



## HEALTH POLICY INITIATIVE PROJECT

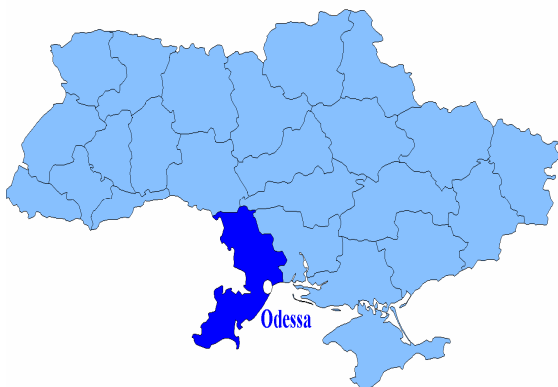
### ODESSA REGION EVALUATION REPORT, INDICATOR II-2-2

Odessa, Ukraine

Completed by: Oleksandr Neduzhko, Natalya Kitsenko

Statistical software: EpiInfo3.4, 2007

Date completed: July 08, 2007



#### INTRODUCTION

In the framework of “Health Project Initiative Project” data was collected among the Municipal and Governmental mass media of Odessa Region (Oblast), Ukraine.

#### VARIABLES

For the data analysis the following variables were used:

**Q2MediaType** – Printed, Radio or TV

**Q4Property** – Municipal or Governmental

**Q5Distribution** – Local, Regional or National

**Q7Educated** (HIV educated staff) – Yes or No

**Q71NumberEducated** (Number of HIV educated staff in each particular media, if present) – 1,2,3,4,5,6,7,8.

**Q15OdessaOther** –Odessa (City) or Other (26 districts of Odessa region)

#### DATA COLLECTION

Data was collected through the telephone interviews. Hard copy questionnaires were converted into the digital Epi2000 (.mdb) format.

#### DATA ANALYSIS

Series of data analyses were completed using EpiInfo3.4, 2007 statistical software.

Description statistics and hypothesis testing were used.



**Table 1 Mass media type**

Q2MediaType	Frequency	Percent
Printed	46	64,8%
Radio	8	11,3%
TV	17	23,9%
Total	71	100,0%

**Table 2 Mass media property**

Q4Property	Frequency	Percent
Governmental	18	25,4%
Municipal	53	74,6%
Total	71	100,0%

**Table 3 Mass media distribution**

Q5Distribution	Frequency	Percent
Local	52	73,2%
National	7	9,9%
Regional	12	16,9%
Total	71	100,0%

## DESCRIPTION STATISTICS

**In total 71 mass media were evaluated.**

From which:

Printed - 46 (64,8%);

Radio - 8 (11,3%);

Television – 17(23,9%).

**Based on property:**

Governmental – 18 (25,4%);

Municipal 53-(74,6%).

**By distribution:**

Local - 52(73,2%);

Regional -12 (16,9%);

National- 7(9,9%).

**Table 4 Governmental mass media by distribution and type**

Q5Distribution	Printed	Radio	TV	TOTAL
<b>Local</b>	2	2	2	6
Row %	33,3	33,3	33,3	100,0
Col %	28,6	33,3	40,0	33,3
<b>National</b>	4	1	1	6
Row %	66,7	16,7	16,7	100,0
Col %	57,1	16,7	20,0	33,3
<b>Regional</b>	1	3	2	6
Row %	16,7	50,0	33,3	100,0
Col %	14,3	50,0	40,0	33,3
<b>TOTAL</b>	7	6	5	18
Row %	38,9	33,3	27,8	100,0
Col %	100,0	100,0	100,0	100,0

**Table 5 Municipal mass media by distribution and type**

Q5Distribution	Printed	Radio	TV	TOTAL
<b>Local</b>	35	2	9	46
Row %	76,1	4,3	19,6	100,0
Col %	89,7	100,0	75,0	86,8
<b>National</b>	1	0	0	1
Row %	100,0	0,0	0,0	100,0
Col %	2,6	0,0	0,0	1,9
<b>Regional</b>	3	0	3	6
Row %	50,0	0,0	50,0	100,0
Col %	7,7	0,0	25,0	11,3
<b>TOTAL</b>	39	2	12	53
Row %	73,6	3,8	22,6	100,0
Col %	100,0	100,0	100,0	100,0

**The total number of Local printed media is 37**

2-Governmental;

35-Municipal.

