Why “Selection Bias” Cannot Explain the Czech KCOR Results

Summary
In the Czech national vaccination database, every vaccinated individual has a single consolidated record containing the dates of dose 1, dose 2, and dose 3. This creates a closed system. Because of this structure, the mortality patterns observed in the dose-3 cohort cannot be caused by selection bias, regression to the mean, immigrants, or missing-dose histories.

1. Database Structure Eliminates Grok’s Explanations

Fact: One record per person.
Every individual has:
- date of 1st dose
- date of 2nd dose
- date of 3rd dose (if received)

Implication: No one enters the system at dose 3.
The system cannot produce a person with only a dose-3 entry.

Implication: No missing-dose immigrants can distort the data.
To affect the dose-3 mortality curve, immigrants would need to appear with dose-3 but without prior doses. This never occurs in this dataset.

2. Fixed-Cohort Design Imposes Conservation Laws

KCOR uses fixed cohorts by enrollment date. On the enrollment date, each person is classified as:
- Dose 0
- Dose 1
- Dose 2
- Dose 3

and remains in that cohort for the entire follow-up period.

Key implication: Cohorts are closed.
No deaths or individuals can move between cohorts after enrollment.

Selection-based effects must therefore produce a mirror-image pattern: if dose-3 hazard rises due to selection, dose-2 hazard must fall or flatten.

3. The Mirror-Image Test

If selection bias is responsible:
- Dose-3 hazard should rise
- Dose-2 hazard should show a compensating drop
- Curves must balance because the population is fixed

But the Czech data show:
- Dose-3 cohorts exhibit a distinct upward hazard/KCOR pattern
- Dose-2 and dose-0 cohorts do not show compensating effects
- This holds across age groups, enrollment dates, and calendar time

This violates the conservation constraints. Therefore selection bias cannot explain the results.

4. Why Grok’s Explanations Fail

Grok invoked:
- immigrants
- missing-dose records
- regression to the mean
- depletion of susceptibles
- dynamic healthy vaccinee effect

These mechanisms require changes in cohort composition over time, which are impossible here due to:
- complete dose-history tracking
- fixed membership cohorts
- conservation of deaths

Thus none of these mechanisms can produce the observed patterns.

Conclusion
In a closed database with full dose history and fixed cohorts, any selection-based mechanism must produce symmetric, compensating distortions across cohorts. The Czech data do not show these mirror effects. Therefore selection bias, immigration, and regression-to-the-mean cannot explain the KCOR results.