

PRESCRIPTION FOR KNOWLEDGE: PATIENT INFORMATION & GENERIC SUBSTITUTION

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Does targeted information to patients increase generic drug use?

- Mailing campaign by health insurer with quasi-random timing
- Information triples generic substitution probability

GENERIC DRUGS

Same therapeutic effect as brand-name drug

- Typically 70%–90% cheaper than brand-name drugs

Policies to increase substitution primarily target financial incentives

- Higher co-insurance rate of 20% in Switzerland for expensive brands

Functioning markets require informed consumers

- Swiss providers required by law to inform patients about generics

INFORMATION TREATMENT

Mailings by Swiss health insurer from 2010–2022 (banned by FOPH)

- Letter sent to patients after claim of one of 26 brand-name drugs
- Campaign only active if drug on 20% co-insurance list

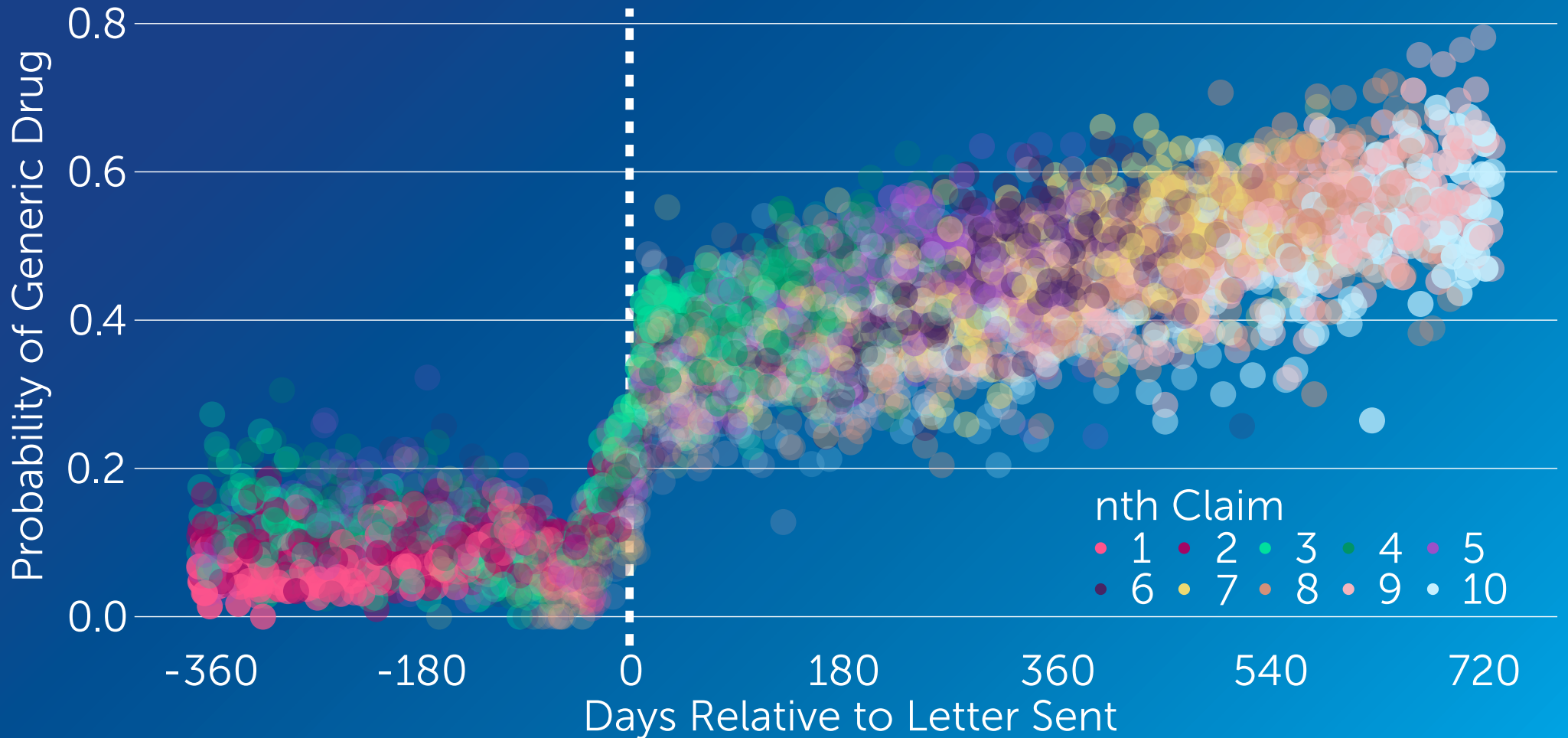
Letter contains information specific to purchased drug