**The total number of Regional printed media is 4**

1-Governmental;

3–Municipal.

**The total number of National printed media is 5**

4-Governmental;

1-Municipal.

**The total number of Local radio stations is 4**

2-Governmental;

2-Municipal.

**The total number of Regional radio stations is 3**

3-Governmental;

0-Municipal.

**The total number of National radio stations is 1**

1-Governmental;

0–Municipal.

**The total number of Local TV channels is 11**

2-Governmental;

9-Municipal.

**The total number of Regional TV channels is 5**

2-Governmental;

3-Municipal.

**The total number of National TV channels is 1**

1-Governmental;

0-Municipal.

**Table 6 HIV-educated staff in printed Governmental media**

Q5Distribution	Yes	No	TOTAL
<b>Local</b>	0	2	2
Row %	0,0	100,0	100,0
Col %	0,0	28,6	28,6
<b>National</b>	0	4	4
Row %	0,0	100,0	100,0
Col %	0,0	57,1	57,1
<b>Regional</b>	0	1	1
Row %	0,0	100,0	100,0
Col %	0,0	14,3	14,3
<b>TOTAL</b>	0	7	7
Row %	0,0	100,0	100,0
Col %	100,0	100,0	100,0

**Table 7 HIV-educated staff in printed Municipal media**

Q5Distribution	Yes	No	TOTAL
<b>Local</b>	21	14	35
Row %	60,0	40,0	100,0
Col %	95,5	82,4	89,7
<b>National</b>	1	0	1
Row %	100,0	0,0	100,0
Col %	4,5	0,0	2,6
<b>Regional</b>	0	3	3
Row %	0,0	100,0	100,0
Col %	0,0	17,6	7,7
<b>TOTAL</b>	22	17	39
Row %	56,4	43,6	100,0
Col %	100,0	100,0	100,0

**Table 8 HIV-educated staff in Governmental radio stations**

Q5Distribution	Yes	No	TOTAL
<b>Local</b>	0	2	2
Row %	0,0	100,0	100,0
Col %	0,0	33,3	33,3
<b>National</b>	0	1	1
Row %	0,0	100,0	100,0
Col %	0,0	16,7	16,7
<b>Regional</b>	0	3	3
Row %	0,0	100,0	100,0
Col %	0,0	50,0	50,0
<b>TOTAL</b>	0	6	6
Row %	0,0	100,0	100,0
Col %	100,0	100,0	100,0

**Table 9 HIV-educated staff in Municipal radio stations**

Q5Distribution	Yes	No	TOTAL
<b>Local</b>	0	2	2
Row %	0,0	100,0	100,0
Col %	0,0	100,0	100,0
<b>National</b>	0	0	0
Row %	0,0	0,0	100,0
Col %	0,0	0,0	0,0
<b>Regional</b>	0	0	0
Row %	0,0	0,0	100,0
Col %	0,0	0,0	0,0
<b>TOTAL</b>	0	2	2
Row %	0,0	100,0	100,0
Col %	100,0	100,0	100,0

**The total number of Local printed media with HIV-educated staff is 21**

0-Governmental;  
21-Municipal.

**The total number of Regional printed media with HIV-educated staff is 0**

0-Governmental;  
0-Municipal.

**The total number of National printed media with HIV-educated staff is 1**

0-Governmental;  
1- Municipal.

**The total number of Local radio stations with HIV-educated staff is 0**

0-Governmental;  
0-Municipal.

**The total number of Regional radio stations with HIV-educated staff is 0**

0-Governmental;  
0-Municipal.

**The total number of National radio stations with HIV-educated staff is 0**

0-Governmental;  
0-Municipal.

**The total number of Local TV channels with HIV-educated staff is 2**

1-Governmental;  
1-Municipal.

**The total number of Regional TV channels with HIV-educated staff is 0**

0-Governmental;  
0-Municipal.

**The total number of National TV channels with HIV-educated staff is 0**

0-Governmental;  
0-Municipal.

