

An outbreak of measles among unvaccinated children aged 3 -15 months in a nursery (Antwerp, 2014)



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Background

- Measles is serious disease
- Unfrequent in Belgium
- High vaccination coverage
- Outbreaks in Europe ↑
- (not yet) unvaccinated young children (3-12 m) are at risk
- Why here?



Intake

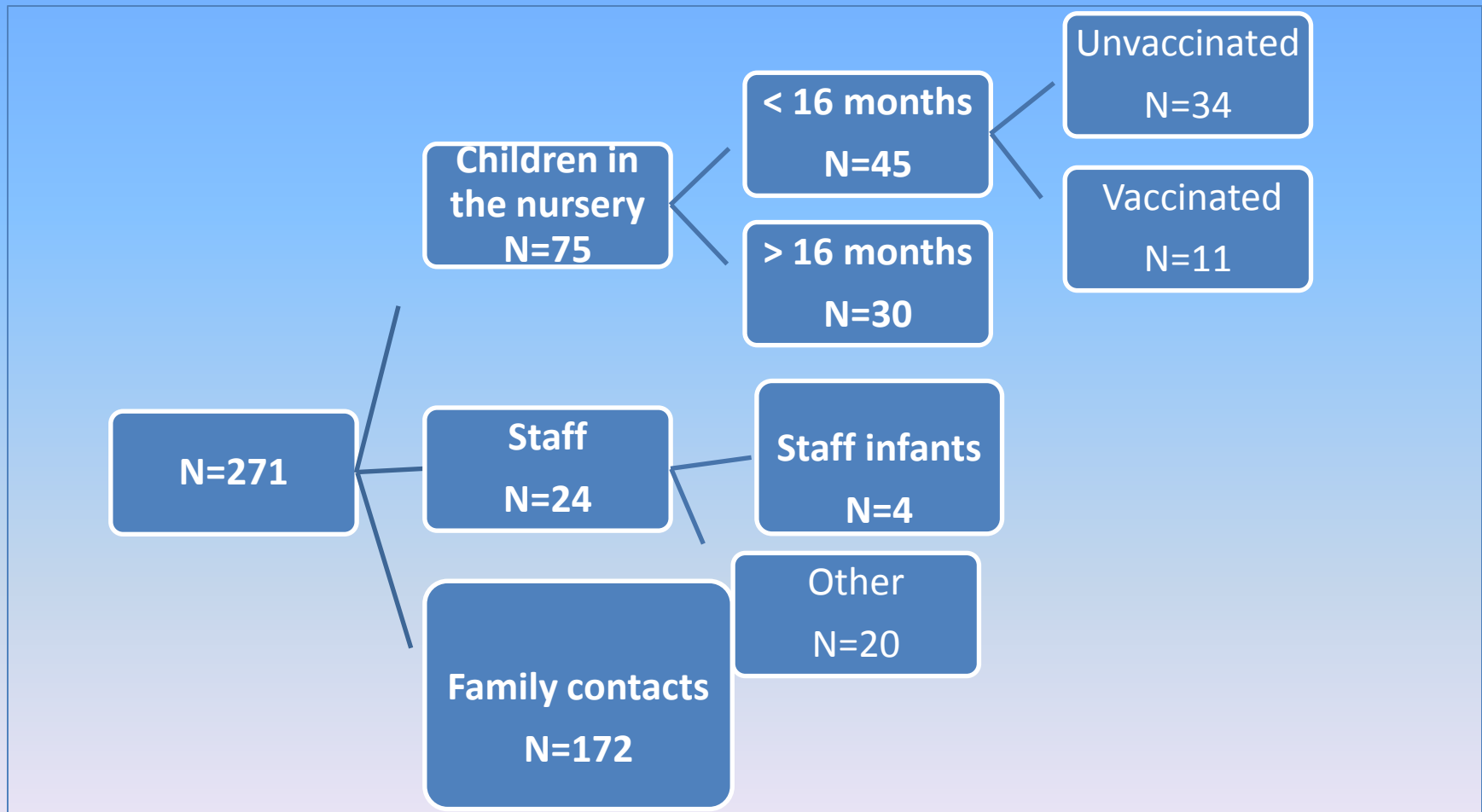
- On 16 April 2014
 - two cases of measles hospitalized
 - babies aged 3 and 7 months
 - one nursery

- Beginning of an outbreak?
 - Extent?
 - Risk factors?
 - Source?
 - What to do?





