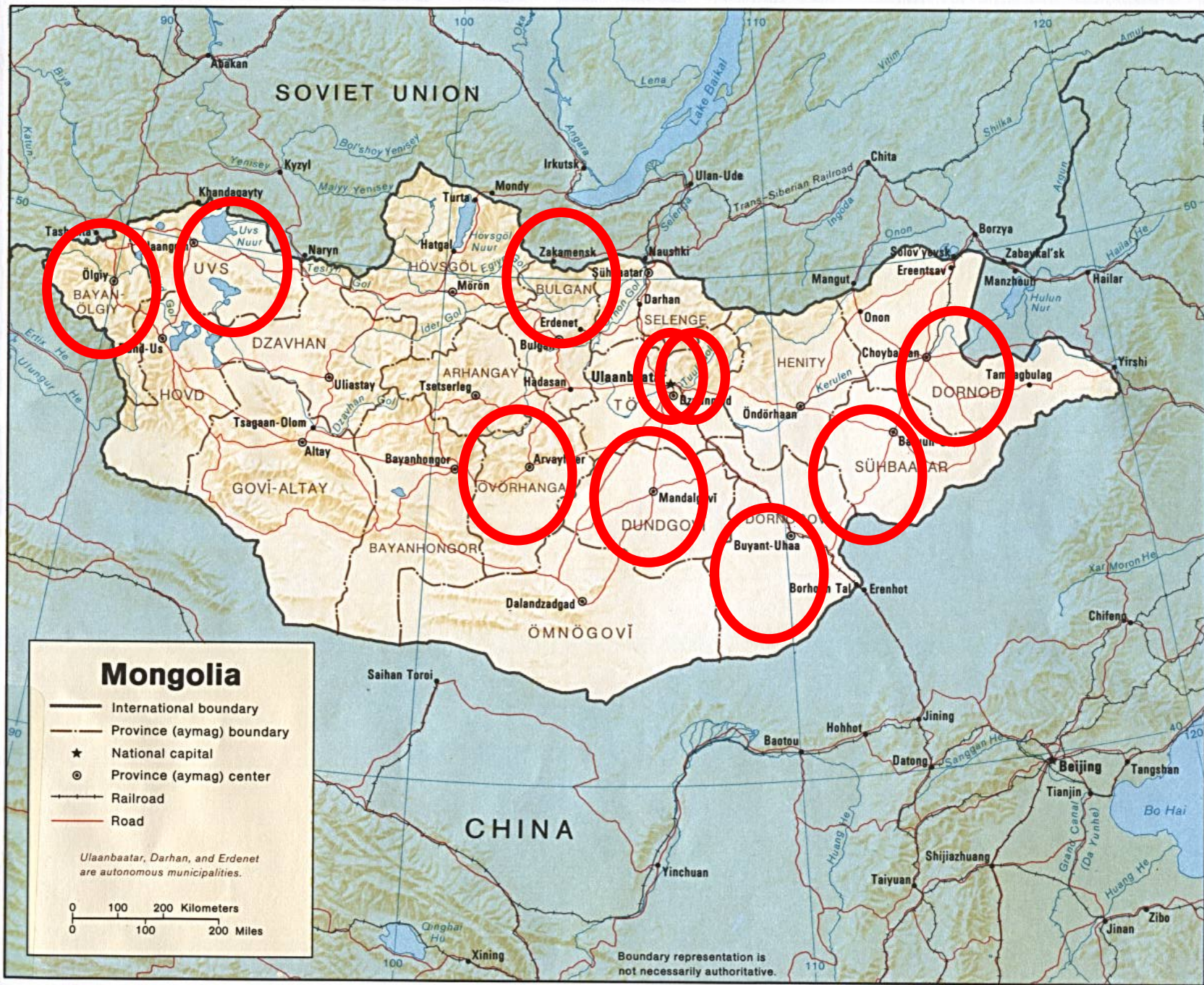

AUDIT in a Mongolian population

Peter Anderson and Elena Kazantseva



Mongolia

- International boundary
- - - Province (aymag) boundary
- ★ National capital
- ⊙ Province (aymag) center
- +—+— Railroad
- Road

Ulaanbaatar, Darhan, and Erdenet are autonomous municipalities.

0 100 200 Kilometers
0 100 200 Miles

Boundary representation is not necessarily authoritative.

