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The Concentration of Value

Condition-list length and the computed value of serious-illness cover in Ireland

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v1.0.1 — 30 September 2026 (computed on the MWP-2026-05 valuation engine, audit workbook v4.0.0; release copy published alongside). Offices are lettered A–E for presentation; because the workbook's inputs are the offices' own published documents, the lettering is a presentational convention and not a guarantee of anonymity.)

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Providers are lettered A–E per the series convention — a presentational pseudonymisation, not a guarantee of anonymity. Every figure is a live cell or registered capture in audit workbook v4.0.0; tab references in brackets.

Abstract

The serious-illness policies of the five domestic life offices cover lists of between 70 and 112 conditions, and each office states its count in its product literature. This paper asks whether the length of the list carries information about the expected value of the cover. Mapping each office's current policy conditions to the 135-heading canonical matrix of MWP-2026-05 and decomposing expected present value on that engine, three illness families — invasive cancer, heart attack and stroke — account for between 97.1 and 98.1 per cent of the computed head of every policy in the market; a mechanical envelope over every admissible re-ranking of the policy wordings places a floor under that share of 89.9 to 90.1 per cent in four offices and 91.0 per cent in the fifth. Against the public-system tail ceiling — itself capped at what each contract can pay over its life — the corresponding lower bound on the three families' share of total policy value is 2.5 to 6.3 per cent; in the one office publishing a finer split, cancer, cardiac and stroke account for 89 per cent of serious-illness claims by count — the cardiac category itself includes tail headings, and the split is of counts, not value. Headings outside the head are bounded individually from public-hospital activity data — bounds on activity in the public acute system, which the private hospital channel escapes except where a sourced uplift is applied: each carcinoma-in-situ site is bounded at largest office-level values of 8.0 to 15.9 per cent of the office's computed head (office-level values run from 6.4 per cent), at or below 9 per cent at ten of the nineteen sites, heart failure at most 4.7 per cent, and partial-payment headings are contractually capped across the market, generally at €15,000 to €20,000, with angioplasty-specific amounts of €40,000 to €50,000. The remainder of the list carries value that is bounded and in large part contractually capped, and the office marketing the longest list holds neither the highest head value nor the highest fair-value index at base, under either tie convention; at the weight ceiling it records the highest fair value, so the statement is a base-case one. Results are reported in interval form; a discount-rate change from 2 to 4 per cent rescales levels and alters no ordering or share finding.

1. Introduction

Each of the five domestic offices publishes, in its own product literature, the number of conditions its serious-illness cover includes; the current counts run from 70 to 112 [S01–S05]. A count is a readily comparable summary of a conditions list, and a buyer comparing policies may read a larger count as more cover; whether that reading is quantitatively sound is a testable question. MWP-2026-05 established that the fair value of the cover varies across offices by several times more than premium does; it did not ask what role the conditions list plays in that variation. This paper asks the narrower question directly: does the length of the list carry information about the expected value of the cover?

The question matters for consumers because a count is a readily comparable summary of a conditions list, and the reading of a larger count as more cover is a quantitative claim that can be tested. Valuing every heading individually is not possible from public data, and this paper does not attempt it; instead it computes the value of a small head of headings exactly on the -05 engine, bounds every other heading from above using national hospital activity data and the offices' own contractual caps, and reports results in interval form, so that each finding states precisely what the public evidence can and cannot support. §2 summarises the data and method, §3 the design, §4 the results, §5 the discussion; formal statements and the per-heading bound table are appended; the source and correction registers are internal, with bona-fide verification as Appendix F describes.

2. Data and method (summary)

The valuation engine is the MWP-2026-05 workbook (v4.0.0): the coverage matrix is coded from the offices' current policy documents (read September 2026); wording ranks are documentary where the texts decide and disclosed where they do not; and payment fractions stand at each office's contractual caps; all -06 construction is additive, and a governing regression check confirms in every build that no -05 result is altered. The head comprises six computed families (invasive cancer, carcinoma in situ of the breast, heart attack, stroke, multiple sclerosis and kidney failure) valued on the -05 incidence sources, a monetary basis of €161,000, the unisex 50/50 average buyer at age 35 of -05 §2.5, the -05 engine's published survivorship, mortality and persistency basis unchanged, and a central discount rate of 3 per cent, which remains provisional and is bracketed at 2 and 4 per cent below. All values are gross of tax; the analysis addresses personal protection policies, and no tax outcome is asserted for any wrapper or circumstance.

Headings outside the head are bounded rather than estimated, and the bounds are bounds on public-hospital activity: HIPE records the public acute system only, so for procedure headings with material private-hospital volumes the national figure is not bounded from public data, a gap the analysis carries openly (a sourced private-sector uplift is applied to angioplasty only). Diagnosis-side emergency headings, whose admissions concentrate in the public system, are the least affected; the tail bounds assume insured incidence at or below the public-system rate (with the angioplasty uplift of Appendix D(vi)); the assumption is stated here once and relied on in §4.4. For 52 headings, public-system upper bounds are constructed from the HIPE 2025 annual report (published September 2026 and authenticated against prior editions) using all-listed episode counts by age band over Census 2022 population denominators; episode counts exceed person counts and the 2022 denominators understate the 2025 population, so both construction choices bias the bounds upward. Payment fractions are driven from each office's own published documents through the coverage-tier matrix, including partial-payment caps of €15,000 in four offices and €20,000 in the fifth, and angioplasty-specific limits in every office, from €5,000 single-vessel amounts to a 50 per cent-of-benefit maximum of €100,000. Where only chapter-level activity is published, the chapter bounds a group of headings jointly and is counted once in aggregation. Twenty headings are excluded by design; 57 carry no verified bound and are reported as gaps rather than as zeros. Throughout, an admissible ranking is one whose weights lie in the published -05 engine's rank-weight interval of [0.2, 1] — the interval of the engine (pre-publication review, MWP-2026-05) on which every value here is computed, held as an adjustable input in the published workbook. Robustness to the wording ranking is established mechanically: the rank-to-weight mapping is switched to its admissible extremes under a verified restore procedure, so every interval reported holds under any ordinal placement of the wordings. [Head_EPV_06; Tail_bounds; Sources_06 S01–S52; Robustness_06.]

3. Design

The design is a computed head with an analytically bounded remainder. Six families — invasive cancer, carcinoma in situ of the breast, heart attack, stroke, multiple sclerosis and kidney failure — are computed

on the -05 incidence basis; the remaining headings are never assigned point estimates. For each of the 52 headings with a register-verified public numerator, the annual claim rate is bounded by the larger of the two working-age band rates (HIPE 2025 all-listed episodes over Census 2022 populations), converted to an annual probability, and multiplied by the office's tier-driven payment fraction and the term annuity; where only chapter-level activity is published, one chapter bounds a group of headings jointly and enters aggregation once. A heading whose bound exceeds one per cent of the head is flagged for resolution rather than silently retained, and the resolution queue is disclosed. Payment fractions are taken from the offices' own published documents, including the €15,000 partial caps in four offices (€20,000 in the fifth) and office-specific angioplasty structures in every office (single-vessel amounts of €5,000 or €10,000; totals to €40,000–€50,000 or, in one design, 50 per cent of benefit to €100,000), with an unknown cap always replaced by its admissible ceiling rather than an estimate.

Five propositions, stated and proved in Appendix B, organise what the design can assert. P-A (time-weight cancellation) establishes that share measures are affected by the discount rate only through differences in age-shape between families, which §4.5 exhibits numerically. P-B (q-dominance) bounds the distortion any admissible placement can introduce into contribution ratios by a factor of five (payment fractions are contract facts and do not move under re-ranking), so that where value ratios exceed that factor — as they do between the three largest families and every other head family — the identity of the top three is invariant to placement. P-C (pure-incidence bound) establishes the $w = 1, b = 1$ curve as a bound requiring no view on the ranking; §4.3 evaluates the tiered-payment variant, which is tighter and equally placement-free, and §4.2 computes the exact minima over all admissible rankings. P-D (count-uninformativeness) gives the formal sense in which a conditions count carries little information about expected value in the presence of concentration and caps. P-E (basis invariance of shares) establishes that, premium being a common scalar within a provider, each heading's share of fair value equals its share of EPV, so the premium-free body of this paper is an identity with the -05 fair-value methodology rather than a departure from it.

4. Results

4.1 List length and value (List_length_06). The marketed counts across the five offices are 70, 89, 91, 97 and 112; they are used as an unattributed set, and the per-office mapping is held in the internal register. On the canonical matrix the any-adult-tier counts are 75, 90, 91, 98 and 109, and the full-tier counts 45, 46, 49, 54 and 56, both as unattributed sets. The six-family head values, for the average buyer at 35, are €16,051 (B), €15,079 (C), €14,220 (A), €10,956 (D) and €6,047 (E); office E's figure is €6,047 to €17,886 (fair value 0.335 to 0.993) across the tie conventions of the ranks disclosure, and the base uses the adverse resolution. The Spearman rank correlations with head value and with the -05 market fair-value index are 0.10 and 0.50 for the marketed counts (with five offices, all coefficients here are descriptive statistics only). Under the base (adverse) tie convention the correlations are -0.1 and 0.3 for the any-tier counts and -0.3 and 0.1 for the full-tier counts; under the for-E convention they become -0.6 and -0.2, and 0.2 and 0.6 — the full-tier association with fair value returns. With five offices and a sign that turns on a tie convention, no count-based conclusion is drawn in either direction. The office with the longest list holds neither the highest head value nor the highest fair-value index at base, under either tie convention.

