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Pharmacoeconomic impact of patient-centric oncology service model

Kasey Rubin

Providence Health & Services, Portland Oregon, Kasey.Rubin@providence.org

Samuel Jacobson

Providence Health & Services, Portland Oregon, samuel.jacobson@providence.org

Shannon Buxell

Providence Health & Services, Portland Oregon, Shannon.Buxell@providence.org

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Kasey Rubin, PharmD; Samuel Jacobson PharmD, BCOP; Shannon Buxell, PharmD

Background

- Ambulatory oncology pharmacy is an expanding discipline of pharmacy with over 20 newly approved oral chemotherapy agents since 2017.¹
- Clinical pharmacists are being integrated into health care teams across the country to serve as the medication experts for this specific subset of patients.
- While current research in this field exists, the impact remains unclear due to the difficulty in quantifying metrics and interventions made by pharmacists.
- Providence Health and Services employs a novel practice model, leveraging an embedded specialty pharmacy called Credena Health.
- Credena Health is licensed in 49 states, however due to limited distribution networks and regional contracting not all patients can utilize as a specialty pharmacy.
- For patient convenience, Credena Health facilities include a central distribution center, an oncology satellite, as well as concierge services available at other sites.
- Providence Cancer Institute cares for a diverse patient population. In this environment the pharmacist is a critical member of the interdisciplinary team
- In March of 2018 clinical pharmacists were embedded into the outpatient oncology clinics, removed from the dispensing role
- The impact has not been formally evaluated
- Goals include:
 - Quantify the pharmacoeconomic benefit of embedded specialty pharmacy services
 - Inform other facilities on processes to implement such services
 - Analyze the pharmacist's clinical impact by examining patient-centric factors

Purpose

- Evaluate the pharmacoeconomic impact of a pharmacist in an ambulatory oncology practice model

Objectives

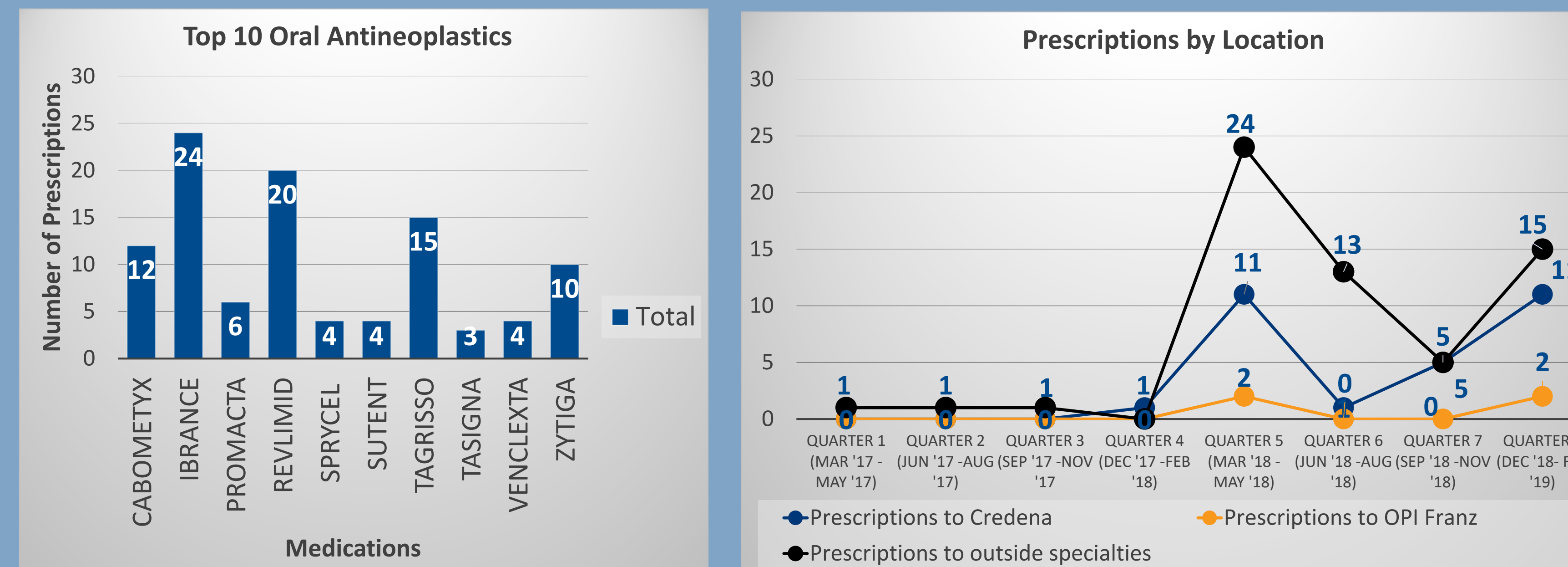
- Primary outcomes
 - Number of prescriptions filled by Credena specialty pharmacy
 - Estimated revenue generated by pharmacists based on prescription quantity
- Secondary outcomes
 - Patient reported pain scales (Numerical 1-10)
 - Patient reported nausea scores (MOSES scale)
 - Number of I-vents completed by pharmacists

