

**BLOOD DONATION OR BLOOD DONOR DEFERRAL
BASED ON DATA ON NONCONFORMITIES DETECTED
IN POST-SELECTION PERIOD
(DURING AND AFTER BLOOD COLLECTION)**

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CROATIA**

or...

HOW IMPORTANT IS THE COMMUNICATION WITH BLOOD DONORS?

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BLOOD DONOR SELECTION

Important role in:

- quality assurance
- blood product safety
- donor health protection

SELECTION CRITERIA

- clearly defined
- all activities described in details in SOPs
- written questionnaire
 - standardization

QUESTIONNAIRE

- clear
- unambiguous
- reasonably detailed
- regularly revised



NONCONFORMITIES
RECORDED DURING
AND AFTER
COLLECTION!

DONOR EDUCATION

- selection criteria
- self-exclusion
- reporting of any information on a possible inappropriateness of the donated blood utilization in transfusion treatment

OBJECTIVES

- There is little literature data on the information learned from donors during and after blood collection, which were not detected or were kept back in the process of selection.

METHODS

- data of the Croatian Institute of Transfusion Medicine (CITM) Department of Quality Assurance
- donor-related nonconformities, based on information on the possible risks for blood donation, detected in the post-selection period (during or after blood collection)
- retrospective analysis
- nonconformity reports
- 10-year period (2001-2010)