**Table 10 HIV-educated staff in Governmental TV channels**

Q5Distribution	Yes	No	TOTAL
<b>Local</b>	1	1	2
Row %	50,0	50,0	100,0
Col %	100,0	25,0	40,0
<b>National</b>	0	1	1
Row %	0,0	100,0	100,0
Col %	0,0	25,0	20,0
<b>Regional</b>	0	2	2
Row %	0,0	100,0	100,0
Col %	0,0	50,0	40,0
<b>TOTAL</b>	1	4	5
Row %	20,0	80,0	100,0
Col %	100,0	100,0	100,0

**Table 11 HIV-educated staff in Municipal TV channels**

Q5Distribution	Yes	No	TOTAL
<b>Local</b>	1	8	9
Row %	11,1	88,9	100,0
Col %	100,0	72,7	75,0
<b>National</b>	0	0	0
Row %	0,0	0,0	100,0
Col %	0,0	0,0	0,0
<b>Regional</b>	0	3	3
Row %	0,0	100,0	100,0
Col %	0,0	27,3	25,0
<b>TOTAL</b>	1	11	12
Row %	8,3	91,7	100,0
Col %	100,0	100,0	100,0

**Table 12 HIV-educated staff in Municipal mass media by type**

Q2MediaType	Yes	No	TOTAL
<b>Printed</b>	22	17	39
Row %	56,4	43,6	100,0
Col %	95,7	56,7	73,6
<b>Radio</b>	0	2	2
Row %	0,0	100,0	100,0
Col %	0,0	6,7	3,8
<b>TV</b>	1	11	12
Row %	8,3	91,7	100,0
Col %	4,3	36,7	22,6
<b>TOTAL</b>	23	30	53
Row %	43,4	56,6	100,0
Col %	100,0	100,0	100,0

The percentage of Governmental printed media with HIV-educated staff is 0%.

The percentage of Municipal printed media with HIV-educated staff is 56.4%.

The percentage of printed media with HIV-educated staff is 47.8%.

The percentage of Governmental radio stations with HIV-educated staff is 0%.

The percentage of Municipal radio stations with HIV-

**Table 13 HIV-educated staff in Governmental mass media by type**

Q2MediaType	Yes	No	TOTAL
<b>Printed</b>	0	7	7
Row %	0,0	100,0	100,0
Col %	0,0	41,2	38,9
<b>Radio</b>	0	6	6
Row %	0,0	100,0	100,0
Col %	0,0	35,3	33,3
<b>TV</b>	1	4	5
Row %	20,0	80,0	100,0
Col %	100,0	23,5	27,8
<b>TOTAL</b>	1	17	18
Row %	5,6	94,4	100,0
Col %	100,0	100,0	100,0

**Table 14 HIV-educated staff in mass media by type**

Q2MediaType	Yes	No	TOTAL
<b>Printed</b>	22	24	46
Row %	47,8	52,2	100,0
Col %	91,7	51,1	64,8
<b>Radio</b>	0	8	8
Row %	0,0	100,0	100,0
Col %	0,0	17,0	11,3
<b>TV</b>	2	15	17
Row %	11,8	88,2	100,0
Col %	8,3	31,9	23,9
<b>TOTAL</b>	24	47	71
Row %	33,8	66,2	100,0
Col %	100,0	100,0	100,0

educated staff is 0%.

The percentage of radio stations with HIV-educated staff is 0%.

The percentage of Governmental TV channels with HIV-educated staff is 20%.

The percentage of municipal TV channels with HIV-educated staff is 8.33%.

The percentage of TV channels with HIV-educated staff is 11.8%.

