



INTRODUCTION & OBJECTIVES

- Retrospective claims analyses are fundamental to HEOR research**
- Payer-sourced, fully adjudicated **"closed claims"** datasets are the preferred data source for these analyses given their longitudinal capture of patient interactions with the healthcare system; however, often, **only clearinghouse-sourced "open claims"** data, are available
- When "open claims" are utilized, **activity criteria are often employed** potentially biasing outcomes
- This study aims to **quantify the potential inadequacies of open claims data** and **identify corrective strategies** (activity criteria) **to enhance the reliability open claims relative to gold-standard closed claims** in outcomes research

METHODS

OVERVIEW & DATA SOURCES

Study evaluated adult T2D patients’ healthcare resource utilization (HCRU) across various SoC (IP, ER, OP, Office) with matched cohorts using:

- Open claims** (Symphony Healthcare)
- Closed claims** (Merative MarketScan)

QUALIFICATION CRITERIA

Study Period

- Jan 1st to Dec 31st, 2023

Patient Identification:

- 2+ ICD-10 T2D diagnoses 30+ days apart during study period

Closed Claims Enrollment Requirements

- Patients had 12 months of continuous enrollment following first T2D diagnosis

Open Claims Activity Criteria

For patients identified using Symphony open claims, **3 separate patient cohorts** were created

- Requiring all-cause activity annually**
- Requiring all-cause activity semesterialy**
- Requiring all-cause activity quarterly**

EVALUATION METRICS

- T2D Visit Rate** (IP, OP, ER, Office)
- T2D Average Annual Visits** (IP, OP, ER, Office)

RESULTS

Figure 1 | Overview of Medical Claims Generation and Clearing House Operations

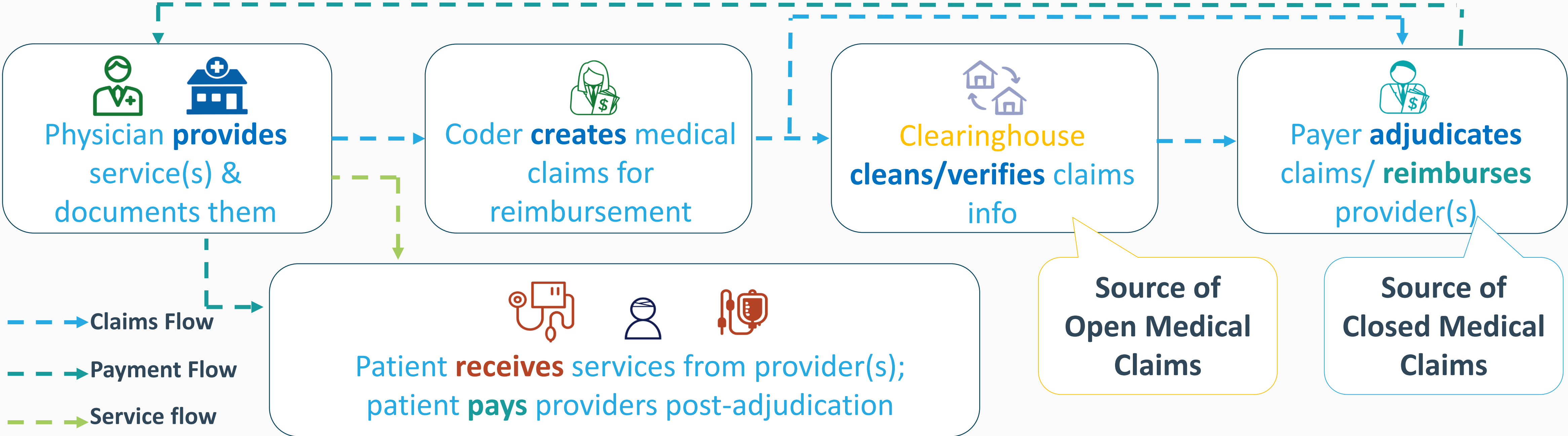


Figure 1: Closed medical claims within Merative MarketScan are sourced from self-insured employers and health plans while open claims are sourced at clearinghouses; Medicare advantage or Medicare supplement patients were excluded

Figure 2 | Matched Cohort Results

Patient Cohorts	MarketScan Closed Claims	SHA Open Claims Annual Activity	SHA Open Claims Semi-Annual Activity	SHA Open Claims Quarterly Activity
Matched Cohort	529,223	529,223	529,223	529,223
Males	53%	53%	53%	53%
Females	47%	47%	47%	47%
18-34	4%	4%	4%	4%
35-54	12%	12%	12%	12%
55-64	52%	52%	52%	52%
65+	<1%	<1%	<1%	<1%

Figure 2: Qualifying MarketScan closed claims patients were matched with SHA open claims patients at a 1:1 ratio based on demographic profile; analysis focused on commercial medical claims for adult patients only