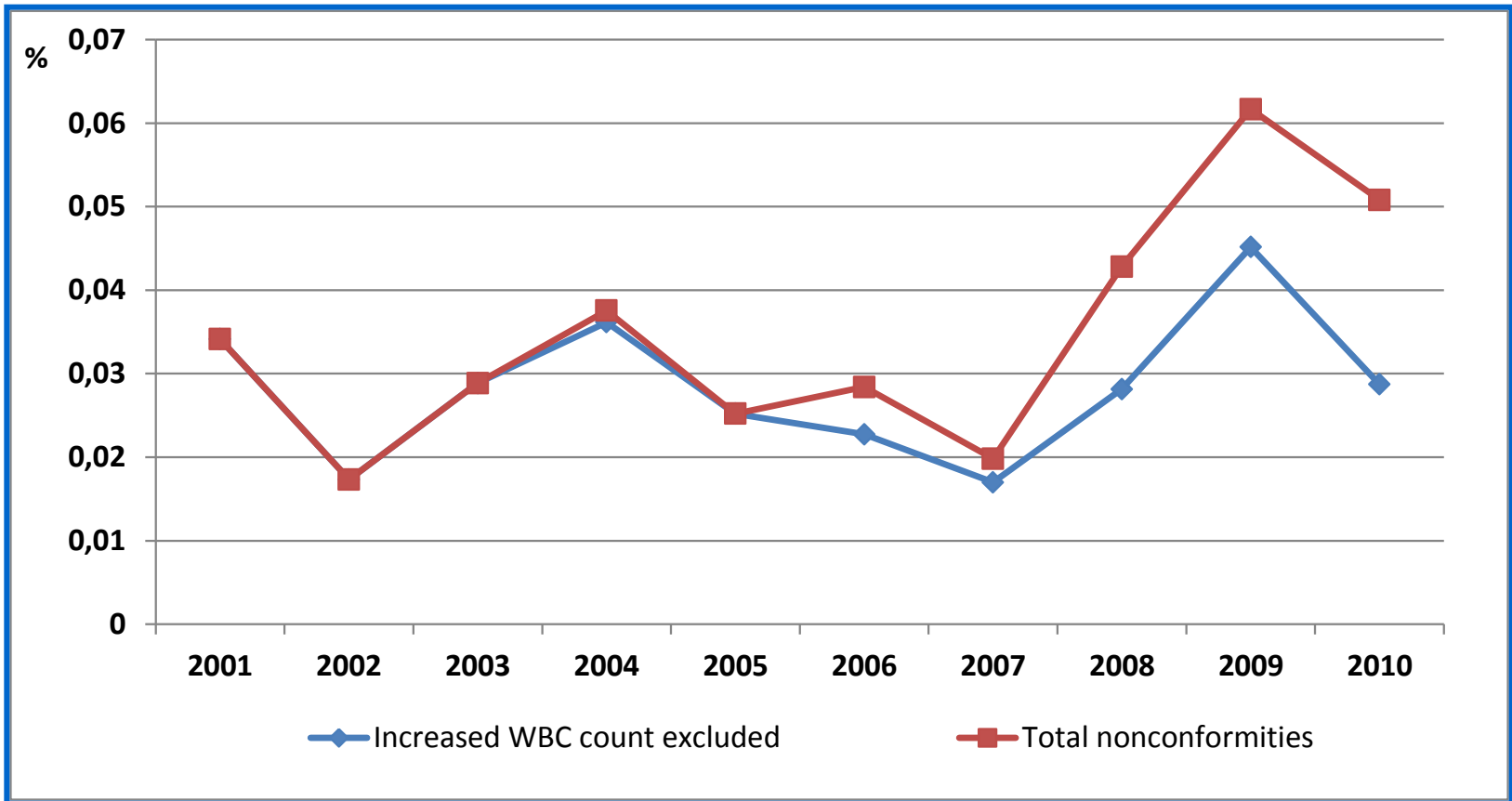
RESULTS

Nonconformity	n	%
Elevated leukocyte count (complete blood count performed in whole blood donors to be included in the program of apheresis)	54	19.9
Demonstrated or suspected infection (the agents routinely tested in donated blood excluded)	41	15.1
Risky sexual behavior	31	11.4
Blood donation for blood testing	15	5.5
Drugs and vaccinations	14	5.1
Alcohol intoxication	13	4.8
Recent surgical procedure or invasive diagnostic examinations	13	4.8
Sharing household or sexual affair with individuals suffering from viral hepatitis	13	4.8
Skin diseases (including allergies)	8	2.9
Mental illnesses	8	2.9
Liver disease suspected, including viral hepatitis	7	2.6
Tattoo, acupuncture, accidental needle pricks	7	2.6
Demonstrated or suspected malignancy	5	1.8
Other	43	15.8
Total	272	100.0

RESULTS

- Total donor deferral rate: **11.4%** (10.2 – 12.7%)
- **272** donor-related nonconformities during or after blood collection:
- **0.03%** of donors presenting for blood donation
- **0,04%** of blood donors donated blood

RESULTS – FREQUENCY OF NONCONFORMITIES



WBC (CBC) DETERMINATION

1. at the beginning of each apheresis procedure
2. **WB donors** – candidates for apheresis program

Increased WBC count:

- BP nonconformity
- donor notification

WBC-WB DONORS

Elevated WBC count

Total: 54 (M=36, F=17)

