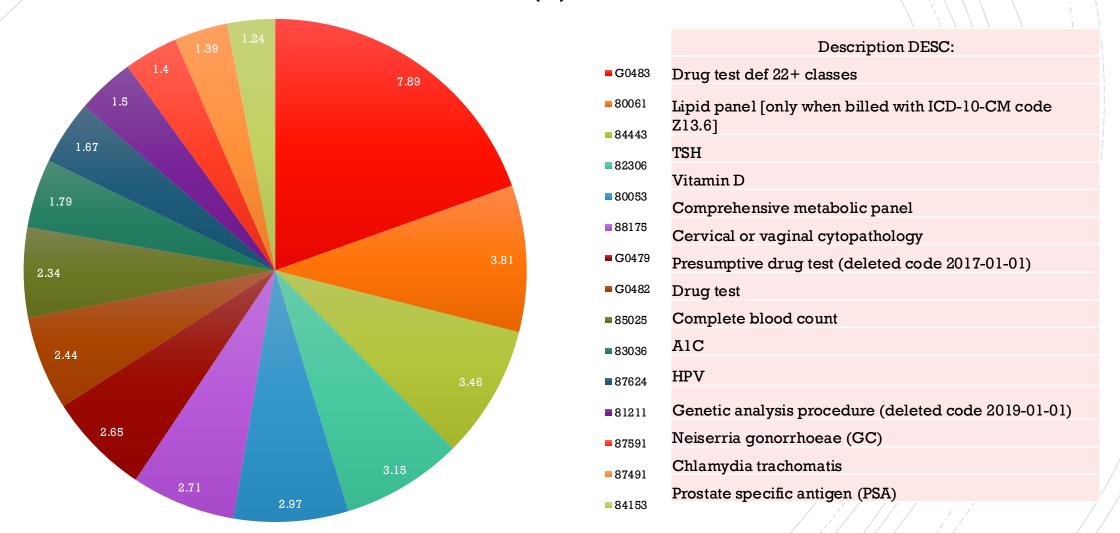
# Medicare Clinical Laboratory Fee Schedule Private Payer Rates and Volumes

Sample data gathered from the Fee for Service Data Collection System (FFSDCS)

Tera Thomas

# FROM A SAMPLE OF 967,129 LAB ORDERS TOP 15 CODES MAKE UP 32% OF TOTAL ORDERS

### TOP 15 MEDICARE LAB HCPCS CODES USED (%)



TOP 15 CODES MAKE UP 32% OF TOTAL ORDERED LABS



# 15 Highest Total Revenue Ordered Labs

ORDERED	HCPCS	Description	REV.
		Lipid panel [only when billed with ICD-10-CM code	
#2	80061	Z13.6]	#1
#5	80053	Comprehensive metabolic panel	#2
#3	84443	TSH	#3
#9	85025	Complete blood count	#4
#6	88175	Cervical or vaginal cytopathology	#5
#4	82306	Vitamin D	#6
#10	83036	AlC	#7
#1	G0483	Drug test def 22+ classes	#8
#28	87880	Group A streptococcus	#9
#11	87624	HPV	#10
#7	G0479	Presumptive drug test (deleted code 2017-01-01)	#11
#15	84153	Prostate specific antigen (PSA)	#12
#40	85610	prothrombin time (PT) test	#13
#18	80048	Basic metabolic panel	#14
#14	87491	Chlamydia trachomatis	#15
#13	87591	Neiserria gonorrhoeae (GC)	#16
#8	G0482	Drug test	#20
		Genetic analysis procedure (deleted code 2019-01-	
#12	81211	01)	#22

THESE TOP 15 CODES MAKE UP 73% OF TOTAL REVENUE

G0483: Drug test def 22+ classes

Price Variability
for the Most
Frequently
Ordered Lab



Record count: 1933

Standard Dev: 1009.9

Avg Price: \$190.96

G0483: Drug test def 22+ classes

Price Variability
for the Most
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Ordered Lab



Record count: 1933

Standard Dev: 1009.9

major outlier!

Avg Price: \$190.96

G0483: Drug test def 22+ classes

Price Variability
for the Most
Frequently
Ordered Lab

### excluding outlier:



Record count: 1932

Standard Dev: 655.0

Avg Price: \$173.47

# Cost Efficiency

hcpcs_cd	cost_efficiency	Description
81455	0.0027	Genomic sequencing DNA/RNA
81450	0.00533	Genomic sequencing; blood/lymph/cancers
81412	0.00844	Genomic sequencing; Ashkenazi Jewish descent clusters
81162	0.00936	Genomic sequencing; BRCA1, BRCA2
81161	0.01288	Genomic sequencing; Dystrophin gene
81324	0.01395	Genomic seequencing; Peripheral myelin protein 22 (deletion/duplication)
81325	0.01612	Genomic sequencing; Peripheral myelin protein 22 (entire gene)
81445	0.01703	Genomic sequencing; solid organ cancers
81287	0.01719	Genomic sequencing; MGMT promoter methylation analysis
81350	0.01952	Genomic sequencing; UGT1A1