- Names of available generic substitutes
- Maximum savings in %

GENERICS MAILING PROCESS

1. Patient purchases brand-name drug on mailing list
2. Health insurer receives claim and flags patient
3. Minimum wait period of 21 days
4. Check if other correspondence with higher priority
 - No: Dispatch of letter to patient
 - Yes: Re-check every 2 weeks for next 365 days

SUBSTITUTION AROUND LETTER



IDENTIFICATION STRATEGY

Patient knowledge may increase with repeated purchases

- Use claim number instead of “time” distance to treatment

Blocking results in quasi-random assignment of treatment timing

- Compare treated with untreated purchases at nth claim

DATA

Individual-level drug claims between 2010–2019

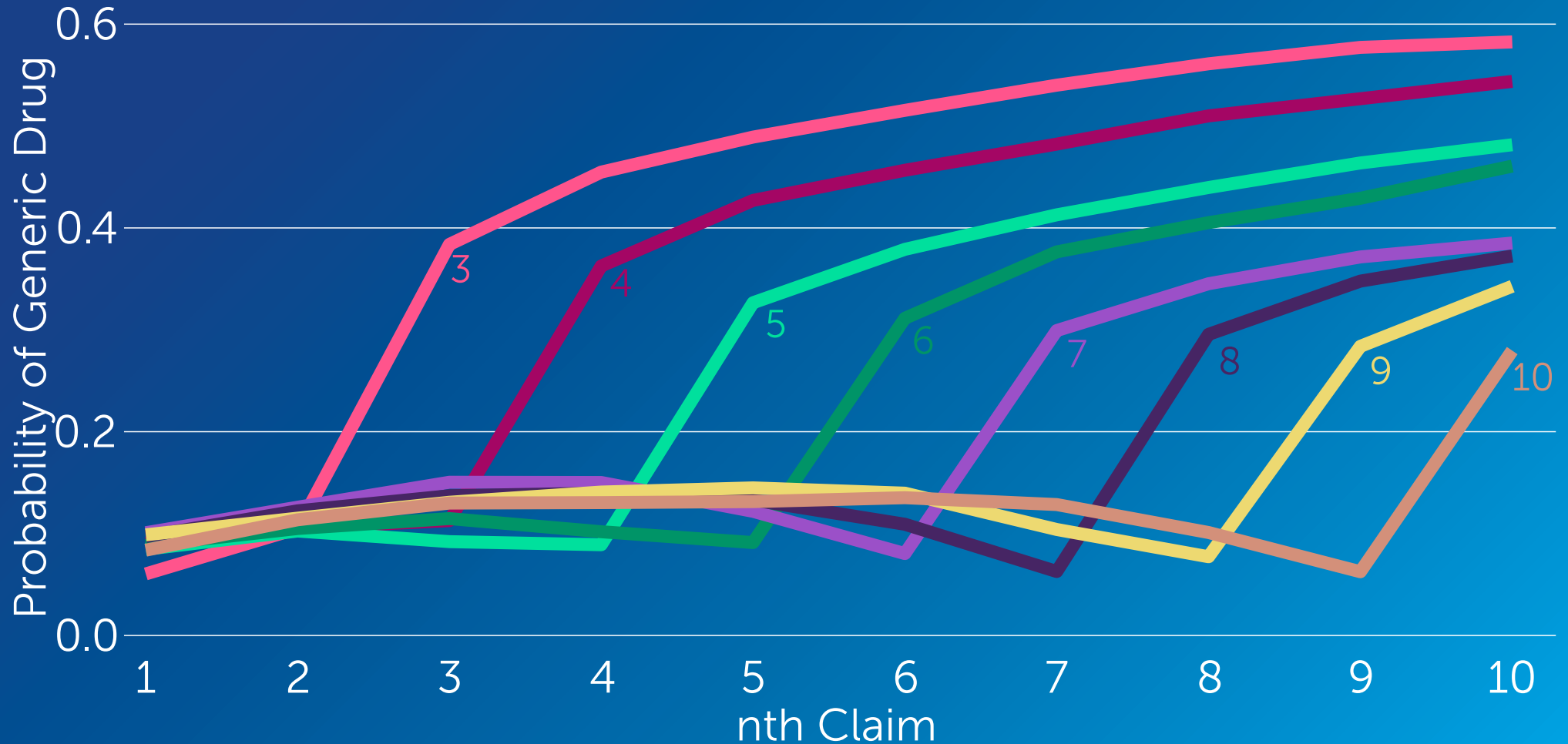
- Limit to drug for which patient received first letter

Claim “numbering” starts when first generic drug available

- Only first 10 claims of patient
- Patients treated between 3rd and 10th claim
- 620,000 claims from 73,000 patients

