



## Clinical trial results:

### Treating gambling disorder with as needed administration of intranasal naloxone: a pilot study to evaluate acceptability, feasibility and outcomes

#### Summary

EudraCT number	2016-001828-56
Trial protocol	FI
Global end of trial date	30 May 2017

#### Results information

Result version number	v1 (current)
This version publication date	28 May 2022
First version publication date	28 May 2022
Summary attachment (see zip file)	NalPilo results (Nalpilo results - PDF.docx)

#### Trial information

##### Trial identification

Sponsor protocol code	NalPilo
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##### Additional study identifiers

ISRCTN number	-
ClinicalTrials.gov id (NCT number)	-
WHO universal trial number (UTN)	-

Notes:

#### Sponsors

Sponsor organisation name	Finnish Institute for Health and Welfare
Sponsor organisation address	PL 30, Mannerheimintie 166, Helsinki, Finland, 00271
Public contact	Sari Castrén, National Institute for Health and Welfare, sari.castren@thl.fi
Scientific contact	Sari Castrén, National Institute for Health and Welfare, +358 295248525, sari.castren@thl.fi

Notes:

#### Paediatric regulatory details

Is trial part of an agreed paediatric investigation plan (PIP)	No
Does article 45 of REGULATION (EC) No 1901/2006 apply to this trial?	No
Does article 46 of REGULATION (EC) No 1901/2006 apply to this trial?	No

Notes:

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**Results analysis stage**

Analysis stage	Final
Date of interim/final analysis	02 January 2017
Is this the analysis of the primary completion data?	No

Global end of trial reached?	Yes
Global end of trial date	30 May 2017
Was the trial ended prematurely?	No

Notes:

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**General information about the trial**

Main objective of the trial:

Pilot study, no control group

Protection of trial subjects:

Close monitor of the subjects well being.

Background therapy: -

Evidence for comparator: -

Actual start date of recruitment	22 August 2016
Long term follow-up planned	No
Independent data monitoring committee (IDMC) involvement?	No

Notes:

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**Population of trial subjects**

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**Subjects enrolled per country**

Country: Number of subjects enrolled	Finland: 20
Worldwide total number of subjects	20
EEA total number of subjects	20

Notes:

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**Subjects enrolled per age group**

In utero	0
Preterm newborn - gestational age < 37 wk	0
Newborns (0-27 days)	0
Infants and toddlers (28 days-23 months)	0
Children (2-11 years)	0
Adolescents (12-17 years)	0
Adults (18-64 years)	20
From 65 to 84 years	0
85 years and over	0

## Subject disposition

### Recruitment

Recruitment details:

Study participants were recruited by newspaper and online advertisements. Online advertisements were sent to organisations that offer treatment or support services to gamblers seeking help, including Helsinki Gambling Clinic, A-Clinic Foundation (offers treatments for addictions), Peluuri (national gambling helpline) and newspaper advertisements

### Pre-assignment

Screening details:

The inclusion criteria were last-year gambling problem at prescreening (SOGS  $\geq 5$ ), age  $>18$  years, able to provide written informed consent, criteria met for GD (Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5))<sup>1</sup> as assessed by clinician interview.

### Period 1

Period 1 title	Overall trial (overall period)
Is this the baseline period?	Yes
Allocation method	Non-randomised - controlled
Blinding used	Double blind
Roles blinded	Subject, Investigator, Monitor, Data analyst

Blinding implementation details:

The subjects (n=20) were allocated (in an alternating sequence) by the study physician 1:1 into two groups: subjects in group A were instructed to take one dose into one nostril (2mg naloxone), up to four times per day (max. 8mg/day) with at least 2hours between each dose. Subjects in group B were instructed to take one dose into both nostrils (4mg naloxone), up to four times per day (max. 16mg/day) with at least 2hours between each dose.

### Arms

Are arms mutually exclusive?	Yes
<b>Arm title</b>	group B

Arm description:

group B were instructed to take one dose into both nostrils (4mg naloxone), up to four times per day (max. 16mg/day) with at least 2hours between each dose.

Arm type	Active comparator
Investigational medicinal product name	Naloxone hydrochloride nasal spray
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Nasal spray, solution
Routes of administration	Intranasal use

Dosage and administration details:

group A were instructed to take one dose into one nostril (2mg naloxone), up to four times per day (max. 8mg/day) with at least 2hours between each dose.

<b>Arm title</b>	group A
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Arm description:

group A were instructed to take one dose into one nostril (2mg naloxone), up to four times per day

(max. 8mg/day) with at least 2hours between each dose.

Arm type	Active comparator
Investigational medicinal product name	Naloxone hydrochloride nasal spay
Investigational medicinal product code	
Other name	
Pharmaceutical forms	Nasal spray
Routes of administration	Intranasal use

Dosage and administration details:

group A were instructed to take one dose into one nostril (2mg naloxone), up to four times per day (max. 8mg/day) with at least 2hours between each dose.