4.2 Concentration (Concentration_06). The smallest number of families carrying at least 90 per cent of the head is two in two offices, whose two largest families alone exceed 90 per cent, and three in the other three. The base share of the largest three families runs from 97.1 per cent (E) to 98.1 per cent (B); the share of the largest single family runs from 46.1 per cent (E) to 86.9 per cent (B). Because the engine is linear in the per-heading weights, the minimum of the three-family share over every admissible ranking is computable exactly: it is 89.9 to 90.1 per cent across four offices and 91.0 per cent in C, and the corresponding single-family floor is 29.0 per cent in four offices and 29.1 per cent in C. Across entry ages 30 to 50 the base three-family share lies between 96.5 and 98.8 per cent in every office [Concentration_06

age grid], so the concentration is not an artefact of the age-35 representative buyer. These floors hold under any admissible placement of the wordings; and the conclusion is not sensitive to the interval's lower end — at hypothetical weight floors of 0.1 and 0.05, far below anything the published ranking contemplates, the three-family floor remains 81.6 to 83.4 per cent and 68.9 to 71.6 per cent respectively [Concentration_06].

4.3 Placement-free envelopes (Robustness_06). At the weight ceiling, which coincides with the tier-only and equal-weight case, the heads converge to €20,797 (B), €20,783 (A, D and E) and €20,741 (C): the contractual in-situ caps now separate the offices even at equal weights, alongside the tier gates — of which the material one is the unresolved in-situ coding at office C (coded not covered pending verification; coded partial at the €15,000 cap, C's head-only floor would equal the others' 90.1 per cent), and each office's head fair value exceeds 1.0 (E rises from 0.335 to 1.153). The envelope accordingly separates the paper's claims into two classes: findings that follow from tiers and equal-weight structure are independent of the ranking, while the cross-office value ordering depends on the ranking and is disclosed as single-source.

4.4 The bounded remainder (Tail_bounds; Marginal_06). Of the 109 in-scope headings outside the head, 52 carry verified upper bounds on public-hospital activity; the private channel is an acknowledged gap except where uplifted, and the head-family comparisons are unaffected by it (the head's cancer incidence is NCRI all-sector registration; the tail bounds are public-hospital activity). The largest office-level bound per carcinoma-in-situ site runs from 8.0 to 15.9 per cent of the office's computed head (office-level values run from 6.4 per cent), at 9 per cent or below at ten of the nineteen; heart failure, covered by one office, at 4.7 per cent; cystic fibrosis contributes nothing to any adult policy in the market, four offices not covering it and the fifth covering children only, which is a tier fact and therefore independent of ranking. Angioplasty payments are contractually limited in every office, on registered terms. Across the market, first single-vessel events pay €5,000 at three offices and €10,000 at two; totals across a second artery run from a €20,000 general partial ceiling to €40,000–€50,000 angioplasty-specific limits; and one design pays 50 per cent of the benefit to a €100,000 maximum while reducing the remaining cover. The workbook codes every office at its own contractual ceilings; the structures are stated here as market facts, unattributed, and the per-office codings are held in the internal register. Chapter-level episode bounds are wide, and an expected value cannot exceed what a contract can pay: the valid full-policy ceiling is the least of the raw head-plus-tail bound, the once-per-policy form (a full payment ends the cover, so the full layer is capped at the sum assured), and the contractual lifetime reach — the once-per-policy form binds in four offices and the lifetime reach in the fifth, whose additional layer pays once (€15,000). On that ceiling the lower bound on the three families' share of total policy value runs from 2.5 to 6.3 per cent; and, in the one office publishing a finer split, cancer, cardiac and stroke account for 89 per cent of serious-illness claims by count — an indication in the same direction, not a bound (the cardiac category includes tail headings, and the split is of counts, not value). The distance between this figure and the head-only floor reflects the granularity of the published data — episode rather than person counts, and chapter rather than procedure detail — rather than any positive evidence of value in the remainder; the National Review of Adult Specialist Cardiac Services records, for 2019, approximately 6,000 device insertions and 342 percutaneous valve interventions nationally, consistent with the per-heading scales used here.

4.5 Sensitivity (Sensitivity_06). Moving the discount rate to 2 or 4 per cent changes head values by +21 and -17 per cent respectively, moves the fair-value index by approximately ± 4 per cent, and leaves the office ordering unchanged in all three scenarios. Share measures move only through age-shape differences between families, and the movement is measured rather than assumed: the largest change in any office's three-family share is 0.15 percentage points across both scenarios. The smallest number of families carrying 90 per cent of computed head value is two in two offices — whose two largest families alone exceed 90 per cent — and three in the other three, in the base and in both rate scenarios [Sensitivity_06].