WBC count available: 44

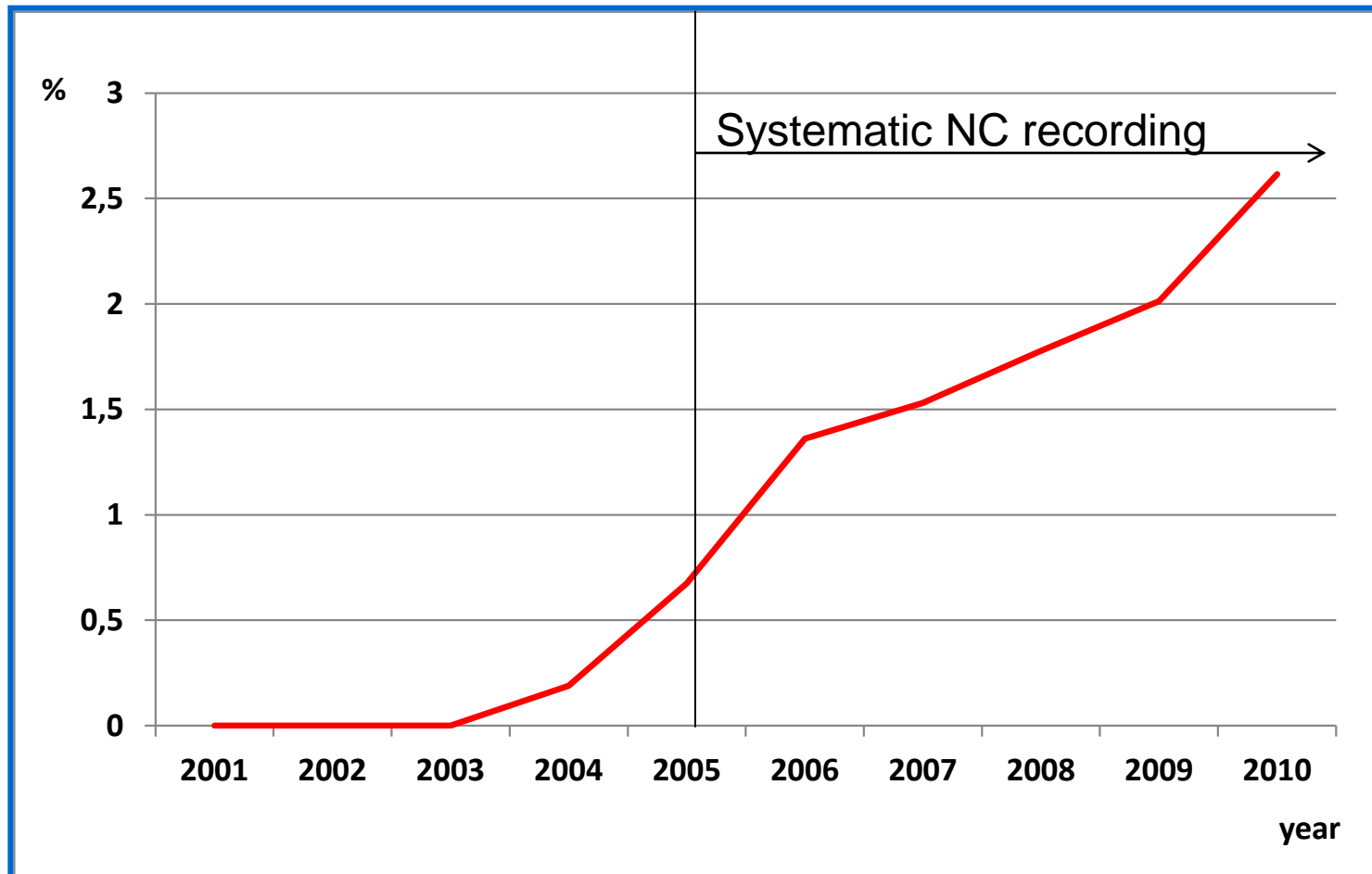
Upper limit: 9.70

WBC count	N	%
≤ 10.0	2	5
10.1-10.5	7	16
10.6-11.0	11	25
11.1-11.5	3	7
11.6-12.0	5	11
12.1-13.0	10	23
≥13.1	6	14

} 46%

Donors	Donations	WBC count	Age
Average	19	11.8	33
Range	1-76	9.72-16.4	19-61

APHERESIS PROCEDURES INTERRUPTED DUE TO INCREASED WBC COUNT



APHERESIS PROCEDURES INTERRUPTED DUE TO INCREASED WBC COUNT

- Donors: 119
 - Donations:
- Total: 173 (M=145, F=28)
WBC count available: 149

WBC count	N	%
≤ 10.0	11	7
10.1	5	3
10.2	13	9
10.3	17	11
10.4	11	7
10.5	5	3
10.6	7	5
10.7	8	5
10.8	7	5
10.9	5	3
11.0	5	3
11.1-11.5	18	12
11.6-12.0	10	7
12.1-13.0	15	10
≥13.1	12	8

10% ↑
52%

APHERESIS PROCEDURES INTERRUPTED DUE TO INCREASED WBC COUNT

M	WBC count	N	%	F	WBC count	N	%
	≤ 10.0	9	7		64%	≤ 10.0	2
10.1	3	2		10.1	2	8	
10.2	11	9		10.2	2	8	
10.3	15	12		10.3	2	8	
10.4	9	7		10.4	2	8	
10.5	5	4		10.5	0	0	
10.6	7	6		10.6	0	0	
10.7	6	5		10.7	2	8	
10.8	7	6		10.8	0	0	
10.9	4	3		10.9	1	4	
11.0	3	2		11.0	2	8	
11.1-11.5	14	11		11.1-11.5	4	16	
11.6-12.0	8	6		11.6-12.0	2	8	
12.1-13.0	14	11		12.1-13.0	1	4	
≥13.1	9	7		≥13.1	3	12	

APHERESIS PROCEDURES INTERRUPTED DUE TO INCREASED WBC COUNT

M	Donors	Donations	WBC count	Age
	Average	72	11.1	42
	Range	3-361	9.71-15.1	21-65

F	Donors	Donations	WBC count	Age
	Average	40	11.2	37
	Range	11-175	9.97-15.0	22-59

All	Donors	Donations	WBC count	Age
	Average	67	11.1	41
	Range	3-361	9.71-15.1	21-65

APHERESIS PROCEDURES INTERRUPTED DUE TO INCREASED WBC COUNT

M

Increased WBC count	Donors	
	N	%
1 x	71	71.0
2 x	19	19.0
3 x	5	5.0
4 x	4	4.0
5 x	1	1.0

Donors: 100
Donations: 145
WBC available: 124

F

Increased WBC count	Donors	
	N	%
1 x	12	63.2
2 x	5	26.3
3 x	2	10.5
4 x	0	0.0
5 x	0	0.0