<b>Number of subjects in period 1</b>	group B	group A
Started	10	10
Completed	10	10

## Baseline characteristics

### Reporting groups

Reporting group title	Overall trial
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Reporting group description:

Eleven of the 20 subjects were female. The average age was 44 years (n=18) (median=47, range 18-74, Q1=40.25, Q3=55.50, IQR=15.25). Eleven of the subjects were married or cohabited, 9 had only a primary school education and 14 were working.

Reporting group values	Overall trial	Total	
Number of subjects	20	20	
Age categorical			
The average age was 44 years (n=18) (median=47, range 18-74, Q1=40.25, Q3=55.50, IQR=15.25).			
Units: Subjects			
Adults (18-64 years)	20	20	
Gender categorical			
Eleven of the 20 subjects were female.			
Units: Subjects			
Female	11	11	
Male	9	9	

## End points

### End points reporting groups

Reporting group title	group B
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Reporting group description:

group B were instructed to take one dose into both nostrils (4mg naloxone), up to four times per day (max. 16mg/day) with at least 2hours between each dose.

Reporting group title	group A
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Reporting group description:

group A were instructed to take one dose into one nostril (2mg naloxone), up to four times per day (max. 8mg/day) with at least 2hours between each dose.

### Primary: SOGS

End point title	SOGS
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End point description:

The SOGS (related to gambling behaviours during the trial Scoring: of the SOGS screen was as follows: (1) 0=no problem with gambling, 1–4 some problems with gambling, 5 or more=probable pathological gambler

End point type	Primary
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End point timeframe:

8 weeks

End point values	group B	group A		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	8	10		
Units: 0-5	12	11		

### Statistical analyses

Statistical analysis title	Statistical analysis
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Statistical analysis description:

n, 18; t-test, male/female p value; Wilcoxon's test: age, SOGS (last 12 months) (score:  $\geq 5$ , probable pathological gambler),

Comparison groups	group B v group A
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Number of subjects included in analysis	18
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Analysis specification	Pre-specified
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Analysis type	non-inferiority <sup>[1]</sup>
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P-value	< 0.01
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Method	Wilcoxon (Mann-Whitney)
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Parameter estimate	Wilcoxon
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Confidence interval	
sides	2-sided
upper limit	95

Notes:

[1] - SOGS, median;

(first and third quartiles)

All: 12.00; (10.00, 13.75)

group A:12.00; (10.75, 14.25)

group B:11.50; (10.0, 13.0)

n, 18; t-test, male/female p value; Wilcoxon's test: age, SOGS (last 12 months) (score:  $\geq 5$ , probable pathological gambler),

## Secondary: BDI

End point title	BDI
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End point description:

, BDI (score: 1-9=nodepression; 10-

18=milddepression; 19-29=moderatedepression; 30-63=severedepression)

End point type	Secondary
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End point timeframe:

8 weeks

End point values	group B	group A		
Subject group type	Reporting group	Reporting group		
Number of subjects analysed	8	10		
Units: 1-63	9	5		

## Statistical analyses

No statistical analyses for this end point

## Adverse events

### Adverse events information

Timeframe for reporting adverse events:

Subjects were followed up 8 week period for any possible adverse events.

Adverse event reporting additional description:

Please see the published article: Alho et al.

Assessment type	Systematic
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### Dictionary used

Dictionary name	MedDRA
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Dictionary version	1
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### Reporting groups

Reporting group title	Group A
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Reporting group description:

18 subjects included in the final analysis 8 in group A and 10 in group B

Reporting group title	Group B
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Reporting group description:

18 subjects were included in the final analysis 8 group A , 10 group B

Serious adverse events	Group A	Group B	
Total subjects affected by serious adverse events			
subjects affected / exposed	0 / 8 (0.00%)	0 / 10 (0.00%)	
number of deaths (all causes)	0	0	
number of deaths resulting from adverse events	0	0	

Frequency threshold for reporting non-serious adverse events: 0 %

Non-serious adverse events	Group A	Group B	
Total subjects affected by non-serious adverse events			
subjects affected / exposed	4 / 8 (50.00%)	6 / 10 (60.00%)	
Product issues			
Headache			
subjects affected / exposed	4 / 8 (50.00%)	6 / 10 (60.00%)	
occurrences (all)	1	1	

## More information

### Substantial protocol amendments (globally)

Were there any global substantial amendments to the protocol? No

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### Interruptions (globally)

Were there any global interruptions to the trial? No

### Limitations and caveats

Limitations of the trial such as small numbers of subjects analysed or technical problems leading to unreliable data.

Other limitations of our study include lack of a placebo control, a small study size and the use of self-report. The small sample size also prevented us from detecting statistically significant differences between the groups.
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Notes: