

# Trends and Concurrence of Opioid Prescribing Among Medicare and Medicaid Beneficiaries, 2019-2021



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## Background

The Centers for Disease Control and Prevention reported that drug overdose deaths in 2021 were six times greater compared to drug overdose deaths in 1999. This trend is intensifying: The number of drug overdose deaths increased by more than 16% from 2020 to 2021. Opioid-involved death rates increased by over 15% while prescription opioid-involved death rates remained the same.<sup>1</sup>

Dentistry is a common source of opioid exposure, especially among children.<sup>2,3</sup> Several studies have shown dental opioid prescriptions decreasing over the past ten years, but prescribing levels are still high.<sup>4,5,6</sup>

For Medicare and Medicaid beneficiaries, alternative methods of prescription payment, such as cash, private insurance or assistance programs, influence both access to prescription medications and pharmacoequity. Research investigating the effects of these alternative payment methods on opioid prescribing patterns is limited.

## Methods

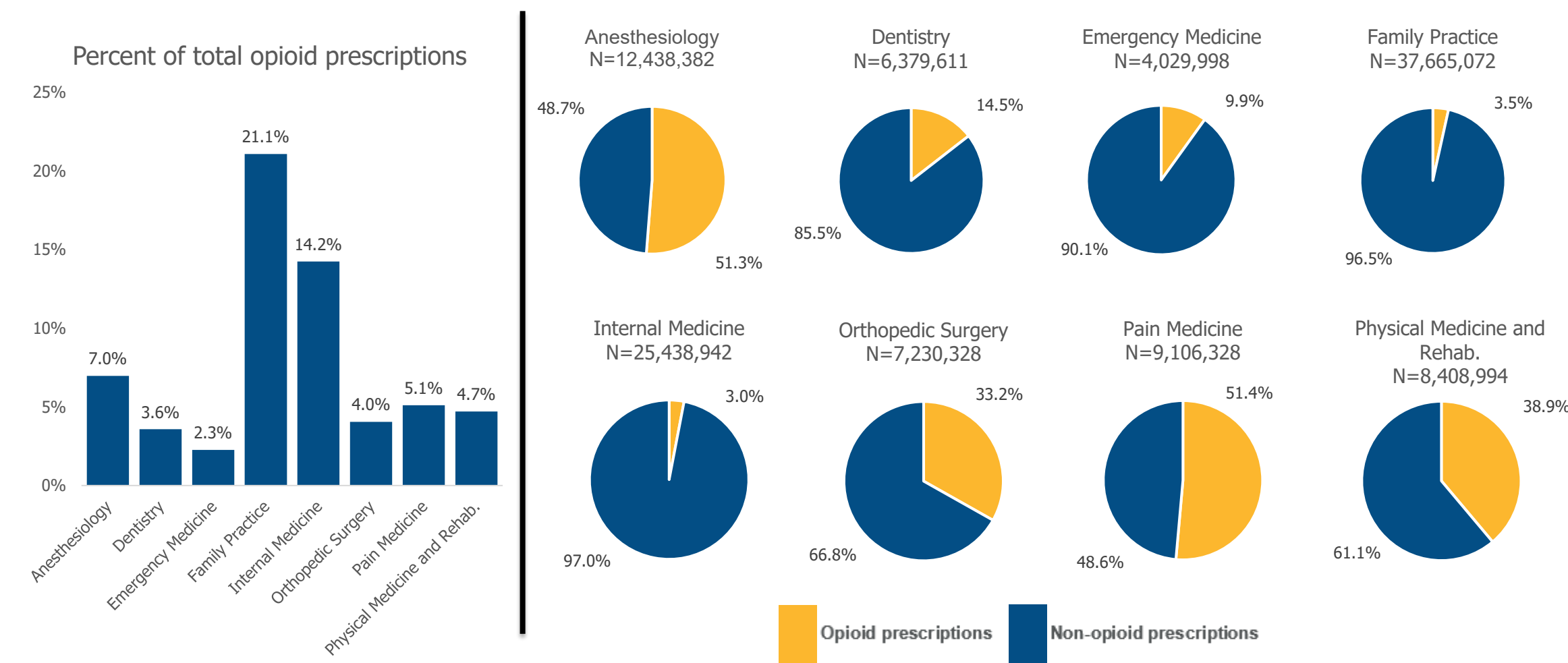
The IQVIA Longitudinal Access and Adjudication Data Set (LAAD) is a comprehensive patient-centric dataset offering an integrated view of the provider, patient and payer to better understand the patient experience.