Study sample

sampling frame:

- ten jurisdictions
 - local government areas
 - households
 - those present in the household aged 15 to 65 years old

Study sample

households were selected until the pre-designated sample size was achieved (650 for each of the 8 regions and 2500 for each of the 2 districts in Ulaanbaatar).

For the nomadic population, interviewers went from ger to ger (nomadic household) until the pre-designated sample size was achieved

Questionnaire

- ✓ WHO graduated quantity frequency questions for alcohol consumption
- ✓ WHO AUDIT
- ✓ WHO (CIDI) Core version 2.1 (12 month version) for alcohol dependence
- ✓ NIAAA AUDADIS IV for measures of physical harm and experience of help or treatment for harmful drinking or alcohol dependence

Definition of Mongolian drink

A Delphi type technique was used to define a standard drink, in the absence of empirical research. A group of 20 primary care physicians and 10 narcologists, representative of the whole country, and 10 scientists of the National Centre of Mental Health and Addictions, met until agreement was reached (2 * 1.5 hour sessions)

Definition of Mongolian drink

- ✓ 330ml glass, can, or bottle of beer (5%)
- ✓ 500 ml bowl of fermented horse milk (5%)
- ✓ 50 ml glass or cup of vodka (40%)
- ✓ 100 ml glass or cup of milk vodka (15%)
- ✓ 100 ml glass of wine (12.5%).

Validity of the AUDIT

1. Risky drinkers (men >40g a day; women >20g a day, as measured by the graduated quantity frequency questionnaire)
2. Dependence on alcohol as measured by CIDI (4+)

Response rate

- 14,842 adults lived in the households visited
- 11,563 (78%) were present in the household at the time of the interview
- 10,157 (87.8%) agreed to be interviewed
- 10,145 (99.8%) (68.4% of the number of people who lived in the household) provided valid data
- No differences in age and gender distributions between resident and interviewed population

Variable	All respondents		Respondents who drank during previous year		
	Sample size	Proportion that used alcohol at least once in life (%)	Sample size	Consumption per drinker (L absolute alcohol per year)	
Overall	10145	72.5	6516	9.9	
Gender					
Male	5126	82.6	3949	13.4	
Female	5014	62.2	2563	4.5	

Variable	Sample size	Lifetime abstainers	Last year abstainers	Category		
				I	II	III
Overall	10145	27.5	8.3	54.8	3.0	6.4
Gender						
Male	5126	17.4	5.6	62.9	4.3	9.9
Female	5014	37.8	11.1	46.5	1.8	2.8

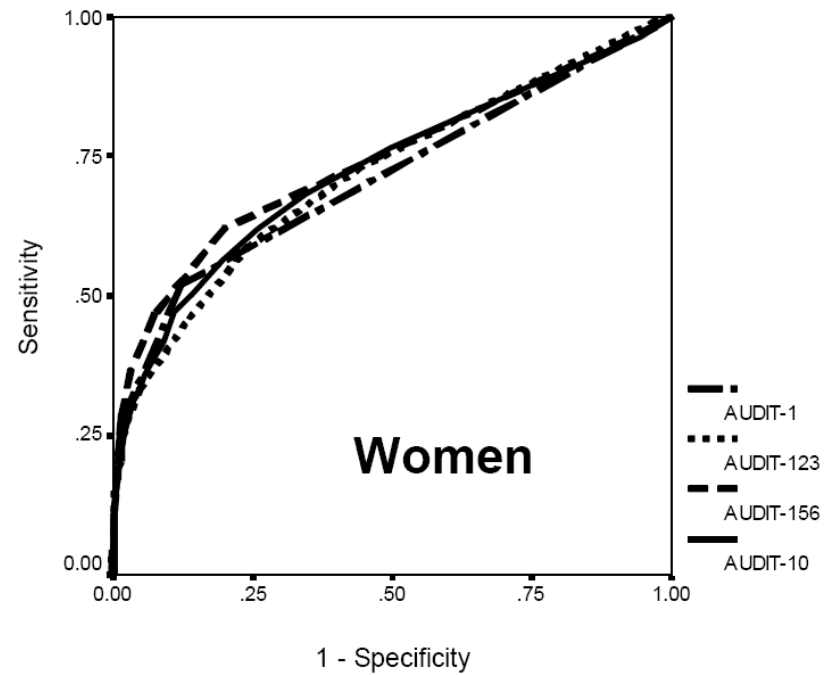
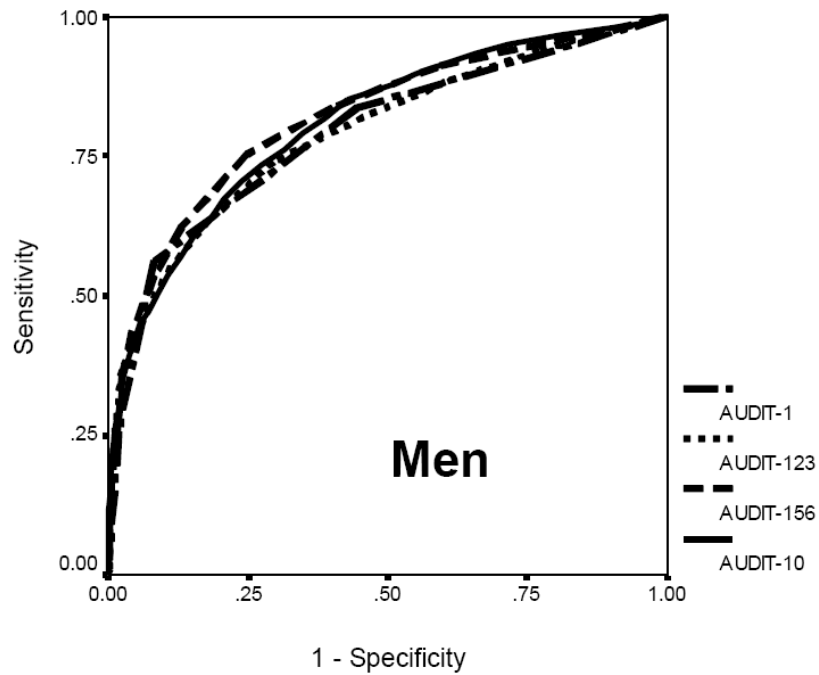
	Total sample		Past year drinkers	
	Sample size	Dependence	Sample size	Dependence
Overall	10145	13.6	6516	21.1
Male	5126	22.0	3949	28.5
Female	5014	5.0	2563	9.7