**Table 15 Overall percentage of mass media with HIV-educated staff**

Q7Educated	Frequency	Percent
<b>Yes</b>	24	33,8%
<b>No</b>	47	66,2%
<b>Total</b>	71	100,0%

The overall percentage of mass media with HIV-educated staff is 33.8%

**Descriptive Statistics for Each Value of Crosstab Variable**

	Obs	Total	Mean	Variance	Std Dev
Governmental	18	8,0000	,4444	3,5556	1,8856
Municipal	53	51,0000	,9623	2,9985	1,7316

**ANOVA, a Parametric Test for Inequality of Population Means**

(For normally distributed data only)

Variation	SS	df	MS	F statistic
Between	3,6029	1	3,6029	1,1490
Within	216,3690	69	3,1358	
Total	219,9718	70		

T Statistic = 1,0719

P-value = 0,2875

## HYPOTHESIS TESTING

### Hypothesis #1

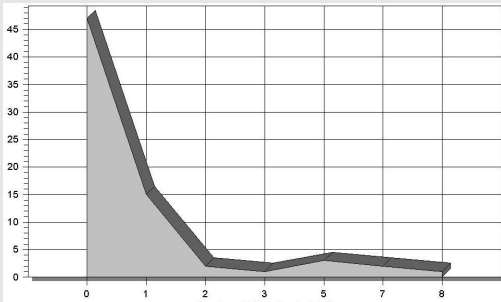
Define Parameters:  $\mu_{diff}$  = true average difference of HIV-educated staff (Governmental versus Municipal)

$H_0: \mu_{diff} = 0$  (There is no difference in average number of HIV-educated staff between Municipal and Governmental mass media in Odessa region)

$H_a: \mu_{diff} > 0$  (There is difference in average number of HIV-educated staff between Municipal and Governmental mass media in Odessa region)

**Bartlett's Test for Inequality of Population Variances**

Bartlett's chi square= 0,1873 df=1 P value=0,6652



**Mann-Whitney/Wilcoxon Two-Sample Test (Kruskal-Wallis test for two groups)**

Kruskal-Wallis H (equivalent to Chi square) =	7,1230
Degrees of freedom =	1
P value =	0,0076

Name of the test: Wilcoxon Signed Rank Test

Justification for using this particular test: even the variances are approximately equal (Bartlett's Test for Inequality of Population Variances shows p value=0,6652, which is more than 0,05), but variables are not normally distributed.

Wilcoxon Signed Rank Test p-value=0,0076

Decision: Reject H<sub>0</sub>. We have evidence to show that the true average difference is greater than zero.

**That is, municipal mass media has in average higher number of HIV-educated staff.**

**Descriptive Statistics for Each Value of Crosstab Variable**

	Obs	Total	Mean	Variance	Std Dev
Odessa	1	4,0000	4,0000	,0000	,0000
Other	26	55,0000	2,1154	8,1062	2,8471

**ANOVA, a Parametric Test for Inequality of Population Means**

(For normally distributed data only)

Variation	SS	df	MS	F statistic
Between	3,4202	1	3,4202	0,4219
Within	202,6538	25	8,1062	
Total	206,0741	26		

T Statistic = 0,6496

P-value = 0,5219

**Hypothesis #2**

Define Parameters:  $\mu_{diff}$  = true average difference of HIV-educated staff (Odessa city versus other 26 districts of Odessa region)

H<sub>0</sub>:  $\mu_{diff}=0$  (There is no difference in average number of HIV- educated staff between Odessa city and district's mass media in Odessa region)

H<sub>a</sub>:  $\mu_{diff}>0$  (There is difference in average number of HIV- educated staff between Odessa city and district's mass media in Odessa region)

Name of the test: Wilcoxon Signed Rank Test

Justification for using this particular test: even the variances are approximately equal (Bartlett's Test for Inequality of Population Variances shows p value=1,0000, which is more than 0,05), but variables are not normally distributed.

Wilcoxon Signed Rank Test p-value=0,3513

Decision: Do not reject H<sub>0</sub>. We have evidence to show that the true average difference equals zero.

