In 1999, Wolters Kluwer Health Life Sciences Analytics (or its predecessors—e.g., Adis International, Source Healthcare Analytics, Medispan, and Pharma Solutions) operated under a much different technical and organizational environment than today. While specific blueprints of their technical architecture from 1999 are not publicly documented, we can piece together a fairly accurate picture based on common industry practices and technologies of the time, especially in healthcare and pharmaceutical analytics.

Key HIPAA Concepts Applied in Pharma Analytics ---we used to do this in the Data marts preparation , before sending files to the clients

1. ZIP Code Masking (3-Digit ZIP Only)

• Full ZIP codes (5 digits) are Protected Health Information (PHI) under HIPAA.

• HIPAA Safe Harbor allows the first 3 digits only if the geographic area includes more than 20,000 people.

• Otherwise, it's masked as “000”.

Example:

• ZIP 90210 → reported as 902

• If population < 20,000 in 902 → reported as 000

Application in pharma analytics:

• Sales and prescription reports by geography are usually shown at 3-digit ZIP, state, or regional level.

• Used for drug performance, market segmentation, and launch planning, while protecting patient privacy.

2. Date Shifting / Aggregation

• Exact dates of service (prescription, diagnosis, admission) are often removed or generalized.

• Instead of exact dates, reports may show:

o Month and year only

o “X days since index event”

o Quarterly aggregates

Example use in reports:

• “Patients initiated treatment in Q1 2024”

• “Average adherence after 90 days post-initiation”

3. Suppressing Small Cell Sizes

• If cell size < 11, data is often suppressed or aggregated to avoid re-identification.

Example:

• "Only 8 patients prescribed Drug X in ZIP 90210" → suppress or roll up to county/state level.

Application:

• In market share reports, rare drug usage or sensitive conditions (e.g., HIV) may be hidden in small regions.

4. Removal of Direct Identifiers

As per HIPAA, the following 18 identifiers must be removed for Safe Harbor de-identification, including:

• Name

• Full address

• Telephone, fax numbers

• Social Security number

• Medical Record Numbers

• Full dates (birth, admission, discharge, etc.)

Wolters Kluwer Health and similar vendors de-identify claims, EHR, or lab data before any pharma analytics use.