The engine was also set against published claims experience, and the comparison is reported as what it shows rather than as a validation. Because the head contains all invasive cancer, the engine's head cancer share should be at least the published cancer share of all serious-illness claims; across the offices that publish the split, it is below it wherever the office's cancer wording rank is low, and far above it where the rank is highest — the deviation tracks the rank, which demonstrates that the ordinal rank-to-weight mapping, not incidence, drives the within-head mix. This is stated as a limitation: within-head composition is conditional on the ranking. In the one office publishing a finer split, cancer, cardiac and stroke account for 89 per cent of serious-illness claims by count; the cardiac category includes tail headings such as bypass and angioplasty, and the split is of claim counts rather than value, so it is an indication rather than a bound — but it points the same way as the formal floors [Sensitivity_06]. One office covers in-situ cancer under a single combined heading whose per-site scope could not be verified against a public current document; its figures are reported on the verified coding, and the workbook brackets the unresolved scope (at most eight euro of head value and five hundredths of a percentage point of floor).

5. Discussion

For a consumer, the practical content of §4 is a change of question. The informative questions about a serious-illness policy are: how the policy defines and pays the three families that carry at least 89.9 per cent of its computed value under any reading of the wordings; whether the in-situ and partial-payment headings that populate the longer lists are capped, and at what amount; and only then anything about the count. An office adding headings to its list adds, on the evidence here, amounts whose largest office-level bounds run to 15.9 per cent of the head at the in-situ sites and above 100 per cent at chapter-bounded headings, and that are in many cases contractually capped at €15,000; the addition is real but small relative to the head.

For the market, the finding is not that longer lists are a defect — the additional headings carry real, if bounded and generally capped, value — but that a conditions count, taken alone, is not a reliable guide to expected value. The rank correlation of 0.10 between marketed count and head value, in a market of five, is reported descriptively; the structural statement — concentration floors of 89.9 to 91.0 per cent that no re-ranking of wordings within the admissible interval $[0.2, 1]$ can move, tier gates that are facts of the documents, caps that are terms of the contracts — does not depend on sample size, because it is not a sample estimate.

The analysis compares covers with one another on a common basis; it does not assess the need for cover, nor the aggregate worth of holding it. The single-source character of the wording ranking is a disclosed limitation of the series, and §4.3 states exactly what it does and does not affect: the cross-office value ordering depends on the ranking; the concentration floors, the tier gates and the caps do not. The remaining limitations bind where stated. HIPE records public-hospital activity only, a restriction confirmed in the source documents themselves; episode counts exceed person counts, and chapter detail exceeds procedure detail, which is why the full-policy floors of §4.4 sit far below the head-only floors; 57 headings carry no verified bound and are reported as gaps; the central discount rate is provisional and bracketed; and the -05 basis carries its own published limitations, incorporated here unchanged. Within those bounds, the conclusion of §4 is stated at the strength the public evidence supports, and no stronger.

6. Conclusion

Mapping the five domestic offices' serious-illness conditions lists to a common classification and valuing them on the MWP-2026-05 engine, the expected value of the cover is concentrated in three illness families to a degree that survives any admissible reading of the policy wordings, the headings beyond the head are individually bounded and in large part contractually capped, and the marketed length of the list is a poor guide to the value of the cover. For a consumer or an adviser comparing policies, the definitions of the

three principal families and the caps applying to partial-payment headings are the informative features of a conditions list; no count — marketed, any-tier, or full-payment — is a reliable guide to computed value on this paper's ranking basis; and because every cross-office comparison is conditional on that single-source ranking, the placement-free statement is the safe one: value concentrates in a handful of definitions and their caps, whichever office one ranks where.

Basis of the wording ranks (disclosure)

Office E's five head-family wording ranks are documentary placements: the office ranks above another only where the current definition texts prove it, with the settled order of the other four offices supplying transitivity and every undecidable comparison resolved against office E. The placements and the pairwise evidence are recorded in the audit workbook. The convention matters and both sides are reported: with every undecidable comparison resolved against office E its head value is €6,047 and its fair value 0.335; resolved for it, €17,886 and 0.993 — from the market's outlier to its second-highest office. The other four offices' figures do not move between the conventions; the paper's base uses the adverse resolution and flags every statement that depends on it. The in-situ family's rank for office E remains provisional (its weight is small; the sensitivity is in the workbook). Office D's sixteen interim rank placements remain as published, protected by the mechanical envelopes of §4.2–4.3, which hold under any admissible ranking.