**Thus, Odessa city and district's mass media have in average the same number of HIV- educated staff.**

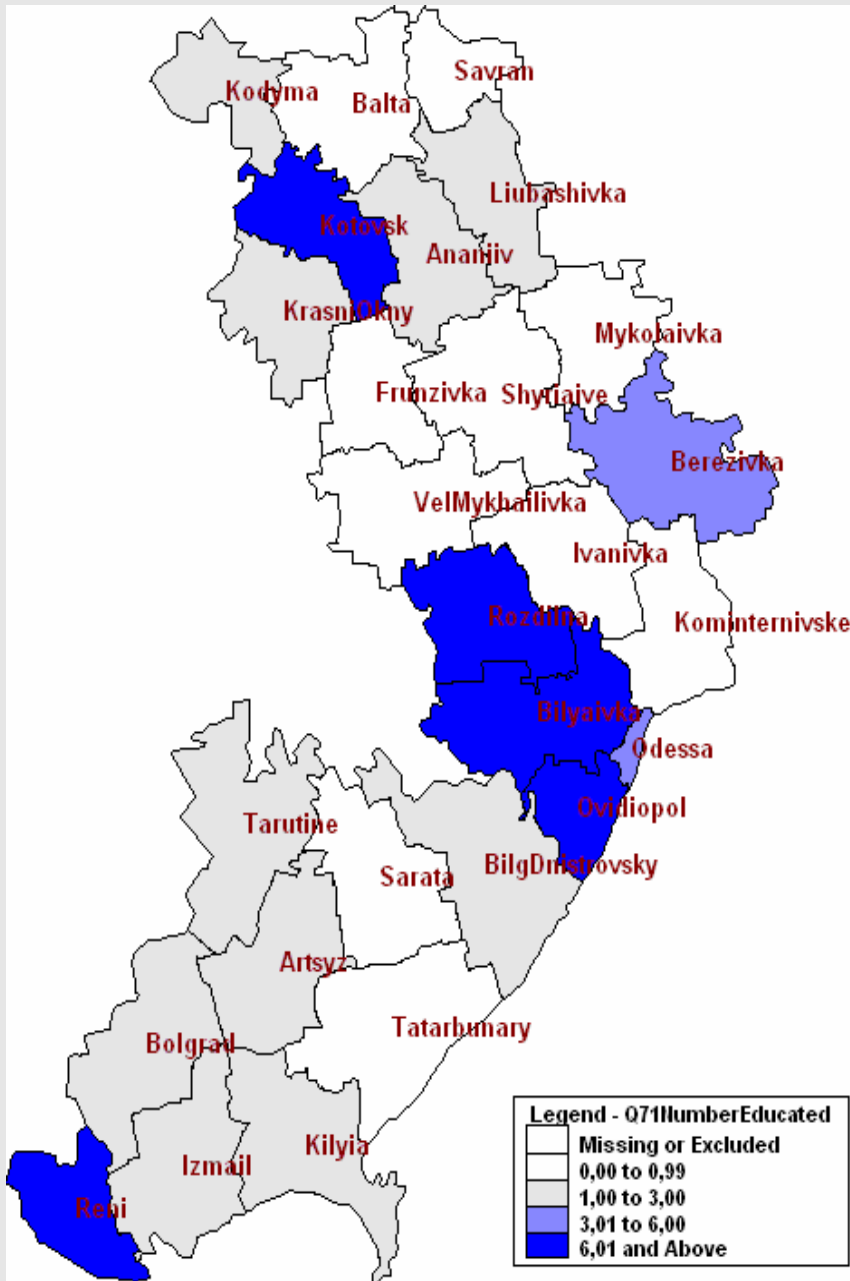
**Bartlett's Test for Inequality of Population Variances**

Bartlett's chi square= 0,0000 df=1 P value=1,0000

**Mann-Whitney/Wilcoxon Two-Sample Test (Kruskal-Wallis test for two groups)**

Kruskal-Wallis H (equivalent to Chi square) =	,8687
Degrees of freedom =	1
P value =	0,3513

**Number of HIV - educated staff in Odessa city and different districts of Odessa region**



**Odessa Region  
Ukraine 2007**

**SUMMARY**

71 Municipal and Governmental mass media are located in Odessa region.

24 (33.8%) mass media have HIV- educated staff.

Municipal mass media have in average higher number of HIV- educated staff compared to Governmental.

Odessa city and district's mass media have in average the same number of HIV- educated staff.

10 (38.5%) districts of Odessa region do not have Municipal and Governmental mass media with HIV- educated staff.

For additional information contact  
Dr.Oleksandr Neduzhko  
[on@hivmed.od.ua](mailto:on@hivmed.od.ua)  
[www.hivmed.od.ua](http://www.hivmed.od.ua)  
"FUTURE WITHOUT AIDS"