A logistic regression analysis to determine most discriminatory AUDIT questions:

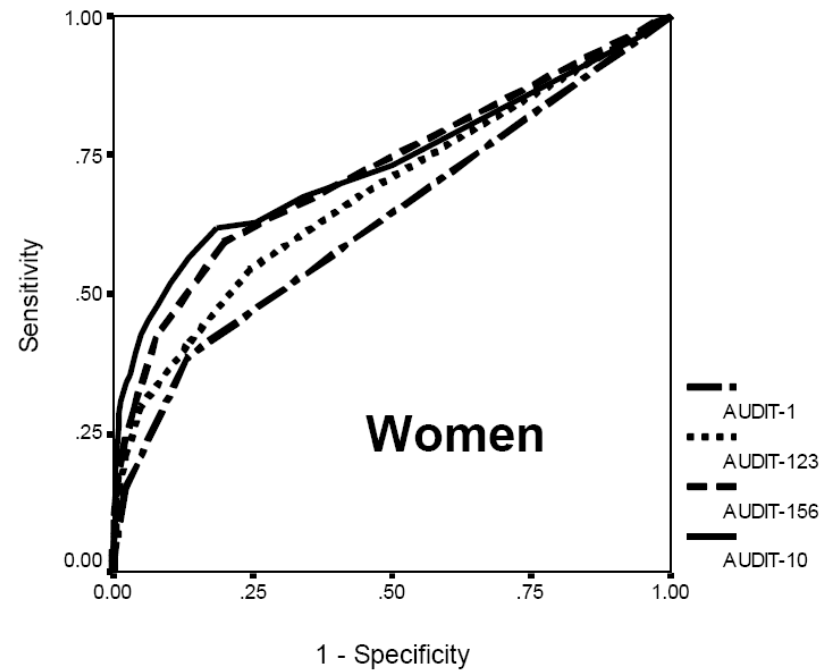
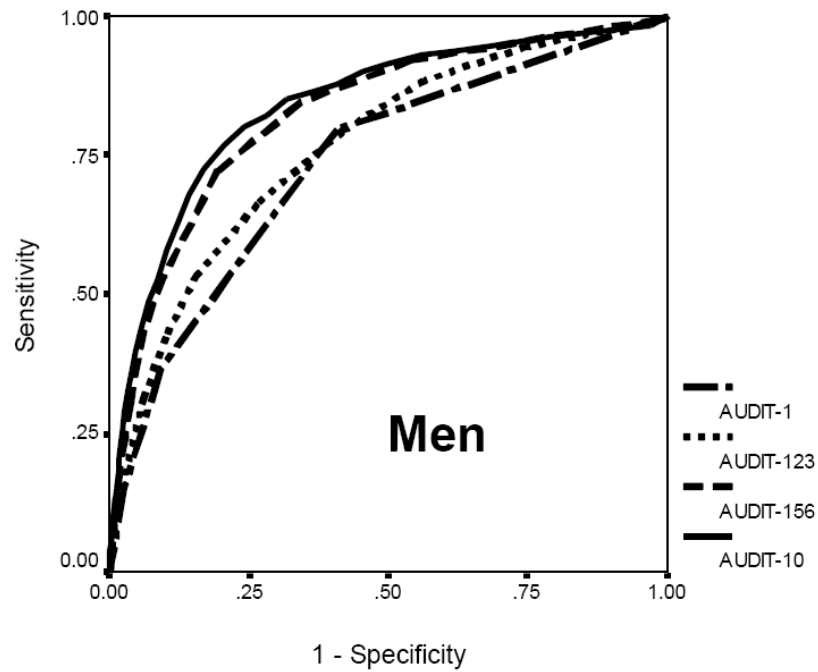
Q1: How often do you have a drink containing alcohol?