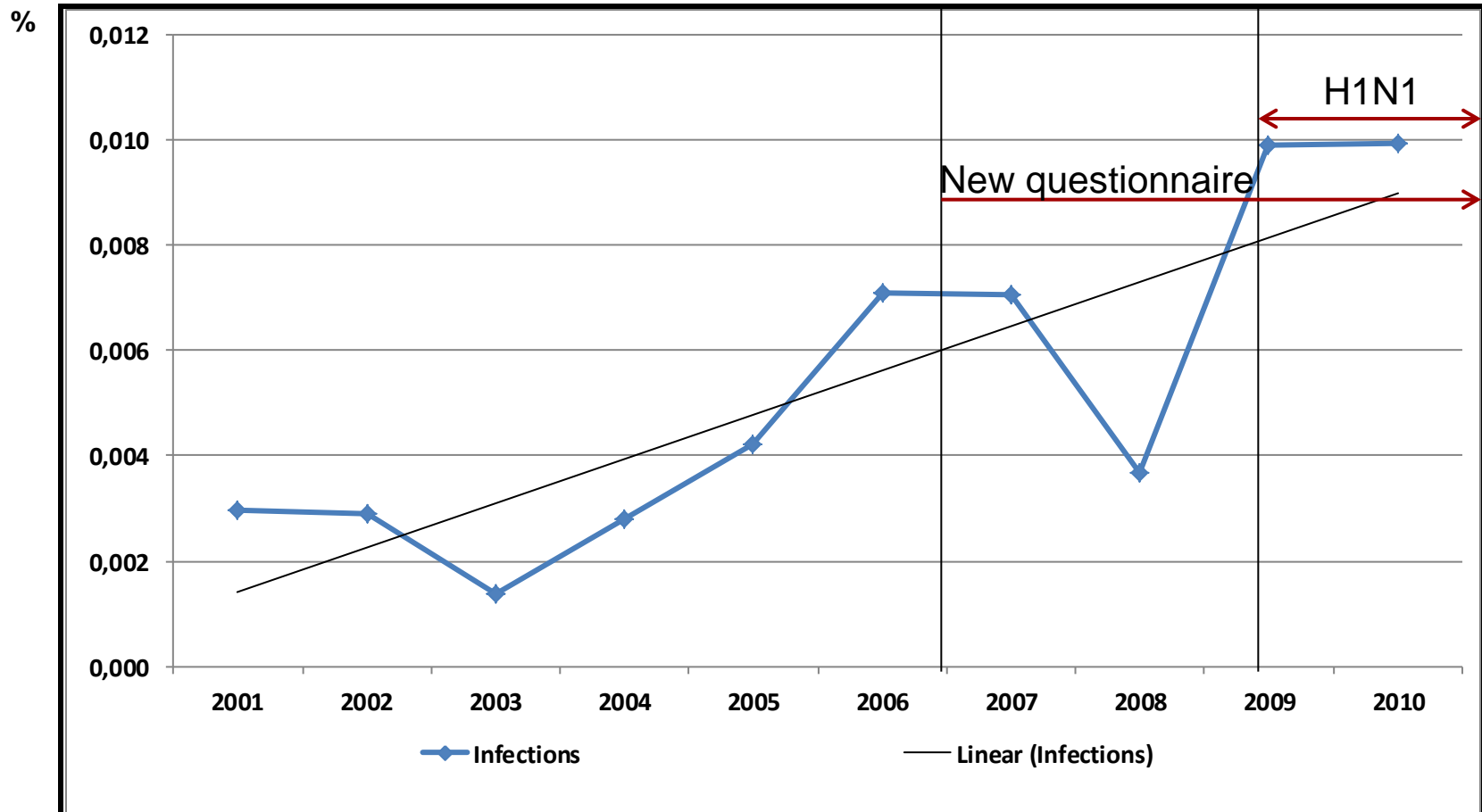
Donors: 19
Donations: 28
WBC available: 25

All

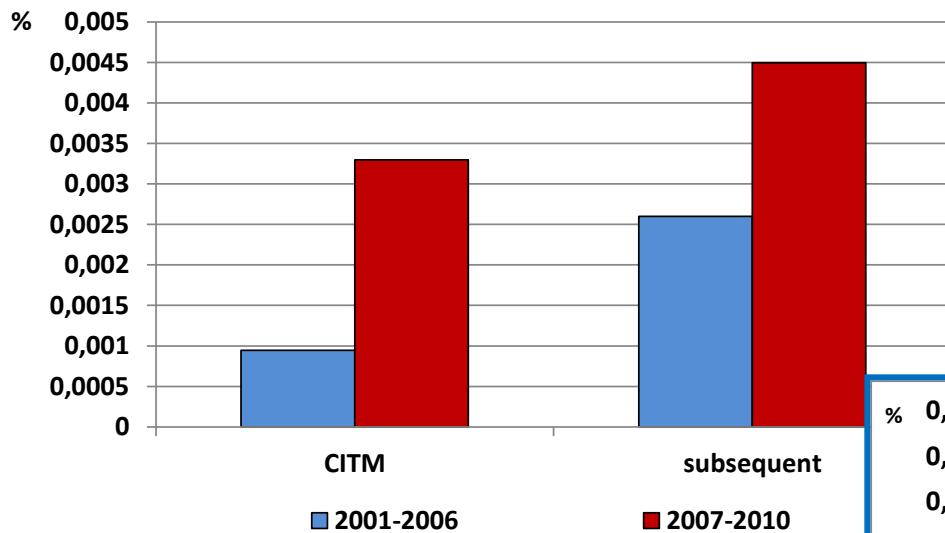
Increased WBC count	Donors	
	N	%
1 x	83	69.7
2 x	24	20.2
3 x	7	5.9
4 x	4	3.4
5 x	1	0.8