This study examined opioid prescriptions from all payers among patients with at least one prescription paid for by Medicare or Medicaid between January 2019 and June 2021. Specialties were defined using the IQVIA Health Data Engine specialty grouping. This analysis was limited to the top 8 opioid-prescribing specialties by volume, accounting for 63.9% of paid opioid prescriptions in the analytical dataset.

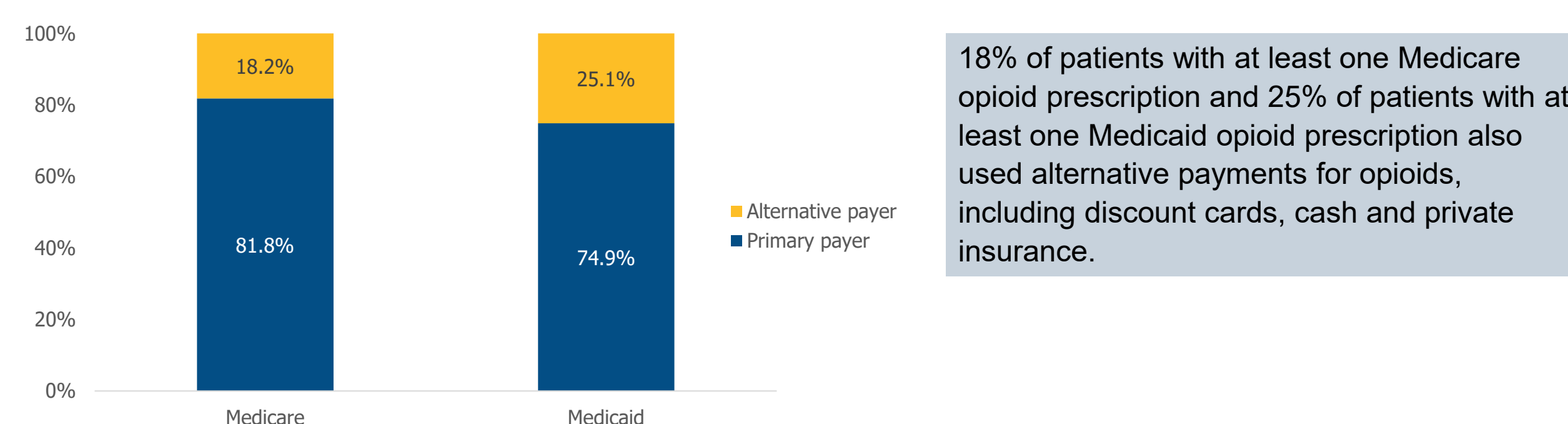
Concurrence was defined as a new opioid prescription filled within the day supply window of a previous prescription, with allowances for refills and swapping between equivalent generic drugs. Prescriptions per 100,000 were defined using the national monthly enrolled population of Medicare and Medicaid beneficiaries according to the Master Beneficiary Summary File (MBSF) and Transformed Medicaid Statistical Information System (T-MSIS) Analytic Files (TAF).