Binary measure whether claim was for generic or brand version

EFFECT BY FIRST TREATED CLAIM



ESTIMATION METHOD

Event study with staggered treatment adoption

- Evaluation at different claims, rather than different points in time

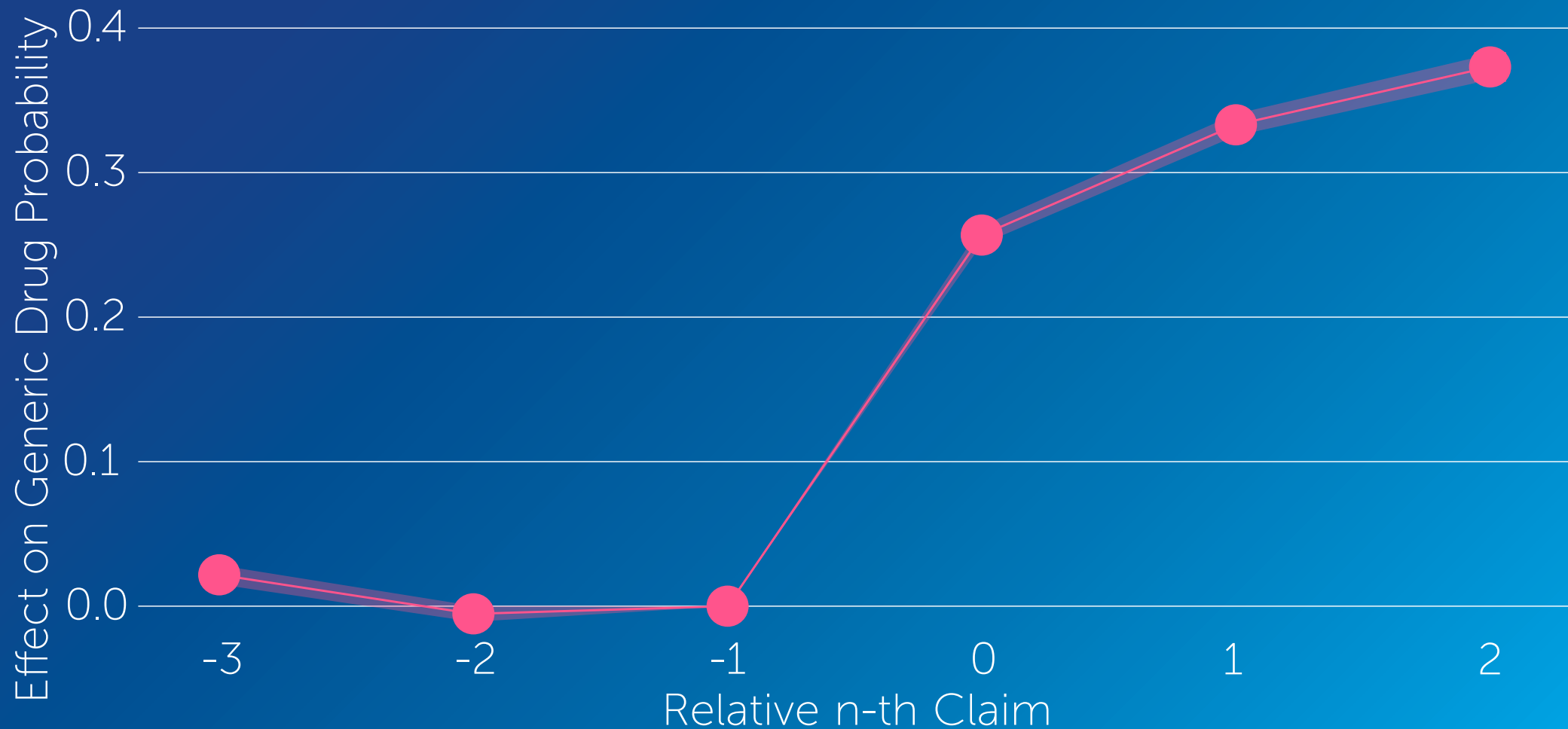
Callaway & Sant'anna (2021) estimator to avoid TWFE problems

- Not-yet-treated units as control group
- Estimation of 63 distinct ATTs, weighted aggregation with group size