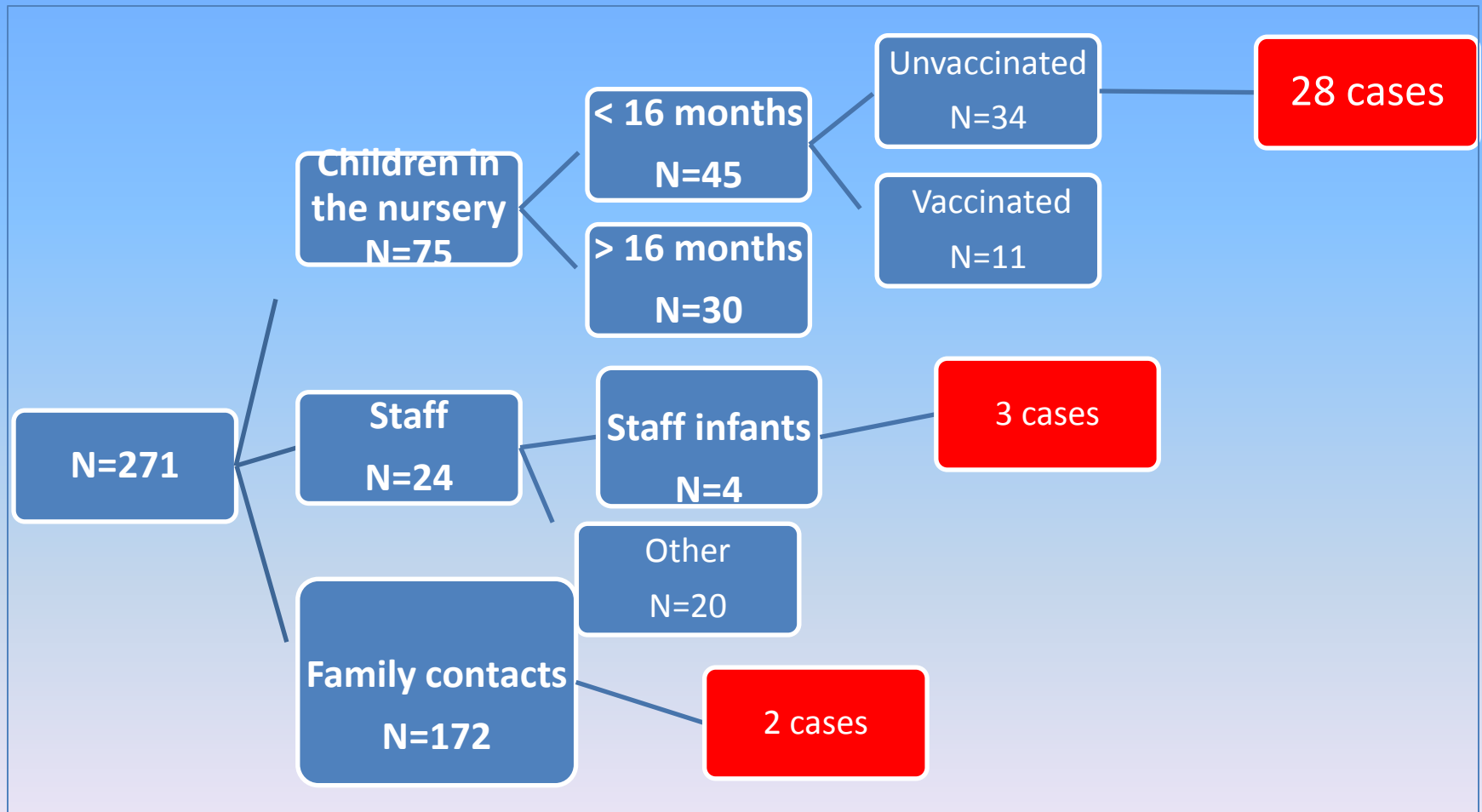
Study population



Methods

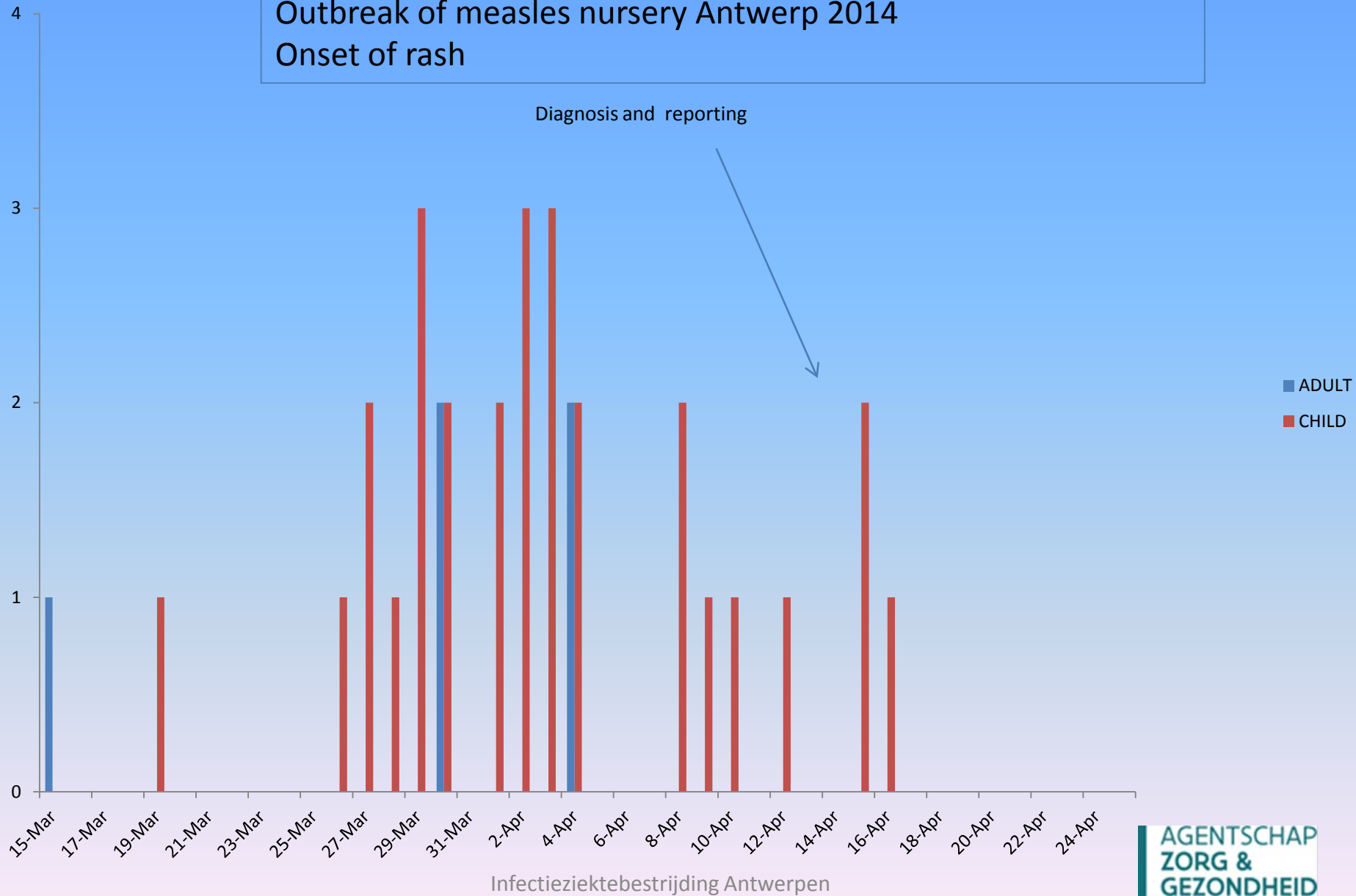
- Case finding
 - Questionnaire
 - Oral sampling and testing EIA: Measles IgM,- IgG (MicroImmune, UK) and Measles In-house RT-PCR, (Ref lab Brussels)
- Case definition (ECDC)
- Genotyping (sequencing PCR)
- Vaccination coverage
- Risk analysis (ORs; 95% CIs)
- Source tracing
- EpiInfo 3.5.3