Figure 3 | T2D Visit Rate and Frequency, Merative MarketScan Closed Claims vs. SHA Comparator

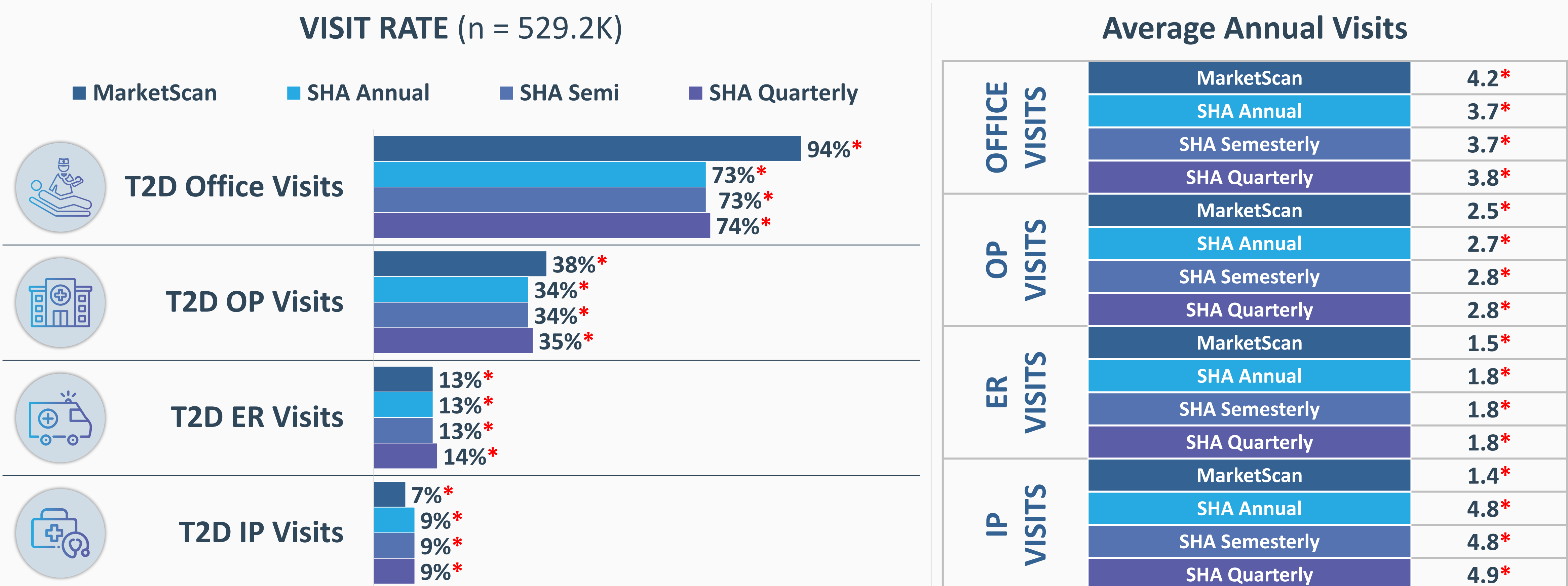


Figure 3: Matched cohorts were evaluated for utilization rates and visit frequency across different settings of care for T2D.

***Statistically Significant Difference (P<.05)**

SUMMARY

- Limited differentiation in T2D engagements were observed across activity criteria cohorts (quarterly, semesterialy, annual); T2D visit rates were within ± 15% IP, OP, and ER visits, but not for office visits**
- Office visits appeared to be under captured within open claims compared to closed claims, even with activity criteria applied**

RESULTS

- Office visit rate was significantly lower for open claims cohorts vs. closed (94% vs. 73%)**
- Visit rate for IP, ER, and OP settings were within ±15% for all cohorts**
- Average annual IP visits were ~340% higher for open claims cohorts than closed (4.8 vs. 1.4 annually)**

DISCUSSION

- Open claims appear to have less significant capture of patient encounters at certain SoC
- Patients identified in open claims using an activity criteria **possibly skew towards a more ill population** as evidenced by **higher the average rate of IP visits**
- Varying the activity criteria** for patients identified in open claims **appears to have minimal effects on the capture of patient interactions** given low variance in average visits and rates of SoC utilization

CONCLUSIONS

- Open claims with activity criteria **could not fully replicate the capture of closed claims**
- Endpoints are less sensitive to activity criteria** than dataset selection
- Open claims may suffice in some analyses **depending on SoC of interest**, particularly as a supplement / benchmark to closed claims

LIMITATIONS

Trinity did not present findings for all-cause interactions, given biases resulting from requirement of all-cause interaction within open claims cohorts

ABBREVIATIONS

SoC: setting of Care; **SHA:** Symphony Healthcare; **HEOR:** healthcare economics and outcomes research; **HCRU:** healthcare resource utilization; **T2D:** type 2 diabetes; **IP :** inpatient; **OP:** outpatient