Donors: 119
Donations: 173
WBC available: 149

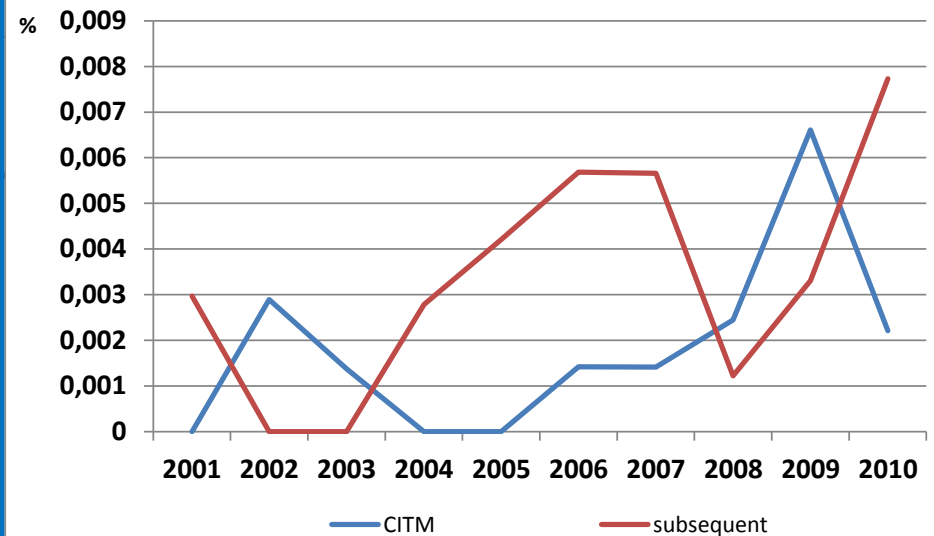
RESULTS - INFECTIONS



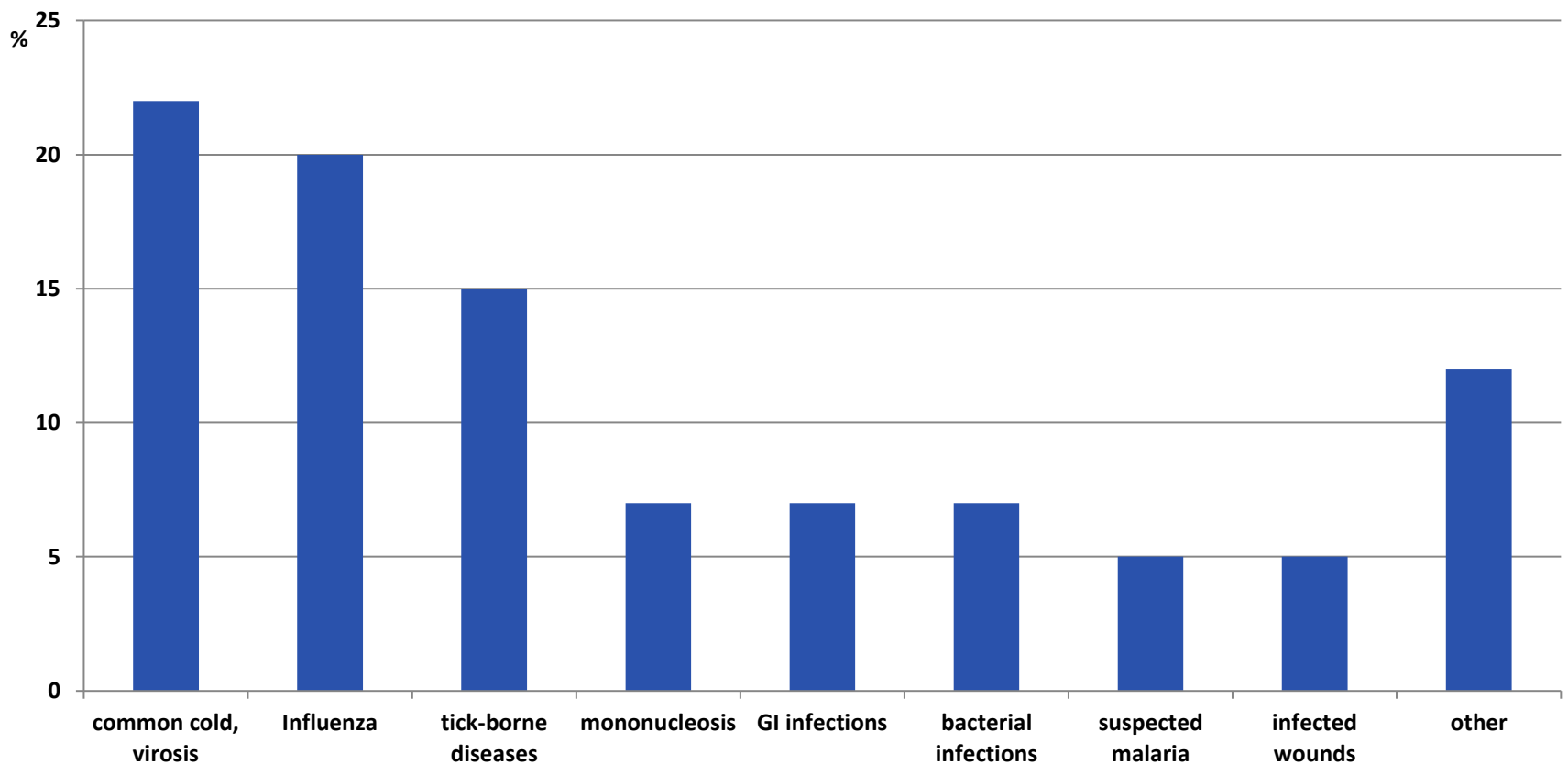
RESULTS-INFECTIONS



2007 – revision of the questionnaire

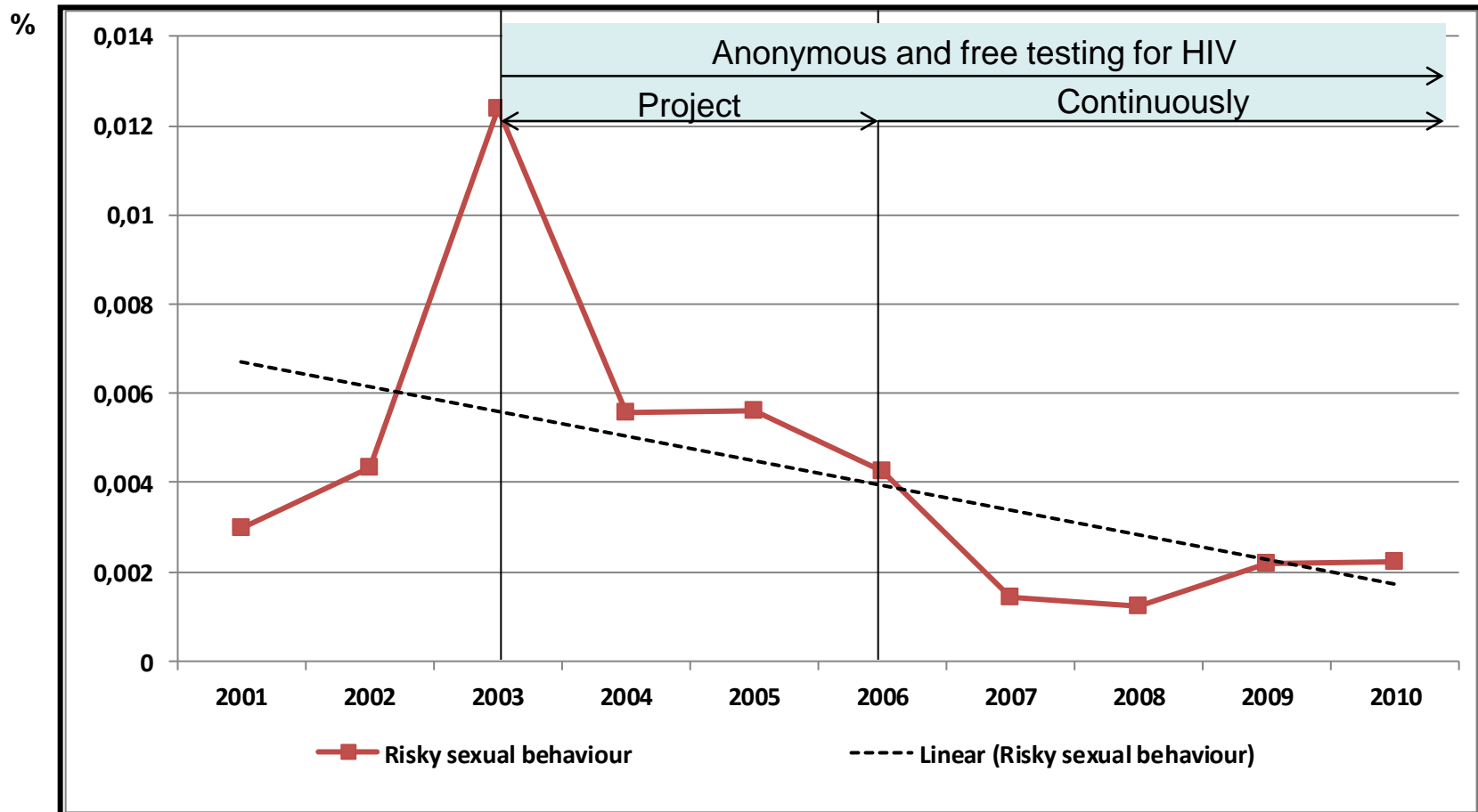


RESULTS-INFECTIONS

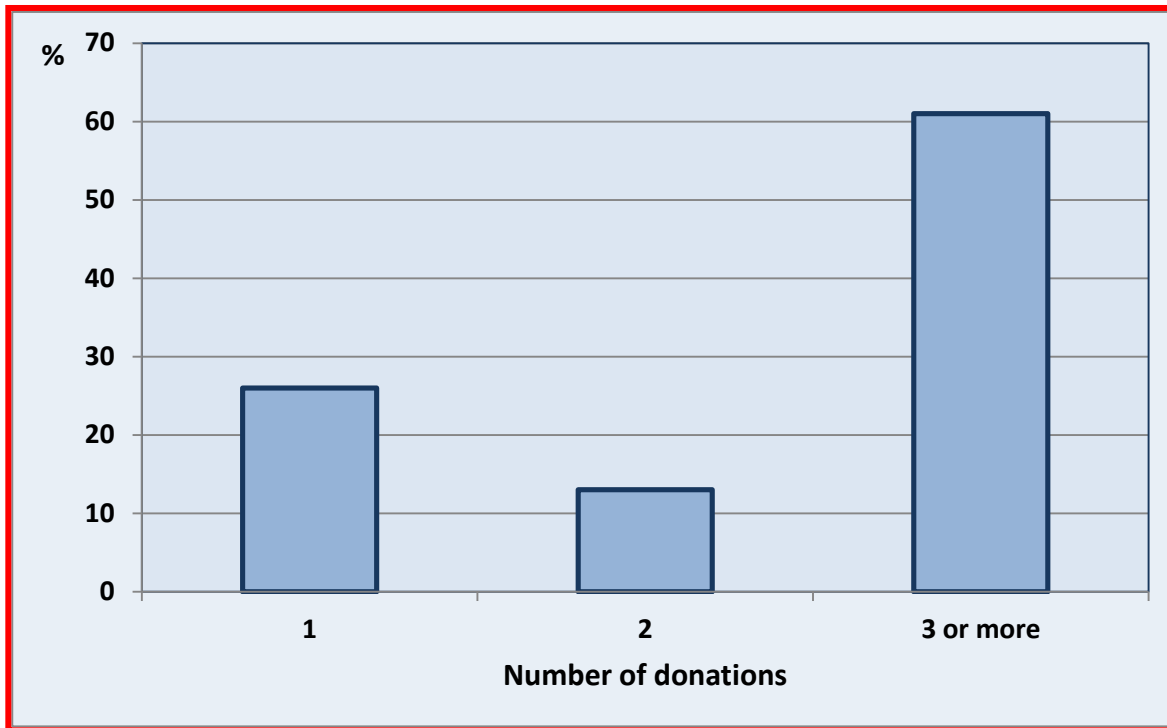


RESULTS – RISKY SEXUAL BEHAVIOUR

N = 31

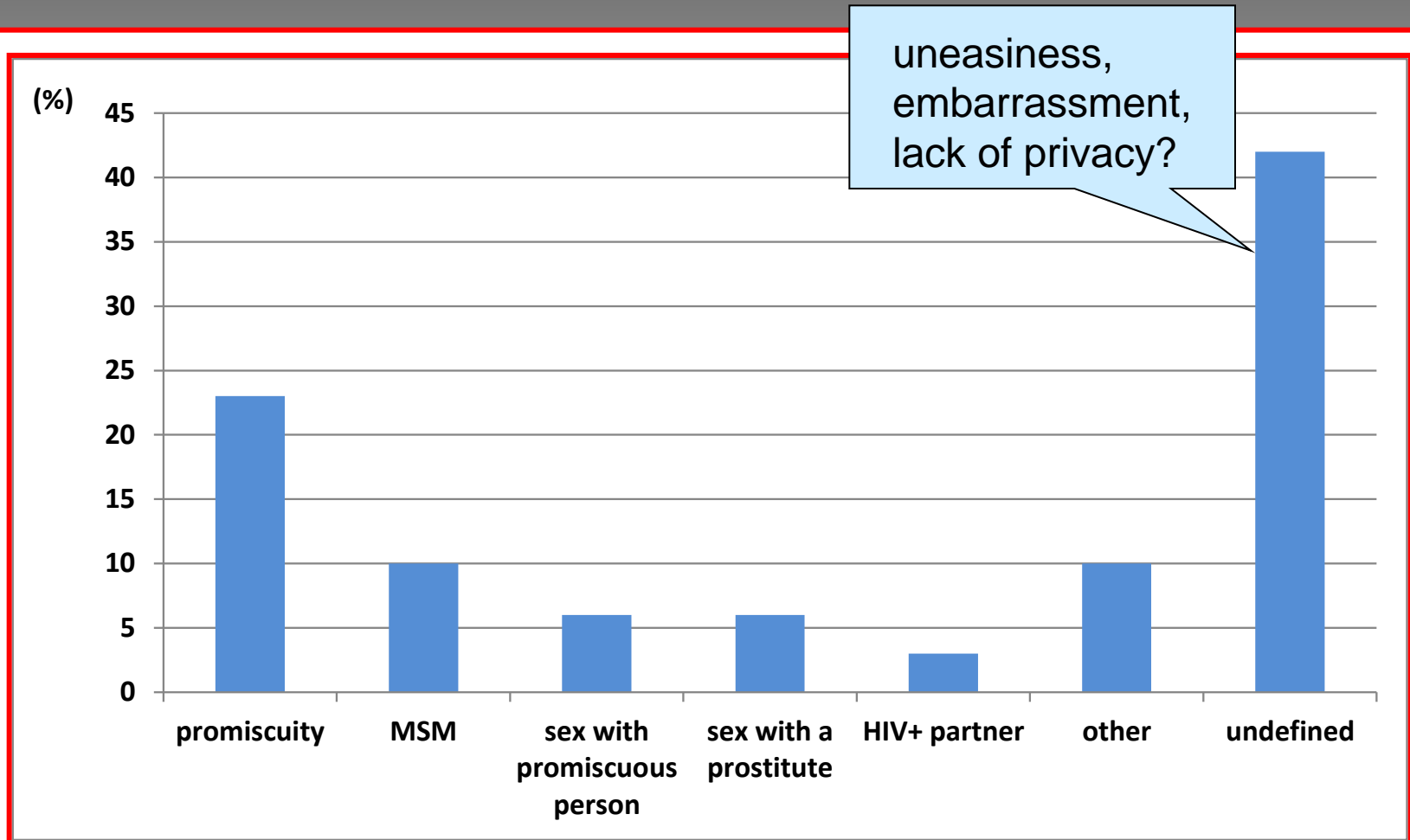


RESULTS – RISKY SEXUAL BEHAVIOUR



~40% first two donations

RESULTS – RISKY SEXUAL BEHAVIOUR