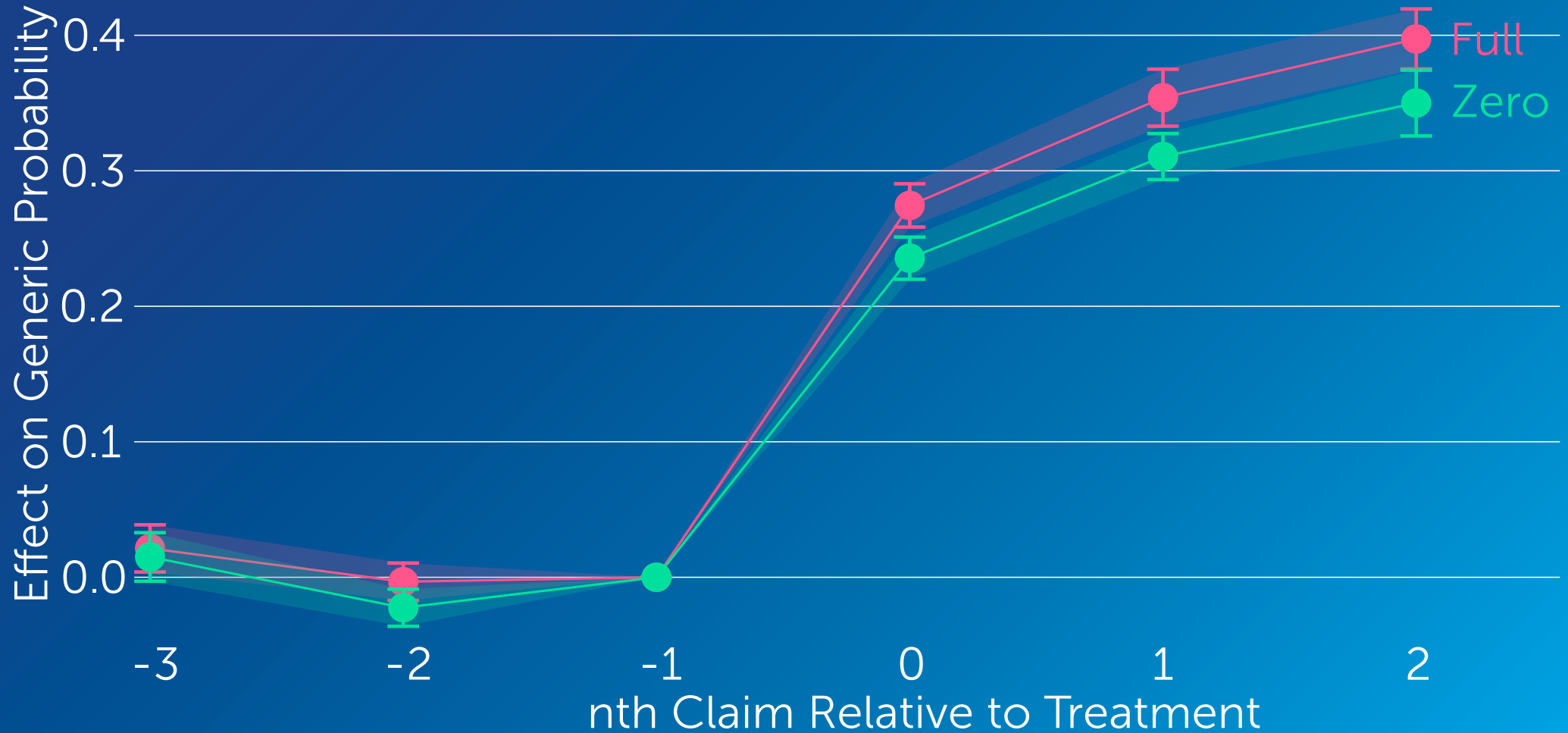
EFFECT OF INFORMATION



EFFECT OF INFORMATION



EFFECT BY SPOT PRICE



DISCUSSION

Threefold increase in substitution due to personalized letter

- Additional yearly savings of CHF 36 per letter that costs CHF 0.3
- Some providers likely never inform patients

