

Appendix

Table A1: Initial values for vaccine efficacy (source: van Hoek et al. (5))

| Age groups (years) | Vaccine efficacy for a duration of protection of 9,5 years | Additional efficacy against PHN |
|--------------------|--|---------------------------------|
| 60-64 | 75% | 0% |
| 65-69 | 73% | 0% |
| 70-74 | 51% | 44% (during 10 years) |
| 75 and older | 37% | 44% (during 5 years) |

Table A2: Mean results of the LTPS study by age of enrollment in the SPS study- 10 years after vaccination (6).

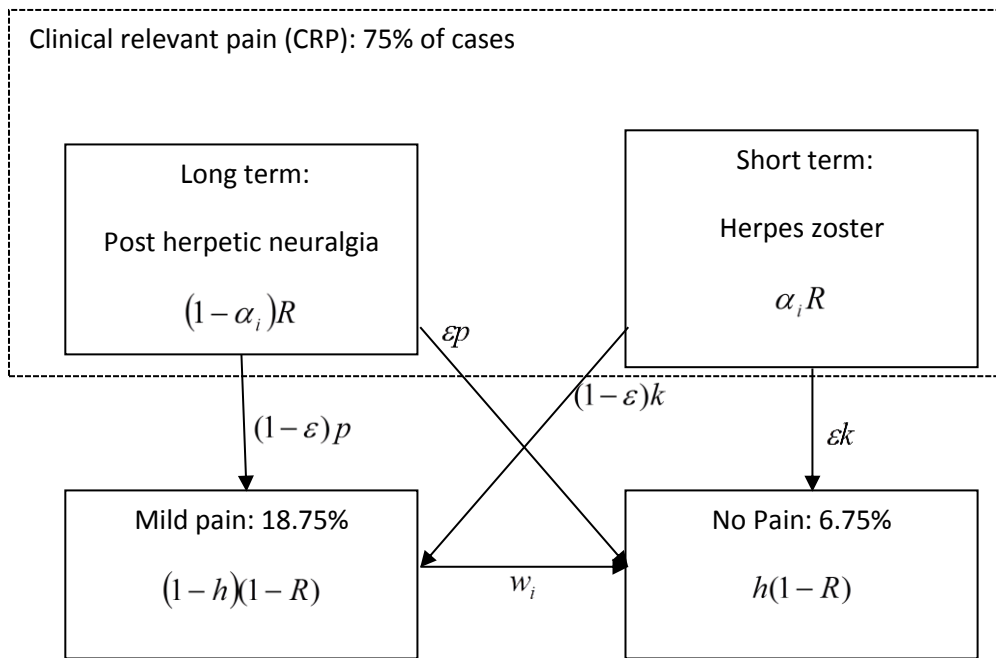
| Age at enrollment in SPS study | Decrease in HZ incidence (CI 95%) | Decrease in PHN incidence (CI 95%) |
|--------------------------------|-----------------------------------|------------------------------------|
| 60-69 years old | 20.2% (6.7-32.2) | 17.1% (-31.0-50.9) |
| 70 years and older | 22.4% (6.0-36.6) | 49.7% (15.6-72.5) |

Table A3: French parameters used in the model (base case scenario and sensitivity analysis)

| Age groups (years) | Base case analysis | | Deterministic sensitivity analysis | |
|----------------------------------|--|---|--|-------------|
| | | | Low value | High value |
| | HZ and PHN epidemiology | HZ annual incidence (Gonzalez Chiappe et al. (8)) | PHN proportion (adapted from Bouhassira et al. (10) and van Hoek et al.(5)) | |
| | | | HZ annual incidence | |
| 60-64 | | 0.76% | 11.75% | 0.61% 0.87% |
| 65-69 | | 0.86% | 13.00% | 0.74% 0.98% |
| 70-74 | | 0.99% | 15.00% | 0.83% 1.16% |
| 75-79 | | 1.03% | 17.00% | 0.76% 1.07% |
| 80-84 | | 1.15% | 19.25% | 0.94% 1.38% |
| ≥ 85 | | 1.10% | 19.75% | 0.90% 1.38% |
| Mean cost (euros) | HZ (Mick et al. (9), PMSI database, own calculations) | PHN (Mick et al. (9), PMSI database, own calculations) | HZ | PHN |
| 60-64 | 180 | 313 | 146 | 236 |
| 65-69 | 191 | 323 | 157 | 246 |
| 70-74 | 215 | 344 | 179 | 265 |
| 75-79 | 257 | 382 | 219 | 301 |
| 80-84 | 315 | 434 | 273 | 350 |
| ≥ 85 | 431 | 539 | 381 | 449 |
| Vaccination costs (euros) | | 137.5 | | 162.5 |
| Discount rate (%) | | 4% | | 6% |

HZ : Herpes zoster, PHN : Post herpetic Neuralgia, PMSI : national hospital discharge database