Lower cost efficiency ratio (price:vol) means the test is more cost efficient

## Cost Efficiency

	hcpcs_cd	cost_efficiency	Description
	81455	0.0027	Genomic sequencing DNA/RNA
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	81445	0.01703	Genomic sequencing; solid organ cancers
	81287	0.01719	Genomic sequencing; MGMT promoter methylation analysis
	81350	0.01952	Genomic sequencing; UGT1A1
	•••		•••
•	G0483	0.08644	Drug test def 22+ classes



#44

 $\uparrow$  Recall  $\rightarrow$  This was the most frequently ordered test, and #8 in highest revenue

# MORE METRICS:

1013 Unique Codes

\$250.80 is the average price per code

```
-- Finding top orders used:
SELECT hcpcs cd, SUM(vol txt) AS total orders
FROM public.medicarelabs
GROUP BY hcpcs cd
ORDER BY total orders DESC
-- Finding proportion from total orders in table:
SELECT
  hcpcs cd,
  SUM(Vol txt) AS total orders,
  SUM(Vol txt) * 1.0 / (SELECT SUM(Vol txt) FROM public.medicarelabs) AS proportion
FROM public.medicarelabs
GROUP BY hcpcs_cd
ORDER BY total orders DESC;
-- Amount billed for the top orders, casting vol txt and price amt as NUMERIC values:
SELECT
  hcpcs cd,
  SUM(CAST(vol txt AS NUMERIC)) AS total orders,
  SUM(CAST(vol_txt AS NUMERIC) * CAST(price_amt AS NUMERIC)) AS total_revenue
FROM public.medicarelabs
GROUP BY hcpcs cd
ORDER BY total revenue DESC
```

**REFERENCE CODE** – slides 2-5:

```
Variability within code - slide 6:
-- price variability for 'G0483' --> have to cast as NUMERIC Value!!
SELECT hcpcs cd,
     COUNT(*) AS record count,
     MIN(price amt::NUMERIC) AS min price,
     MAX(price amt::NUMERIC) AS max price,
     AVG(price_amt::NUMERIC) AS avg_price,
     PERCENTILE CONT(0.25) WITHIN GROUP (ORDER BY price amt::NUMERIC) AS ql price,
     PERCENTILE CONT(0.50) WITHIN GROUP (ORDER BY price amt::NUMERIC) AS median price,
     PERCENTILE_CONT(0.75) WITHIN GROUP (ORDER BY price_amt::NUMERIC) AS q3_price,
     STDDEV(price amt::NUMERIC) AS stddev price
FROM public.medicarelabs
WHERE hcpcs_cd = 'G0483'
GROUP BY hcpcs cd
-- validate
SELECT hcpcs_cd,
     vol txt,
     price_amt
FROM public.medicarelabs
WHERE hcpcs cd = 'G0483'
ORDER BY price amt DESC
```

```
Variability excluding outlier: slide 8
-- excluding the outlier
WITH filtered_data AS (
  SELECT *
 FROM public.medicarelabs
 WHERE hcpcs cd = 'G0483'
 AND price_amt::NUMERIC < (SELECT MAX(price_amt::NUMERIC) FROM public.medicarelabs WHERE hcpcs_cd = 'G0483')
SELECT
 hcpcs cd,
  COUNT(*) AS record count,
 MIN(price amt::NUMERIC) AS min price,
 MAX(price_amt::NUMERIC) AS max_price, -- New max after removing the outlier
 AVG(price amt::NUMERIC) AS avg price,
 PERCENTILE_CONT(0.25) WITHIN GROUP (ORDER BY price_amt::NUMERIC) AS ql_price,
  PERCENTILE_CONT(0.50) WITHIN GROUP (ORDER BY price_amt::NUMERIC) AS median_price,
  PERCENTILE CONT(0.75) WITHIN GROUP (ORDER BY price amt::NUMERIC) AS q3 price,
  STDDEV(price amt::NUMERIC) AS stddev price
FROM filtered data
GROUP BY hcpcs cd;
```

```
Testing for cost efficiency ratio – slide 9-10:
-- cost efficiency (inc vol, dec price)
--
SELECT
hcpcs_cd,
SUM(CAST(price_amt AS NUMERIC)) AS total_price_amt,
SUM(CAST(vol_txt AS NUMERIC)) AS total_vol_txt,
CASE
WHEN SUM(CAST(vol_txt AS NUMERIC)) = 0 THEN NULL
ELSE SUM(CAST(price_amt AS NUMERIC)) / SUM(CAST(vol_txt AS NUMERIC))
END AS cost_efficiency
FROM public.medicarelabs
GROUP BY hcpcs_cd
ORDER BY cost_efficiency ASC;
```

Sample data provided by: https://data.cms.gov/provider-characteristics/hospitals-and-other-facilities/medicare-clinical-laboratory-fee-schedule-private-payer-rates-and-volumes