Effect of information greatly dominates individual financial incentives

- Price mechanism as policy tool requires market conditions

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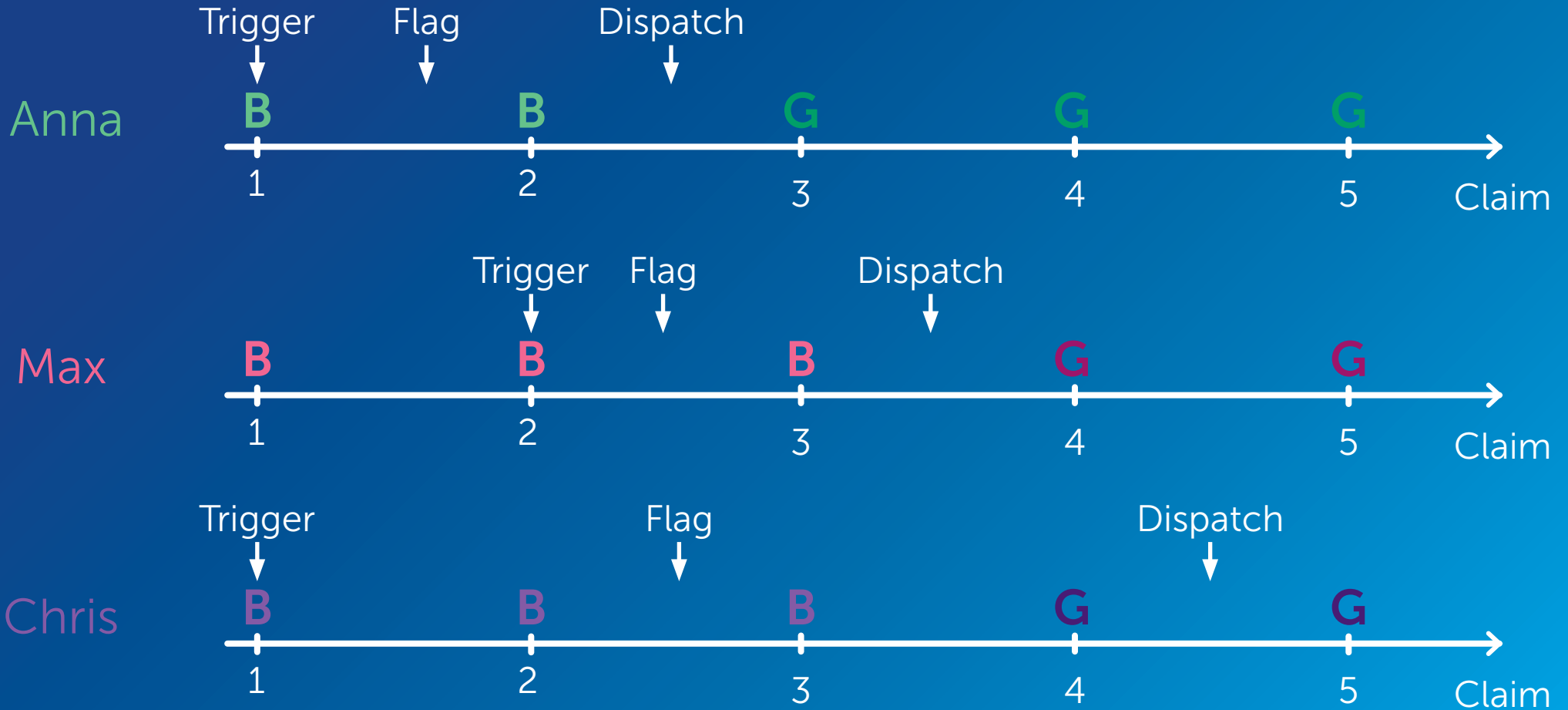
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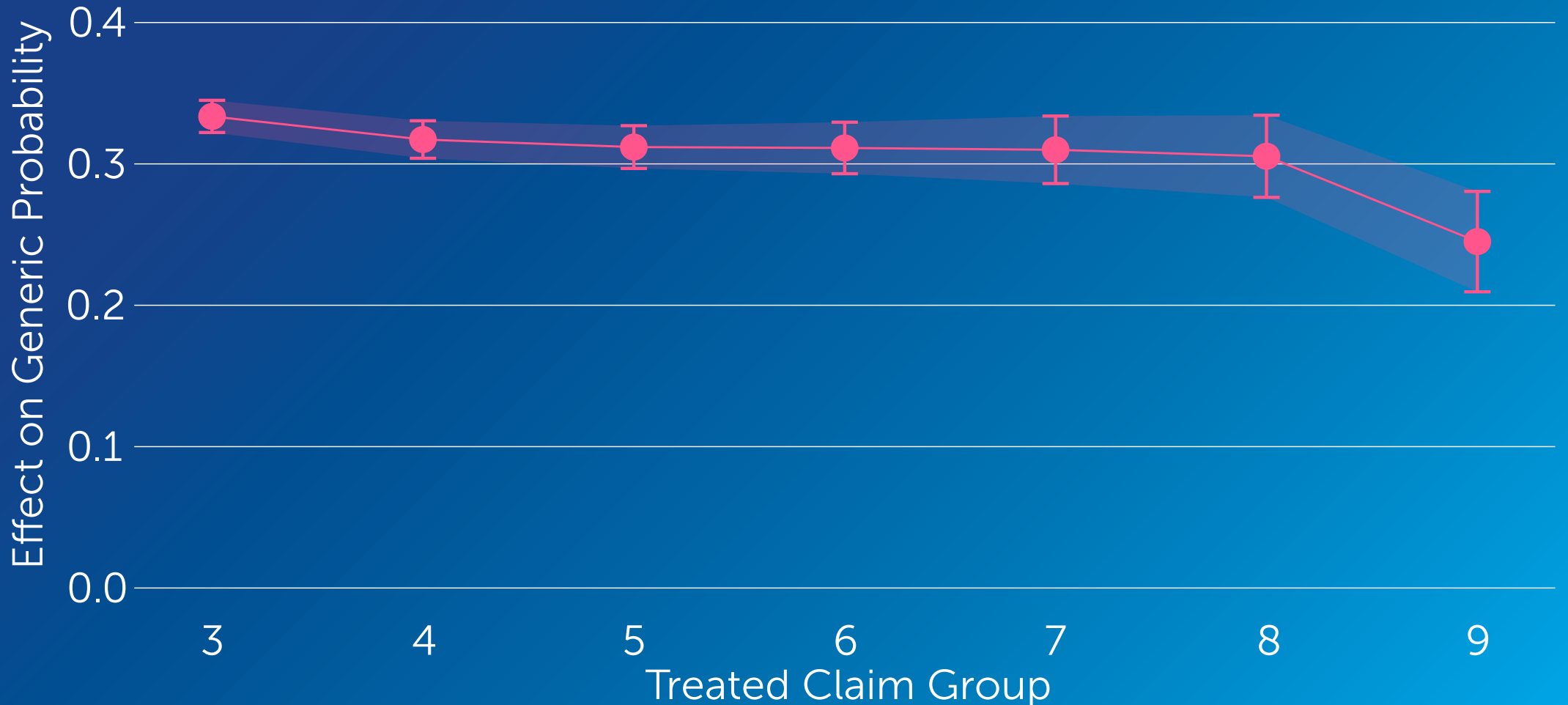
GENERIC MAILING PROCESS



