.40	1.50	1.20	1.90	1.80	1.20	2.85	.	.	.
GP 1	1.50	1.25	2.00	2.00	1.60	2.40	1.65	1.25	2.20	1.65	1.25	2.20	1.60	1.35	1.95	3.15	2.75	3.65	1.50	1.25	1.80
GP 2	1.90	1.20	2.40	2.45	1.80	2.90	5.00	4.25	5.50	5.40	4.45	5.75	2.80	2.30	3.45	4.50	3.30	5.20	4.85	3.35	5.50
GP 3	1.35	1.00	1.70	1.50	1.25	1.75	1.90	1.50	2.30	2.05	1.60	2.40	2.10	1.60	2.60	2.40	2.00	2.80	2.35	2.00	2.85
GP 4	1.50	1.00	2.00	2.50	1.50	3.50	2.00	1.50	2.50	2.00	1.50	2.50	1.50	1.00	2.00	2.00	1.50	2.50	2.00	1.50	2.50
GP 5	1.55	1.40	1.70	1.55	1.40	1.70	1.90	1.60	2.20	3.00	2.50	3.50	1.55	1.40	1.70	1.80	1.50	2.10	2.05	1.90	2.20
GP 6	3.75	3.50	4.00	4.30	4.10	4.75	3.65	3.30	4.15	4.25	3.70	4.70	3.20	2.85	3.35	3.50	3.25	3.75	3.25	3.15	3.35

GP: general practitioner

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