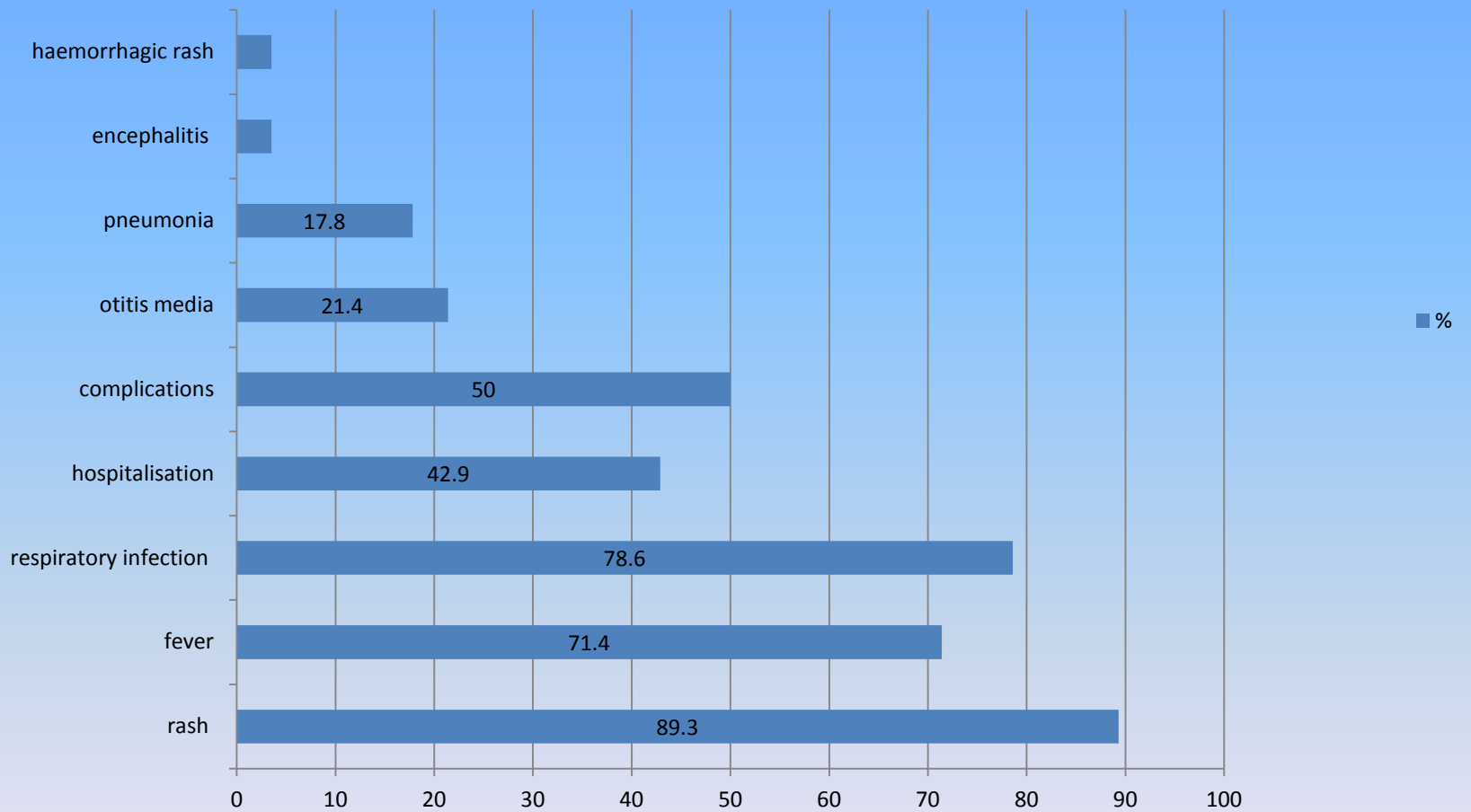
Case finding



Outbreak of measles nursery Antwerp 2014

Onset of rash





	Cases	PCR +	IgM +	IgM borderline
Babies	28	23 (82%)	16 (57%)	-
Adults	5	3 (60%)	2 (40%)	2
Total	33	26	18	2

Genotyping of outbreak strain: D8

	Total	Complication	No complication	OR	95%-CI	P value
Sex	15	7	8	0.6	0.1-3.2	ns
Age \geq 8 m.	23	12	11	5.4	0.6-41.6	ns
Maternal antibodies	18	8	10	0.7	0.09-5.1	ns
Gestation \leq 38 w	18	8	10	2.3	0.4-12.5	ns
Breast feeding \geq 1 m	20	10	10	0,7	0.1-5.1	ns

Source tracing

- Index case
 - Staff member 22 y
 - Rash 15 March
 - Twice vaccinated with MMR vaccine
 - Early March in the Netherlands
 - Ongoing outbreak in the Netherlands D8



Actions

- MMR vaccination of unvaccinated children
- Second dose MMR older children and staff
- Exclusion of patients
- Information for GP's and paediatricians





- Linked to ongoing outbreak of measles in the Netherlands
- No secondary cases in vaccinated children
- Transmission from a twice vaccinated adult
- Diagnostic delay
- Undervaccination and timeliness (70%)
- Positive association for complications and age, period of gestation, breast feeding
- Surveillance and prompt response

Thanks

Marjolijn Sansen (Infectieziektebestrijding, Antwerpen)

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