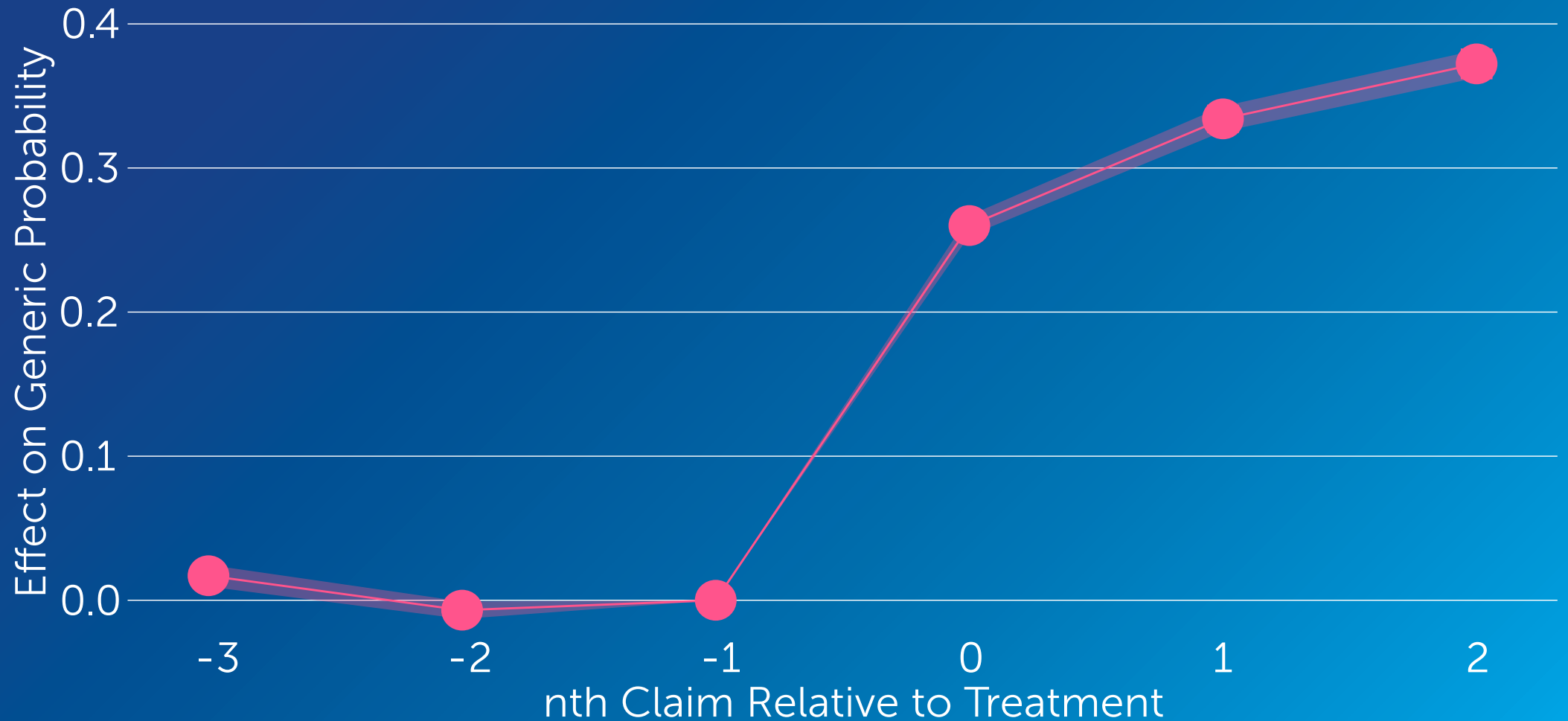
CLAIM DISTRIBUTION

| Claim Treated Group | nth Claim | | | | | | | | | | |
|---------------------|-----------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| 10 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 | 2,078 |
| 9 | 2,692 | 2,692 | 2,692 | 2,692 | 2,692 | 2,692 | 2,692 | 2,692 | 2,692 | 2,692 | 2,550 |
| 8 | 3,106 | 3,106 | 3,106 | 3,106 | 3,106 | 3,106 | 3,106 | 3,106 | 3,106 | 2,950 | 2,787 |
| 7 | 3,956 | 3,956 | 3,956 | 3,956 | 3,956 | 3,956 | 3,956 | 3,728 | 3,499 | 3,292 | |
| 6 | 6,668 | 6,668 | 6,668 | 6,668 | 6,668 | 6,668 | 6,306 | 5,916 | 5,507 | 5,179 | |
| 5 | 10,261 | 10,261 | 10,261 | 10,261 | 10,261 | 9,634 | 9,061 | 8,459 | 7,933 | 7,425 | |
| 4 | 13,899 | 13,899 | 13,899 | 13,899 | 12,752 | 11,781 | 10,903 | 10,111 | 9,258 | 8,424 | |
| 3 | 19,245 | 19,245 | 19,245 | 17,406 | 15,846 | 14,362 | 13,068 | 11,909 | 10,733 | 9,512 | |