Q5: How often during the last year have you failed to do what was normally expected of you because of drinking?

Q6: How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?



ROC curves of the four forms of the AUDIT when compared with risky drinking.



ROC curves of the four forms of the AUDIT when compared with dependence

Characteristics with Category II plus as standard						
Gender	Version	Cut-off	Sensitivity	Specificity	Predictive value	Overall accuracy
Male	AUDIT-10	6+	0.90	0.56	0.25	0.61
		8+	0.86	0.63	0.28	0.66
		10+	0.82	0.69	0.30	0.71
		12+	0.76	0.75	0.33	0.75
		14+	0.70	0.81	0.38	0.80
	AUDIT-123	4+	0.82	0.4	0.27	0.66
		5+	0.74	0.77	0.34	0.76
		6+	0.63	0.86	0.43	0.83
	AUDIT-156	3+	0.84	0.68	0.30	0.70
		4+	0.75	0.80	0.39	0.80
		5+	0.62	0.90	0.50	0.86
	AUDIT-1	2+	0.84	0.56	0.28	0.60
		3+	0.56	0.92	0.59	0.86
	Female	AUDIT-10	2+	0.76	0.71	0.11
3+			0.68	0.80	0.14	0.79
4+			0.62	0.85	0.16	0.84
AUDIT-123		2+	0.73	0.74	0.12	0.74
		3+	0.59	0.86	0.16	0.84
AUDIT-156		2+	0.62	0.88	0.20	0.87
		3+	0.47	0.96	0.34	0.93
AUDIT-1		2+	0.52	0.88	0.25	0.85

Characteristics with alcohol dependence as standard						
Male	AUDIT-10	10+	0.85	0.75	0.49	0.77
		12+	0.80	0.81	0.55	0.81
		14+	0.72	0.87	0.61	0.84
	AUDIT-123	4+	0.79	0.68	0.41	0.70
		5+	0.66	0.80	0.48	0.77
		6+	0.53	0.88	0.56	0.80
	AUDIT-156	3+	0.84	0.74	0.47	0.76
		4+	0.72	0.85	0.58	0.82
		5+	0.53	0.92	0.66	0.84
	AUDIT-1	2+	0.80	0.59	0.42	0.65
		3+	0.36	0.91	0.60	0.76
	Female	AUDIT-10	2+	0.72	0.71	0.11
3+			0.66	0.80	0.15	0.79
4+			0.62	0.85	0.18	0.84
AUDIT-123		2+	0.67	0.74	0.12	0.73
		3+	0.54	0.85	0.16	0.84
AUDIT-156		2+	0.58	0.88	0.21	0.87
		3+	0.42	0.95	0.33	0.93
AUDIT-1		2+	0.39	0.87	0.20	0.83