## Results

**Fig. 1 Opioid prescription rates across and within specialties**



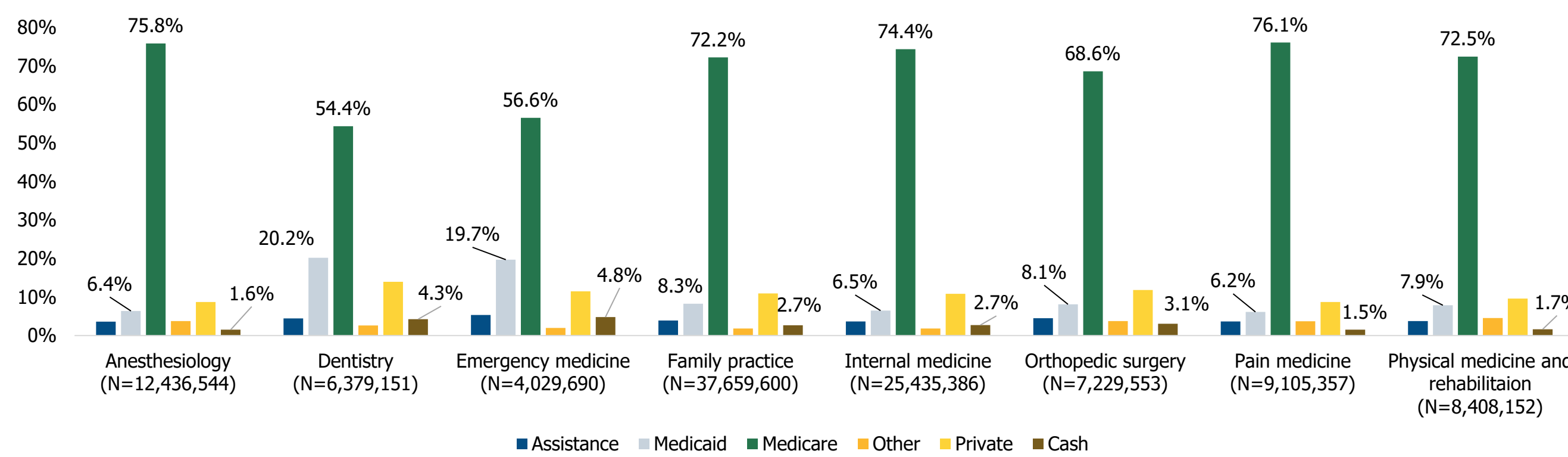
**Fig. 2 Alternative payments for opioid prescriptions, 2019-2021**



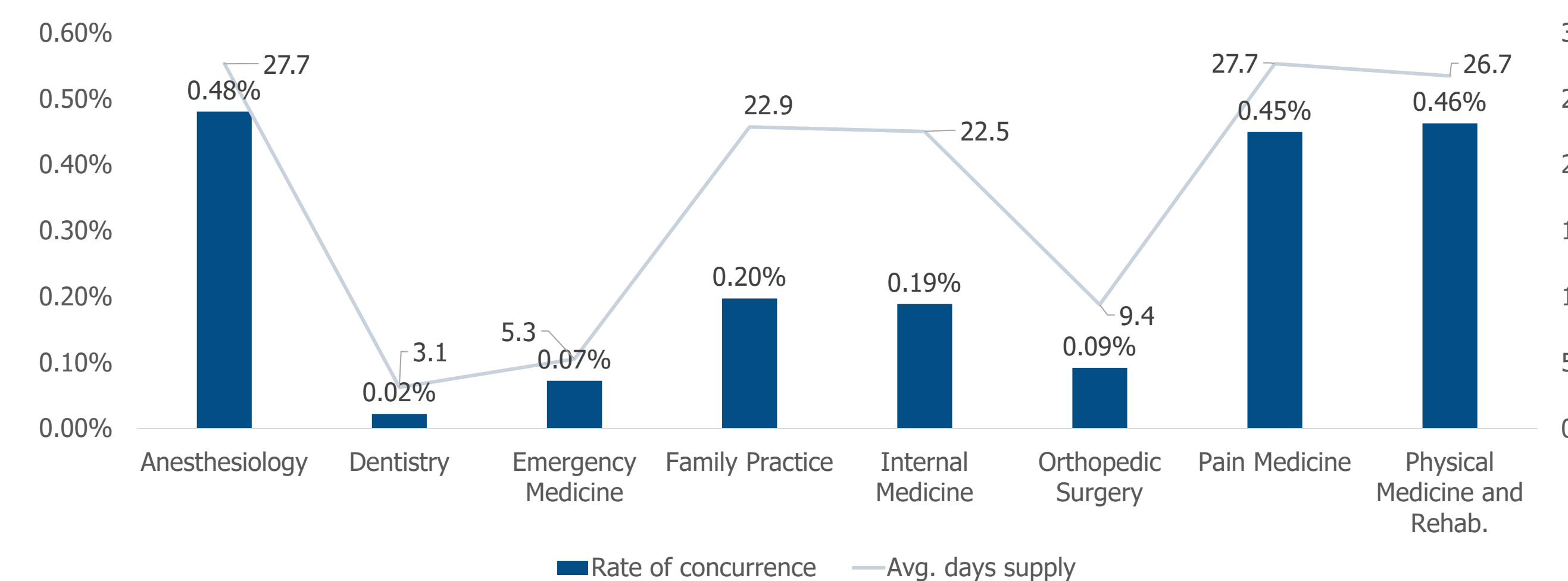
Source: IQVIA Longitudinal Access and Adjudication Data Set (LAAD), Chi-sq test of significance >0.001.