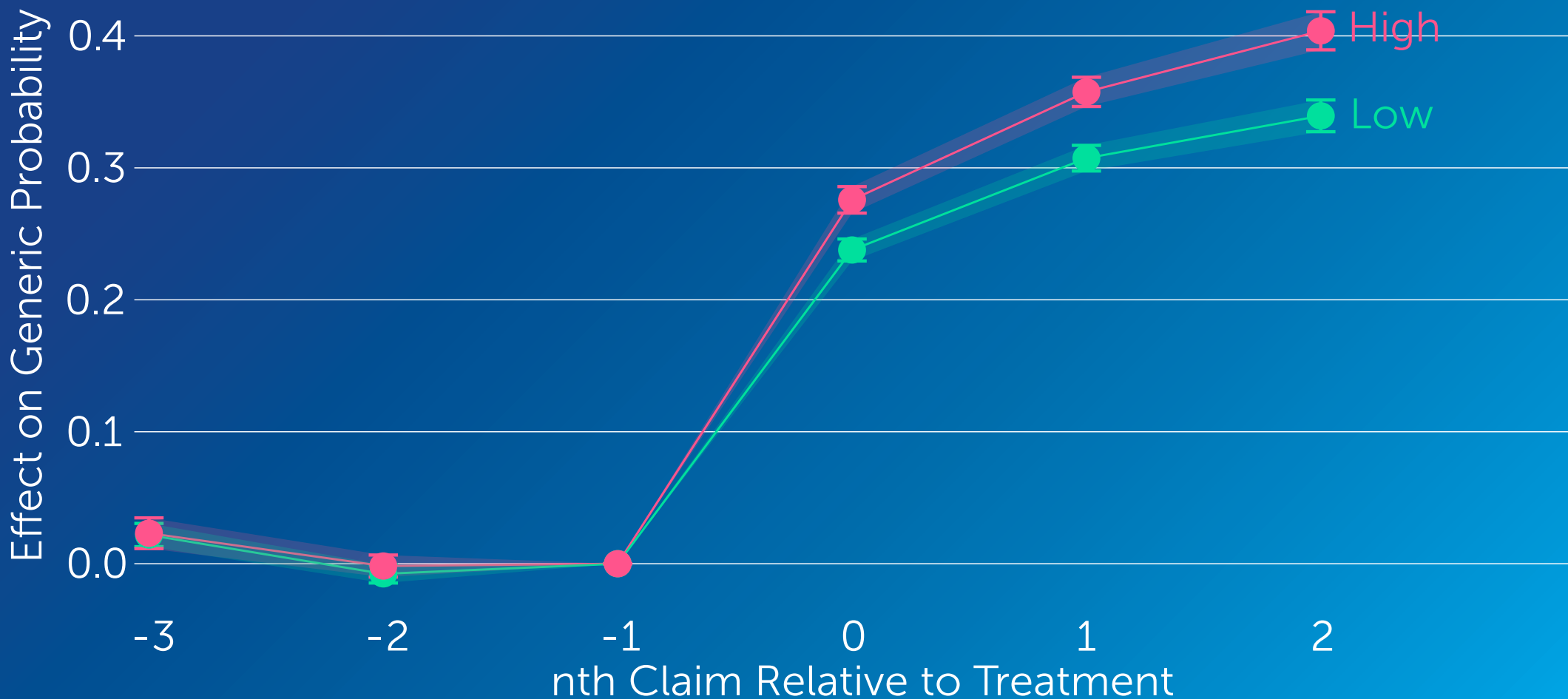
EFFECT BY TREATMENT GROUP



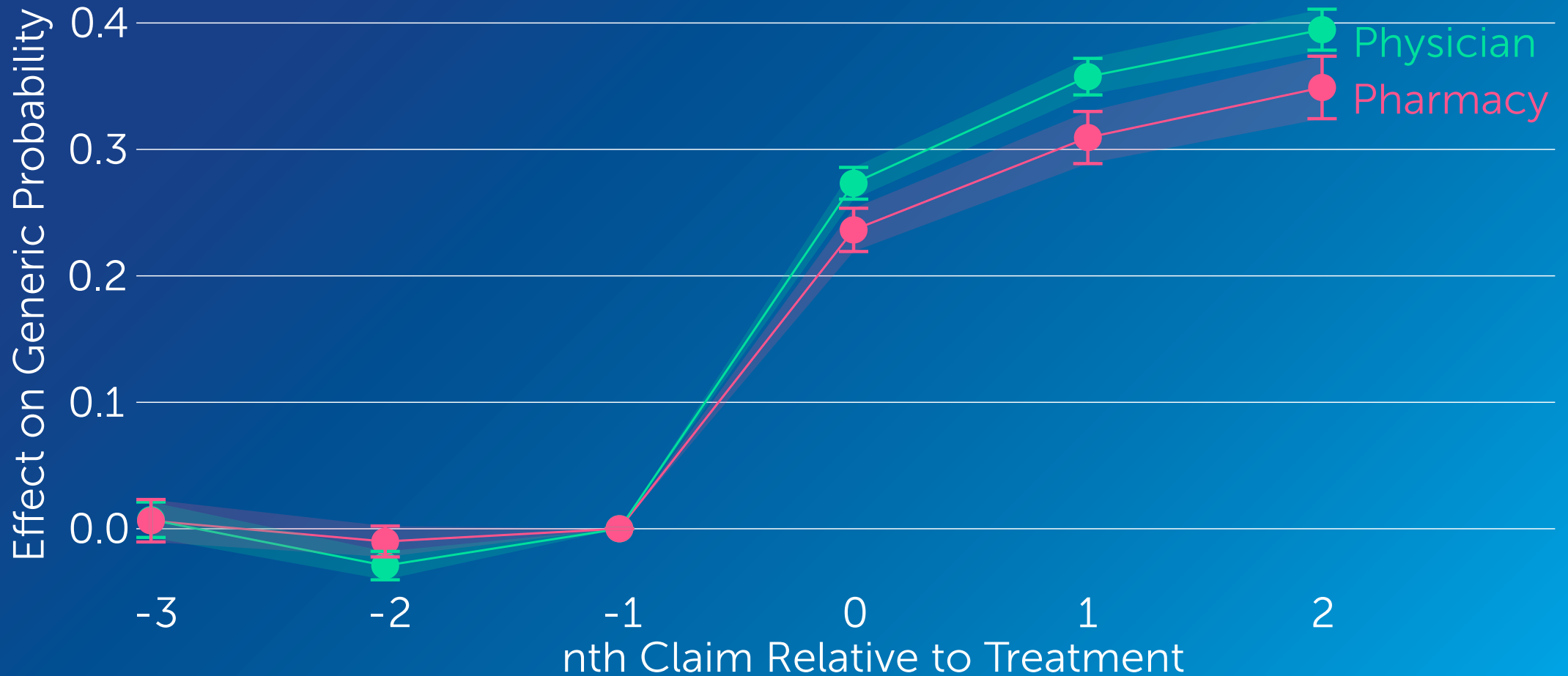
EFFECT WITH BALANCED PANEL



EFFECT BY SAVINGS POTENTIAL



EFFECT BY DISPENSER



INSURANCE MODEL