Comparing poor with non-poor				
	Area under the curve¹	SND, p²	Sensitivity	Specificity
Category II as standard				
AUDIT-10			Score of 12+	
Poor	0.821 (0.794-0.848)	0.74, p=ns	0.80	0.74
Not poor	0.801 (0.776-0.826)		0.73	0.76
AUDIT-156			Score of 4+	
Poor	0.834 (0.807-0.861)	1.0, p=ns	0.79	0.80
Not poor	0.807 (0.782-0.833)		0.72	0.81
Dependence as standard				
AUDIT-10			Score of 12+	
Poor	0.83 (0.806-0.863)	0.71 p=ns	0.80	0.81
Not poor	0.845 (0.826-0.863)		0.79	0.82
AUDIT-156			Score of 4+	
Poor	0.823 (0.8-0.846)	0.09, p=ns	0.73	0.84
Not poor	0.825 (0.806-0.855)		0.71	0.86

Comparing rural with urban				
	Area	SND, p	Sensitive	Specificity
Category II as standard				
AUDIT-10			Score of 12+	
Rural	0.805 (0.782-0.828)	0.65, p=ns	0.76	0.75
Urban	0.820 (0.790-0.850)		0.76	0.75
AUDIT-156			Score of 4+	
Rural	0.814 (0.790-0.837)	0.67, p=ns	0.74	0.81
Urban	0.832 (0.802-0.862)		0.77	0.80
Dependence as standard				
AUDIT-10			Score of 12+	
Rural	0.842 (0.823-0.861)	0.24, p=ns	0.80	0.80
Urban	0.837 (0.815-0.859)		0.80	0.82
AUDIT-156			Score of 4+	
Rural	0.827 (0.808-0.847)	0.19, p=ns	0.74	0.85
Urban	0.823 (0.801-0.844)		0.70	0.85

		AUDIT-156	
Condition		Negative	Positive
High blood pressure	Reported (%)	23	33
	OR (95%CI)	1.5 (1.4-1.6)	
Cirrhosis of the liver	Reported (%)	6	18
	OR (95%CI)	2.4 (2.2-2.6)	
Rapid heart beat	Reported (%)	26	45
	OR (95%CI)	1.9 (1.8-2.0)	
A heart attack	Reported (%)	5	9
	OR (95%CI)	1.5 (1.3-1.7)	
A stomach ulcer	Reported (%)	7	17
	OR (95%CI)	2.0 (1.8-2.2)	
Gastritis	Reported (%)	20	30
	OR (95%CI)	1.5 (1.4-1.7)	
Pancreatitis	Reported (%)	7	18
	OR (95%CI)	2.0 (1.9-2.2)	
Head injury	Reported (%)	9	20
	OR (95%CI)	2.0 (1.9-2.2)	
Depression or low mood	Reported (%)	12	30
	OR (95%CI)	2.3 (2.2-2.5)	
Anxiety or stress	Reported (%)	25	45
	OR (95%CI)	2.0 (1.8-2.1)	

		AUDIT-156	
Treatment		Negative	Positive
Been admitted to hospital (apart from delivery of live born child)	Reported (%)	17	25
	OR (95%CI)	1.5 (1.4-1.6)	
Received medical care or treatment in a hospital emergency room	Reported (%)	2	6
	OR (95%CI)	2.0 (1.8-2.3)	
Suffered injuries that caused you to seek medical help or to cut down your usual activities for more than half a day	Reported (%)	5	17
	OR (95%CI)	2.5 (2.3-2.7)	
Admitted to a sobering up station	Reported (%)	3	31
	OR (95%CI)	4.6 (4.2-4.7)	
Received compulsory treatment for alcohol problems	Reported (%)	0.7	6
	OR (95%CI)	3.5 (3.2-3.9)	
Received treatment from a narcologist for alcohol problems	Reported (%)	1	12
	OR (95%CI)	3.9 (3.6-4.2)	
Received advice or treatment from a family doctor for alcohol problems	Reported (%)	2	13
	OR (95%CI)	3.6 (3.3-3.9)	

Only 13% of those who scored positive on AUDIT-156 had received advice or treatment from a family doctor for alcohol problems in the previous 12 months.

For those who were AUDIT-156 positive, men were much more likely than women to have received treatment from a narcologist (men 16%, women 3%, OR=3.9, 95%CI=2.6-5.8) or a family doctor (men 17%, women 5%, OR=3.0, 95%CI=2.2-4.2) for alcohol problems during the previous year.

Conclusions:

1. AUDIT-156 and AUDIT-10 performed the same
2. AUDIT performed much better for men than for women
3. AUDIT performed equally well for poor/non poor and urban/rural
4. +ve AUDIT related to self-reported health problems and self-reported experience of advice and treatment
5. +ve AUDIT identified enormous treatment gap.