## Results

**Fig. 3 Opioid prescriptions rates, by payer and specialty, 2019-2021**



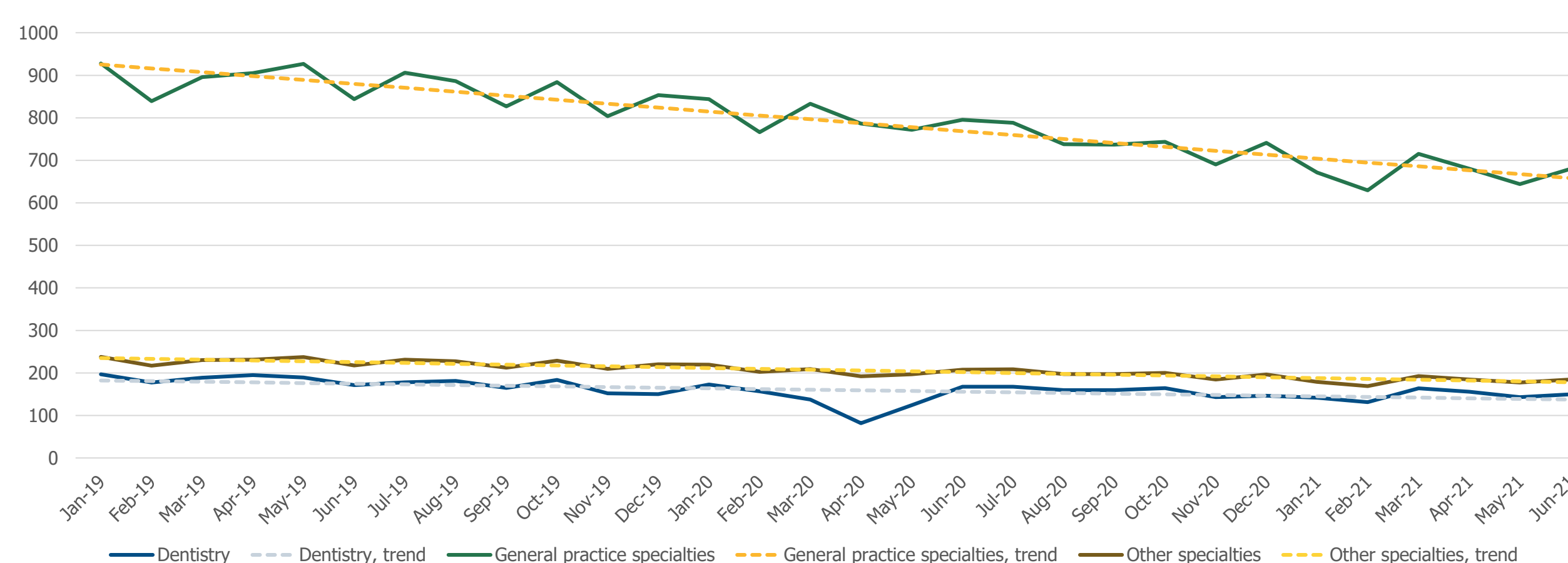
**Fig. 4 Concurrence vs. average days supply for paid opioid prescriptions**



| Effect                       | Odds ratio | Standard error | Prob. chi-sq | Effect                   | Odds ratio | Standard error | Prob. chi-sq |
|------------------------------|------------|----------------|--------------|--------------------------|------------|----------------|--------------|
| <b>Specialty</b>             |            |                |              | <b>Insurance type</b>    |            |                |              |
| Anesthesiology               | 2.44       | 0.0062         | <.0001       | Assistance/discount card | 1.00       | 0.00972        | 0.76         |
| Dentistry                    | 0.11       | 0.027          | <.0001       | Medicaid                 | 0.67       | 0.00865        | <.0001       |
| Emergency medicine           | 0.38       | 0.0191         | <.0001       | Medicare                 | Reference  | Reference      | Reference    |
| Family practice              | 1.04       | 0.00591        | <.0001       | Other                    | 0.92       | 0.0116         | <.0001       |
| Internal medicine            | Reference  | Reference      | Reference    | Private                  | 0.84       | 0.00682        | <.0001       |
| Orthopedic surgery           | 0.48       | 0.0131         | <.0001       | Cash                     | 0.84       | 0.0138         | <.0001       |
| Pain medicine                | 2.29       | 0.00679        | <.0001       | <b>Demographics</b>      |            |                |              |
| Physical medicine and Rehab. | 2.37       | 0.00689        | <.0001       | Male                     | Reference  | Reference      | Reference    |
|                              |            |                |              | Female                   | 0.93       | 0.00393        | <.0001       |
|                              |            |                |              | Age at event date        | 0.99       | 0.000158       | <.0001       |
|                              |            |                |              | Urban                    | Reference  | Reference      | Reference    |
|                              |            |                |              | Rural                    | 0.99       | 0.00483        | 0.04         |