Appendix A — Canonical matrix and tier taxonomy

The 135-heading canonical matrix, its per-office tiers and ranks, and the live scoring are published in the audit workbook (Wording_Ranks; Wording_Scores). Tier taxonomy as applied throughout: **Full** — the wording pays 100 per cent of the specified-illness benefit on the heading's trigger; **Partial** — a capped or fractional amount as the heading's payment route; **Booster** — an additional payment that does not extinguish continuing cover; **Ancillary** — payment arises only from an ancillary benefit; **Child-only** — covered only under a children's benefit; **Not covered** — no payment route. Adult valuation gates Child-only and Not covered to zero. Canonical any-adult-tier counts, unattributed: 75, 90, 91, 98 and 109 (§4.1).

Appendix B — Propositions P-A–P-E (statements per specification v5, with proofs)

- **P-A (concentration is a level property; time-weight cancellation).** Under common age-shape $q_i(x + t) = \theta_i \cdot h(x + t)$, all common time-weights (discount, mortality, no-prior-claim survivorship) cancel from EPV shares. Corollary: the discount rate and common survivorship are level effects for share measures; age-shape deviation is the only channel, and §4.5 reports its measured magnitude. Exact per life; portfolio weighting caveat stated.
- **P-B (q-dominance; bounded distortion).** With $w \in [0.2, 1]$ and b held at each office's contract values (payment fractions are facts, not placement variables), only the placement weight $w \in [0.2, 1]$ moves under re-ranking, so contribution ratios move by at most a factor of 5; where rank-free value ratios exceed 5 the ordering is invariant to every admissible placement. The smallest rank-free ratio between a top-three family and any other head family is 12.8, which exceeds 5, so the top-three identity is placement-invariant. Across the bounded tail the engine's contractual minimum payment fraction is 0.031, so no such invariance is claimed there; the proposition is a head-family statement only.
- **P-C (pure-incidence bound).** The $w = 1, b = 1$ curve is the placement-free bound requiring no view on the v1.2 ranking.

- **P-D (count-unformativeness).** Adding a heading with incidence below a threshold moves the count by one and every reported measure by less than ε ; CR-k and N90 are invariant to zero-value headings, list-normalised indices are not — the count-sensitive statistics are themselves the flawed comparison devices under critique.
- **P-E (basis invariance of shares).** Within a provider, PV(premium) is a common scalar, so each heading's share of fair value equals its share of EPV. -06's premium-free body is a mathematical identity with the -05 fair-value methodology (§6.6 of -05), not a departure from it.

Note: P-B and P-C protect the concentration and bound statements; cross-provider comparison enters solely through the placement weights and payment fractions and remains conditional on placement, which the envelopes of §4.2–4.3 bound mechanically and §5 discloses.

Proofs

Throughout, heading i 's contribution for a given life is $EPV_i = S \cdot b_i \cdot w_i \cdot \sum_t v(t) \cdot p(t) \cdot q_i(x+t)$, with v the discount factor, p the composite survivorship (mortality and no-prior-claim), q_i the annual claim probability, b_i the payment fraction, a contract fact fixed per office and heading and $w_i \in [0.2, 1]$ the placement weight for covered headings ($w = 0$ under a tier gate). All factors are non-negative.

P-A. Under $q_i(x+t) = \theta_i \cdot h(x+t)$, $EPV_i = S \cdot b_i \cdot w_i \cdot \theta_i \cdot K$ with $K = \sum_t v(t) \cdot p(t) \cdot h(x+t)$ common to all headings. Every share $EPV_i / \sum_j EPV_j = b_i w_i \theta_i / \sum_j b_j w_j \theta_j$ is then free of K , hence of the discount rate, mortality and survivorship, which proves cancellation; the result is exact per life. For a portfolio of lives at different ages, K varies by age and cancels only heading-by-heading within each life, so portfolio-weighted shares can move with time-weights exactly to the extent that age-shapes differ across headings; §4.5 exhibits the empirical magnitude (nil to ordering, ± 4 per cent to the fair-value level through the premium side). ■

P-B. For headings i, j with positive incidence, the contribution ratio is $(w_i b_i / w_j b_j) \cdot (\theta_i / \theta_j)$ under P-A's factorisation. With b fixed at contract values, the placement factor is $w_{\max} / w_{\min} = 5$. If the rank-free value ratio of i to j exceeds 5, the contribution ratio exceeds 1 under every admissible placement, so i outranks j . The smallest rank-free ratio between a top-three family and any other head family is 12.8 (stroke against kidney failure; rank-free values €13,949, €3,761, €2,626, €205, €199 and €42–€56), which exceeds 5, so the top-three identity is placement-invariant, as §4.2's exact floors confirm. The composition of shares within the head is not placement-invariant, which is why §4.2 computes exact floors rather than relying on P-B alone. ■

