

Pertussis notifications in the Netherlands: workload versus benefits

MJM te Wierik¹, B de Gier², AWM Suijkerbuijk³, NAT van der Maas², K Cox⁴, WLM Ruijs¹

¹⁻³ National Institute for Public Health and the Environment, Bilthoven, the Netherlands. ¹ National Coordination Centre for Communicable Disease Control. ² Infectious Diseases Epidemiology and Surveillance. ³ Nutrition, Prevention and Health Services. ⁴ Public Health Service region Utrecht, Zeist, the Netherlands.

Introduction

- Pertussis is highly endemic in the Netherlands and forms the bulk of mandatory notifications to Public Health Services (PHSs) in the Netherlands (54% in 2016¹)
- PHSs experience a significant workload while benefits for prevention and control are deemed modest
- Data are important for surveillance
- Purpose: inventory of PHSs actions, associated costs and control measures taken after pertussis notifications in order to balance workload and benefits

Methods & Materials

- Semi-structured questionnaire to all 25 PHSs to identify different approaches to handling pertussis notifications (november 2015)
- Six PHS-regions were selected by contrasting incidence, vaccine coverage and way of handling notifications, i.e. elaborate and less elaborate approaches
- In each region, 200 pertussis cases were retrospectively studied: all (administrative) actions and control measures taken were scored by two trained nurses using a structured scorecard (first half 2016)

Results

- Responses of 24 PHSs showed striking heterogeneity in handling notifications, precluding identification of a few common approaches (results not shown)
- PHSs with an elaborate approach more often gave case-specific control advice (17%) than PHSs with a less elaborate approach (4%, table 1)
- An elaborate approach resulted in an almost 3times higher median time and and almost 4 times higher median costs per case (figure 1)
- Not unexpected, elaborate approaches resulted in more complete surveillance data (figure 2)
- In a nationwide consensusmeeting of PHSs, a new approach was developed that balances workload and benefits of pertussis notifications

Control measures	None	Only information	Specific advice	Total
Approach				
Elaborate	369 (61%)	135 (22%)	104 (17%)	608 (100%)
Less elaborate	390 (65%)	184 (31%)	23 (4%)	597 (100%)
Total	759 (63%)	319 (26%)	127 (11%)	1205 (100%)

Table 1. Control measures to prevent pertussis by approach of handling pertussis notifications, the Netherlands, 2016 (n=1205)

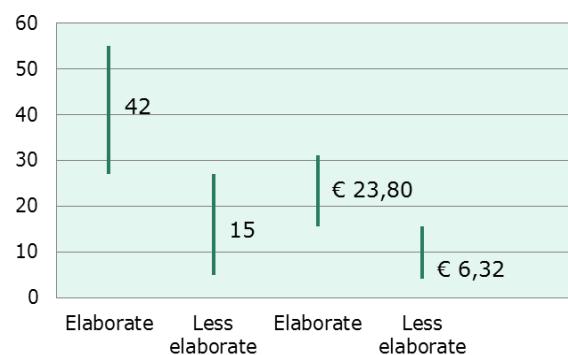


Figure 1 Median time in minutes & median costs per case by approach of handling pertussis notifications, the Netherlands, 2016 (P25 en P75, n = 1205 and 1177 respectively)

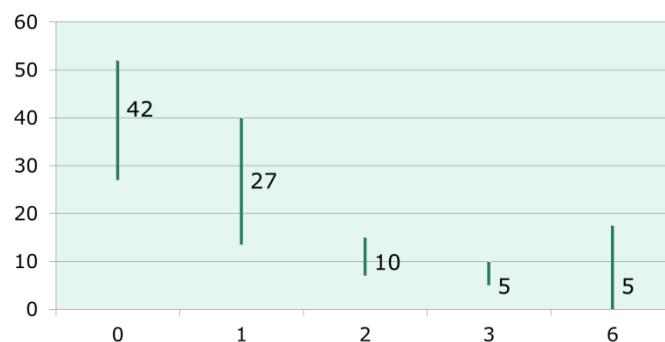


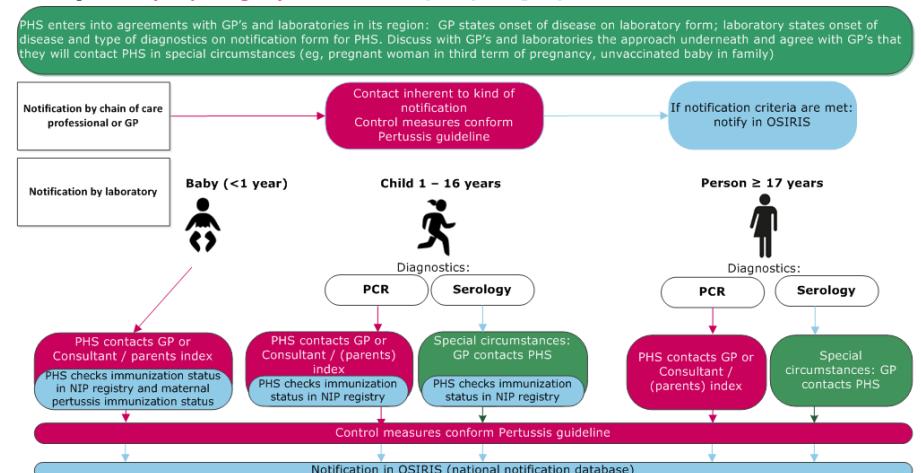
Figure 2 Number of lacking surveillance data by median time in minutes per case, the Netherlands, 2016 (P25 en P75, n = 1137)

Conclusions

- Striking variations exist between PHSs in handling pertussis notifications
- A considerable workload and costs are associated
- A nationwide consensus approach was reached (figure 3), balancing workload against prevention and control of pertussis for under ones, while maintaining surveillance quality

Consensus handling Pertussis notifications

balancing **control** (red part figure) and **surveillance** (blue part figure)



This consensus was reached during the Consensus meeting Pertussis notifications (4 June 2018, City Hall, Utrecht, the Netherlands)

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Figure 3 Consensus handling Pertussis notifications in the Netherlands, 2018