Figure A1. Markov model structure adapted from van Hoek et al. (5)



| Model parameters | Values |
|--|--------|
| k : rate of loss short term CRP | 0.360 |
| p : rate of loss long term CRP | 12.4 |
| ε : fraction of patients moving directly to "No pain" | 94% |
| R : Proportion of patients in CRP at time 0 | 75% |
| h : Proportion of patients not in CRP who are in mild pain at time 0 | 25% |
| α : Proportion of CRP patients of age i in the "short term" group at time 0 | 0.001 |
| w : Recovery rate from mild pain to no pain for age i | 0.61 |

Figure A2. QALY loss per year by age (data from van Hoek et al. (5))

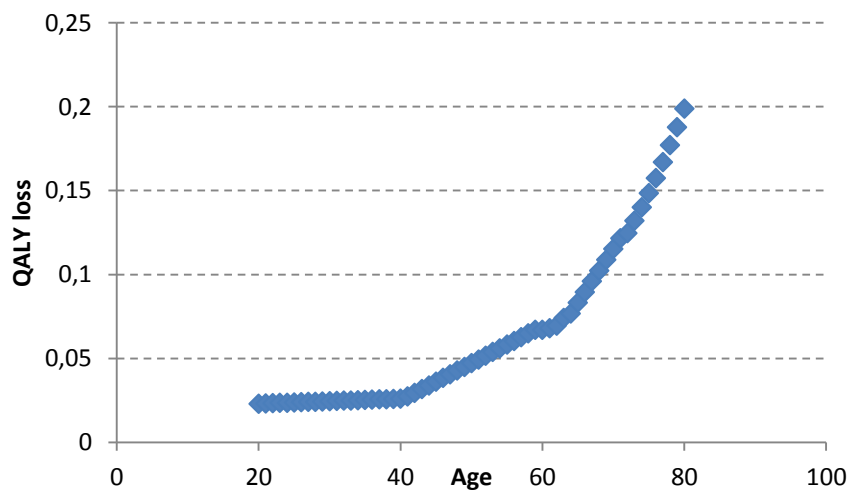


Figure A3 : Initial distribution of patients according to the four health states (French Model)

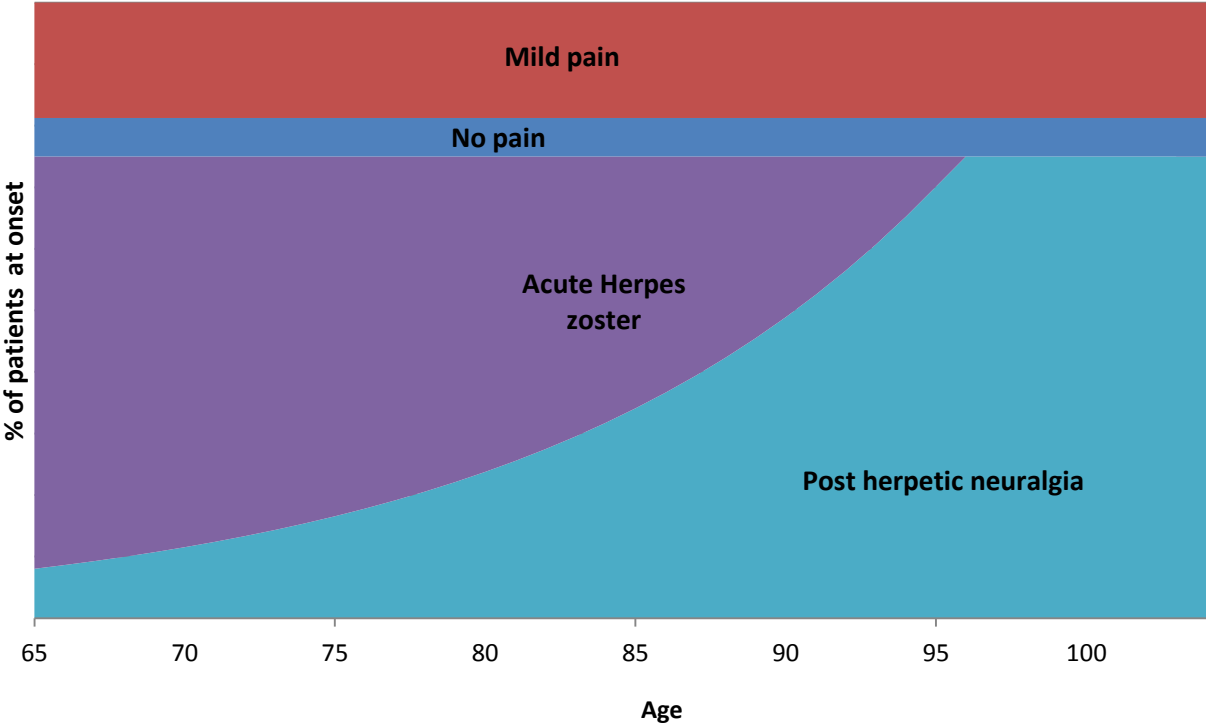


Figure A4: Vaccine efficacies, by age groups, observed in the LTPS study (6) and estimated by van Hoek et al. (5) for a mean duration of protection of 9.5 years