P-C. Each EPV_i is non-decreasing in w_i and in b_i , all other factors being non-negative. Setting $w_i = b_i = 1$ for every covered heading therefore dominates every admissible configuration term by term, and the resulting curve bounds EPV from above with no reference to any ranking. The variant computed in §4.3 sets $w = 1$ with the contractual payment fractions retained; it lies below the P-C curve, still dominates every admissible ranking outcome by the same termwise argument, and is the tighter of the two placement-free bounds. ■

P-D. EPV is additive over headings. Appending a heading with $S \cdot b \cdot w \cdot \theta \cdot K \leq \varepsilon$ changes every additive measure by at most ε while increasing the count by one; iterating, the count can be made arbitrarily large at total value change bounded by the sum of the ε 's. CR-k and N90 are functions of the sorted contribution vector's leading terms and are therefore invariant to appending zero-value headings and continuous in appending ε -value ones; by contrast any statistic normalised by list length shifts by order $1/n$ per appended heading regardless of value. The count-sensitive statistics are thus exactly the ones that respond to valueless additions. ■

P-E. Within a provider, fair value per heading is $EPV_i / PV(\text{premium})$ with $PV(\text{premium})$ a common positive scalar; shares are $FV_i / \sum_j FV_j = EPV_i / \sum_j EPV_j$. Every share statement in this paper is therefore identical on the fair-value and EPV bases, and the premium-free body is an identity with the -05 methodology (-05 §6.6). Cross-provider level comparisons reintroduce premiums and are made only where premiums are stated. ■

Appendix C — Per-heading bounds (52 verified rows; workbook Tail_bounds, build v4.0.0)

Counts are HIPE 2025 all-listed episodes, both sexes, public hospitals (S37/S38); $\bar{q}$ = max of the two band rates over Census 2022 denominators (S39), ×1.5 private-sector uplift on angioplasty rows only (S13); bounds are on public-system activity and use tier-driven payment fractions on the published -05 Benefit_b scale (Full = 1) and are stated per office in the workbook — the columns here show each heading's maximum across offices. Group-bounded headings share their group's counts and are aggregated once (Appendix D).

#	Heading	HIPE basis (row used)	Count 15–44	Count 45–64	$\bar{q}$ /100k	Max bound (any office)	Max share of own head
9	Chronic / Severe Rheumatoid Arthritis	T3.13 M05-M06 all-listed	832	2,625	203.0	€6,398	45.0%
10	Aorta Graft Surgery	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€75,158	1242.9%
11	Aortic Aneurysm – Endovascular Repair (Partial)	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€9,336	115.8%
12	Balloon Valvuloplasty	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€75,158	1242.9%
13	Cardiac Arrest with Defibrillator Insertion	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€75,158	1242.9%
15	Carotid Artery Stenosis – Treated by Endarterectomy or Angioplasty	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€9,336	115.8%
16	Coronary Angioplasty (Partial Payment)	T3.16 0670-0671 ×1.5 private uplift (S13)	249	2,548	295.5	€4,656	47.8%
17	Coronary Angioplasty – Single Vessel	T3.16 0670-0671 ×1.5 private uplift (S13)	249	2,548	295.5	€578	9.6%
18	Coronary Angioplasty – Two or More Vessels	T3.16 0670-0671 ×1.5 private uplift (S13)	249	2,548	295.5	€4,656	47.8%
19	Coronary Artery Bypass Graft (CABG) – Open Surgery	T3.16 0672-0679 CABG	41	900	69.6	€2,195	36.3%
21	Heart Failure	T3.13 I50 all-listed	432	2,936	227.0	€667	4.7%
23	Heart Valve Replacement or Repair	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€75,158	1242.9%
24	Implantable Cardioverter Defibrillator (ICD) – for Primary Prevention	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€9,336	115.8%