DONOR DATA

Infections

		CITM		Subsequent		Total	
		M	F	M	F	M	F
N		12	3	23	3	35	6
Mean No of donations		21	40	22	26	22	33
Mean age		32	45	34	44	33	45

Risky sexual behaviour

		CITM		Subsequent		Total	
		M	F	M	F	M	F
N		16	5	10	0	26	5
Mean No of donations		7	6	16	-	10	6
Mean age		34	35	33	-	34	35

C O R R E C T I O N S

Nonconformity	n	%
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CONCLUSION

Donor-related nonconformities:

1. Failures in the process of donor selection



2. Communication with donors during the blood donation



CONCLUSION

- Increased WBC count:
 - appropriateness of the current procedure?
 - repeatedly elevated WBC count: detailed anamnesis (physiological/pathological condition?)
 - predonation screening (capillary blood)?
- Suspected infection:
 - revision of the questionnaire: acute and chronic infections
 - temperature measurement?
- Risky sexual behaviour:
 - information about the possibility of free and anonymous testing (leaflets, posters, questionnaire..)
 - education (testing limitations: window period, STD transmission...)

CONCLUSION

- further improvement of the questionnaire (additional questions or explanations of particular conditions and diseases):
 - liver diseases
 - alcohol intoxication
 - sharing household or sexual affair with individuals suffering from viral hepatitis
 - tick-borne diseases
- inclusion of this category of nonconformities as a quality indicator
- communication with blood donors
- donor education

THANK YOU!