Source: IQVIA Longitudinal Access and Adjudication Data Set (LAAD). Both rates of concurrence and average days supply are significantly different per specialty (Chi-sq test of significance >0.001). Concurrence was defined as a new opioid prescription filled within the days supply window of a previous prescription, with allowances for refills and swapping between equivalent generic drugs. Urban/rural status by Rural-Urban Commuting Area (RUCA) codes. \*Assistance payer category includes discount cards and assistance programs. \*Other\* payer category includes federal or state employee insurance and worker's compensation.

**Fig. 5 Monthly opioid prescriptions per 100,000 Medicare and Medicaid beneficiaries**



| Specialty           | Parameter estimate (adjusted to 30 days) | Standard error | T-Value | Prob. chi-sq |
|---------------------|--|----------------|---------|--------------|
| All (not shown)     | -40.4                                    | 0.13           | -10.19  | <.0001       |
| Dentistry           | -1.5                                     | 0.01           | -3.72   | 0.0009       |
| General specialties | -9.1                                     | 0.02           | -13.54  | <.0001       |
| Other specialties   | -1.9                                     | 0.01           | -11.47  | <.0001       |

Source: IQVIA Longitudinal Access and Adjudication Data Set (LAAD). "General practice specialties" is an average of "Internal medicine" and "Family medicine". "Other Specialties" is an average of "Anesthesiology," "Emergency medicine," "Orthopedic surgery," "Pain medicine" and "Physical medicine and rehabilitation."

## Discussion

### Payers of opioid prescriptions

- Family practice and internal medicine specialties led in paid opioid prescriptions as a proportion of all paid opioid prescriptions in the dataset. Pain medicine and anesthesiology led in opioid prescriptions as a proportion of total prescriptions within the specialty, including non-opioid prescriptions.
- 18% of patients with at least one Medicare opioid prescription and 25% of patients with at least one Medicaid opioid prescription also used alternative payments for opioids, including discount cards, cash and private insurance.
  - These alternative payments are not captured in administrative Medicare or Medicaid claims data.
- There is significant variation in opioid prescriptions by specialty and payment. Medicaid pays for 20% of all dental and emergency medicine opioid prescriptions. Cash payments accounted for over 4% of all dental and emergency medicine opioid prescriptions.

### Concurrence of opioid prescriptions

- Rates of concurrence were relatively low; about 1.5% of patients with an opioid prescription had one or more prescriptions defined as concurrent (data not shown).
- Specialists who typically prescribe 30-day prescriptions have higher levels of concurrence, shown both by the average days' supply data and in the multivariate analysis.
- Dentistry has the lowest odds of concurrence among the studied specialties.
- The minimal concurrence observed among specialties indicates that strategies such as prescription monitoring programs may effectively influence prescribing behaviors.

### Monthly trends for opioid prescriptions

- Total opioid prescriptions declined at an overall monthly rate of 40.3 prescriptions per 100,000 Medicare and Medicaid beneficiaries (-0.79%, -9.6% annualized).
  - Dental opioid prescriptions declined at a monthly rate of 1.5 prescriptions per 100,000 beneficiaries (-0.78%, -9.5% annualized).
- General practice specialties declined at a monthly rate of 9.1 prescriptions per 100,000 beneficiaries (-0.98%, -11.9% annualized).
- Other specialties declined at a rate of 1.9 prescriptions per 100,000 beneficiaries (-0.81%, -9.9% annualized).

## Conclusions

- Alternative methods of opioid prescription payment, such as cash, private insurance and assistance programs, account for about 20% of all opioid prescriptions to Medicare and Medicaid beneficiaries. These alternative payments are crucial in understanding access to opioids among beneficiaries.
- Rates of concurrence are strongly linked to days' supply of the opioid prescription and provider specialty.
- The rate of opioid prescriptions among Medicare and Medicaid beneficiaries is on a downward trend. This reduction is somewhat more rapid in fields such as primary care and internal medicine when compared to dentistry or other medical specialties.

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