#	Heading	HIPE basis (row used)	Count 15–44	Count 45–64	q̄ /100k	Max bound (any office)	Max share of own head
26	Peripheral Vascular Disease – with Surgery or Angioplasty	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€75,158	1242.9%
27	Permanent Pacemaker Insertion	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€7,002	115.8%
28	Pulmonary Artery Graft / Replacement Surgery	T3.16 cardiovascular chapter (group)	9,530	31,176	2,410.5	€75,158	1242.9%
30	Cerebral Aneurysm – with Surgical Repair	T3.16 nervous+cardiovascular chapters (union group)	20,743	52,268	4,041.3	€15,526	192.6%
31	Cerebral Arteriovenous Malformation – Requiring Surgery	T3.16 nervous+cardiovascular chapters (union group)	20,743	52,268	4,041.3	€15,526	192.6%
32	Cerebral or Spinal Aneurysm – with Surgical Repair	T3.16 nervous+cardiovascular chapters (union group)	20,743	52,268	4,041.3	€11,645	192.6%
33	Cerebral or Spinal Arteriovenous Malformation – Requiring Surgery	T3.16 nervous+cardiovascular chapters (union group)	20,743	52,268	4,041.3	€11,645	106.3%
36	Central Retinal Artery/Vein Occlusion (Eye Stroke)	T3.13 H00–H59 all-listed (group)	7,097	19,207	1,485.1	€5,779	71.7%
51	Crohn's Disease – Severe / with Surgical Resection	T3.13 K50–K52 all-listed (disease-side group)	25,307	16,421	1,269.7	€39,813	658.4%
53	Ulcerative Colitis – Treated with Total Colectomy	T3.13 K50–K52 all-listed (disease-side group)	25,307	16,421	1,269.7	€4,946	61.3%
54	Aplastic Anaemia – of Specified Severity	T3.13 D50–D89 all-listed (group)	17,670	19,157	1,481.2	€46,397	767.3%
57	Liver Resection	T3.16 digestive chapter (group)	64,310	99,258	7,674.5	€28,959	359.2%
76	Syringomyelia or Syringobulbia	T3.16 nervous-system chapter (group)	11,213	21,092	1,630.8	€51,046	844.1%
81	Brain Abscess – Drained via Craniotomy	T3.16 nervous-system chapter (group)	11,213	21,092	1,630.8	€51,046	844.1%
85	Pituitary Gland Tumour	T3.16 nervous+endocrine chapters (union group)	11,933	22,217	1,717.8	€6,676	82.8%
86	Traumatic Brain / Head Injury – Resulting in Permanent Symptoms	T3.13 S06 all-listed	1,381	1,391	107.6	€3,392	56.1%
88	Carcinoma in Situ – Anus	T3.13 D00–D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.8%
89	Carcinoma in Situ – Bile Ducts	T3.13 D00–D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.0%
91	Carcinoma in Situ – Cervix	T3.13 D00–D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
92	Carcinoma in Situ – Colon or Rectum	T3.13 D00–D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%

#	Heading	HIPE basis (row used)	Count 15-44	Count 45-64	q̄ /100k	Max bound (any office)	Max share of own head
93	Carcinoma in Situ – Gallbladder	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.0%
94	Carcinoma in Situ – Larynx	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.8%
95	Carcinoma in Situ – Lung/Bronchus	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.8%
96	Carcinoma in Situ – Oesophagus	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
97	Carcinoma in Situ – Oral Cavity/Oropharynx	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
98	Carcinoma in Situ – Other Sites	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
99	Carcinoma in Situ – Pancreas	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.0%
100	Carcinoma in Situ – Renal Pelvis/Ureter	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.8%
101	Carcinoma in Situ – Stomach	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.0%
102	Carcinoma in Situ – Testicle	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
103	Carcinoma in Situ – Thymus	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.0%
104	Carcinoma in Situ – Urinary Bladder	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
105	Carcinoma in Situ – Uterus	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	8.8%
106	Carcinoma in Situ – Vagina	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
107	Carcinoma in Situ – Vulva	T3.13 D00-D09 all-listed (group, all CIS sites)	669	4,230	327.1	€1,280	15.9%
124	Cystic Fibrosis	T3.13 E84 all-listed	1,431	453	69.2	€0	0.0%
125	Single Lobectomy – for Disease or Trauma (Partial)	T3.16 respiratory chapter (group)	5,755	13,510	1,044.6	€4,074	50.5%
130	Surgical Removal of One Eye	T3.16 eye chapter (group)	4,876	20,421	1,578.9	€6,141	76.2%
135	Cystectomy – Complete Removal of the Urinary Bladder	T3.16 urinary chapter (group)	37,981	83,124	6,427.1	€24,402	302.6%

Appendix D — Bound conventions

(i) **Band-maximum rule** (a convention): the annual rate is bounded by $\max(\text{count}_{15-44}/\text{pop}_{15-44}, \text{count}_{45-64}/\text{pop}_{45-64})$. This is not an upper bound at every attained age; it is adopted as the working convention because the EPV-weighted aggregate is dominated by the younger ages, where the band maximum binds. (ii) **Upward biases by construction**: episodes exceed persons — heart failure illustrates the magnitude, its admissions including frequent readmissions of the same patients, so the person-level rate is a fraction of the episode rate used; all-listed exceeds principal; Census 2022 denominators understate the 2025 population. (iii) **Group-once aggregation**: a chapter-level source bounds its member headings jointly and enters office totals once, with union-mapped headings joining every chapter they may code to. (iv) **Cap ceilings**: an unknown cap is replaced by its admissible ceiling, never an estimate; all caps used are quoted from office documents (S06–S12, S25–S27). (v) **Promotion rule**: any bound exceeding one per cent of the head flags the heading for resolution; the queue and its disposition are in the correction register. (vi) **Vintage**: sources valid for their data years only are used as context, never as current bounds. One vintage-limited multiplier remains in use — the 2011 private-share uplift on angioplasty — and it is validity-critical, not margin: the tail bound assumes the public system's share of activity has not fallen since 2011, and if the private share has grown, the bound understates. The assumption is stated here rather than hidden in a margin argument, and the input is treated exactly as other dated sources are, pending period evidence on the private share. (vii) **Vintage table**: head incidence — NCRI 2017–19 (the -05 basis); tail numerators — HIPE 2025 (published September 2026); denominators — Census 2022 (understating 2025, conservative); payment caps — the offices' current published documents at the dates in the source register; cardiac context volumes — 2019/2021 (context only).

Appendix E — References (sources)

Provider documents are cited collectively, following the series convention (MWP-2026-05, Appendix B): **the five domestic life offices — policy conditions and published product materials, as current at the dates recorded in the source register** (rows S01–S12 and S25–S27: marketed counts, partial-payment caps and policy terms). No provider document is mapped to an office letter in this paper; the itemised per-office register, with document identities, URLs and verification notes, is held in the audit workbook and is not published with the office key.

Public and institutional sources:

1. Healthcare Pricing Office (2026), *Activity in Acute Public Hospitals in Ireland — HIPE Annual Report 2025*, tables T3.11–T3.16 as cited (author-obtained; the HPO public catalogue, <https://www.hpo.ie>, listed 2022 as the latest open release at the time of writing).
2. Central Statistics Office (2023), *Census of Population 2022 — Summary Results*, population by age band and sex, <https://www.cso.ie>.
3. National Cancer Registry Ireland (2025), *Cancer incidence statistics*, invasive and in-situ by site, <https://www.ncri.ie>.
4. Department of Health (2025), *National Review of Adult Specialist Cardiac Services in Ireland* (the 2023 review, published April 2025), context check on intervention scale (device insertions and valve volumes), <https://www.gov.ie/en/department-of-health/publications/national-review-of-adult-specialist-cardiac-services-in-ireland/>.
5. Organ Donation and Transplant Ireland (2025), *Annual Report*, transplant activity, <https://www.hse.ie/odti>.
6. Jennings, S., et al., *Trends in percutaneous coronary intervention and angiography in Ireland, 2004–2011*, the source of the angioplasty private-share uplift (S13; validity-critical per Appendix D(vi)),

<https://pmc.ncbi.nlm.nih.gov/articles/PMC5802397/>.

7. Milmo-Penny, D. (2026), *MWP-2026-05*, with audit workbook v4.0.0 (release copy, pseudonymised), Mylife.ie.

Provider policy conditions, definitions guides and published condition lists are cited collectively, following the series convention: the five domestic life offices — policy conditions and published product materials, current editions, read September 2026. Editions, references and locations are held in the internal source register; bona-fide verification is available per Appendix F.

Appendix F — Corrections

Corrections to this paper, should any arise after publication, will be issued as numbered errata to the paper and listed at the series page. The working correction-and-decision register maintained during the paper's production is an internal record of the series, retained in full, and is available to bona-fide verification enquiries at the author's discretion.

Declaration of interests

SMP Financial, trading as Mylife.ie, holds commercial agency appointments with each of the five domestic life offices analysed in this paper and earns commission on the protection business it places with them. This is an inherent conflict of interest, disclosed here so that the analysis may be judged on its method rather than on the author's independence.

The paper's safeguards against that conflict are methodological, and are set out in the body: a single framework applied uniformly to every office (Sections 2 to 5); a closed, stated evidential hierarchy and a strict separation of epidemiological incidence from claims experience (Section 2); computation exposed in full in the audit workbook; and lettered (pseudonymised) presentation of provider-level results (Provider A–E), with the identity key held in the internal register. The offices analysed operate in a regulated market and pay the majority of the claims they receive; the paper's aim is to measure structural differences in contractual value without promoting or disparaging any of them.

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Use of AI

This paper was prepared with the assistance of an AI system, used under the author's direction for drafting, structuring and computational support. It was not used to generate data: the incidence, activity, population and policy figures derive entirely from the sources listed in Appendix E, and every sourced figure has been checked against its primary source. All quantitative results are computed in the accompanying audit workbook and are reproducible from the disclosed inputs; the workbook, not the prose, is the computational record. The author retains full responsibility for the method, the analysis, the findings and any errors.

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