Methods

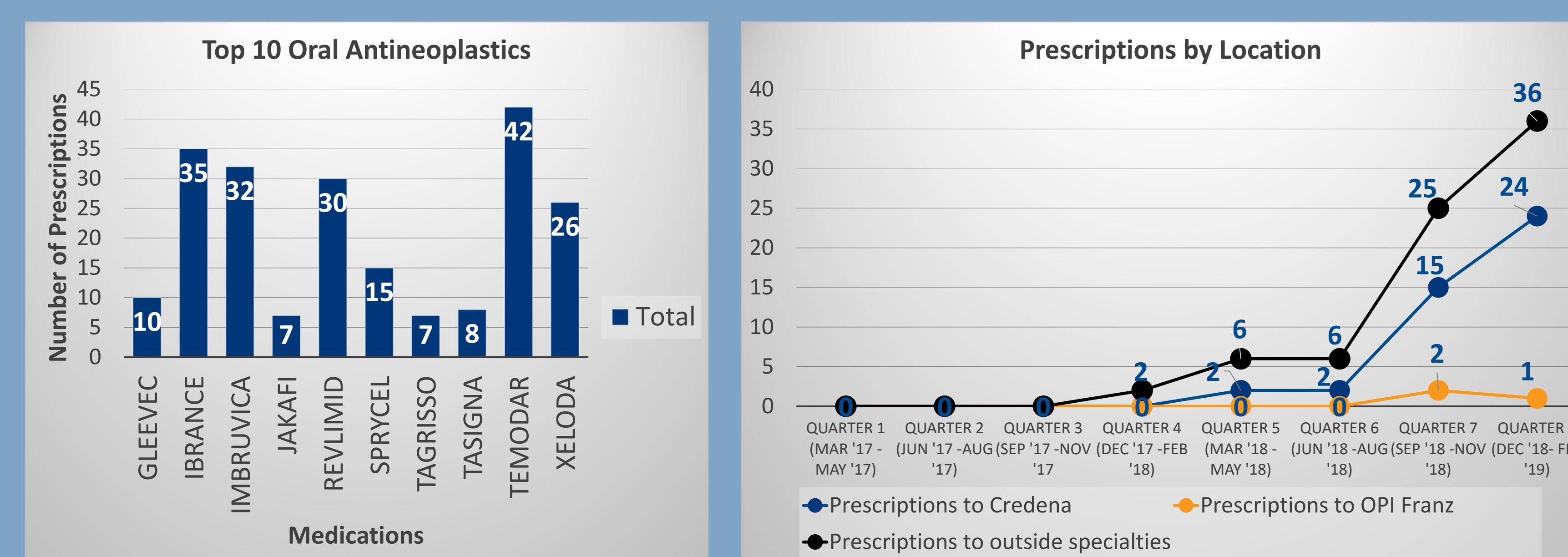
- Study design
 - Retrospective
 - Pre-Post
 - Pre-intervention: March, 2017 – February, 2018
 - Post-intervention: March, 2018 – March, 2019
- Inclusion criteria
 - >18 years old
 - Have had a visit to the ambulatory oncology clinic within the designated timeframe
- Exclusion criteria
 - Patients who were/are incarcerated
 - Patients who were/are in mental institutions
 - Patients who were/are pregnant
 - Patients with cognitive disability present

Results

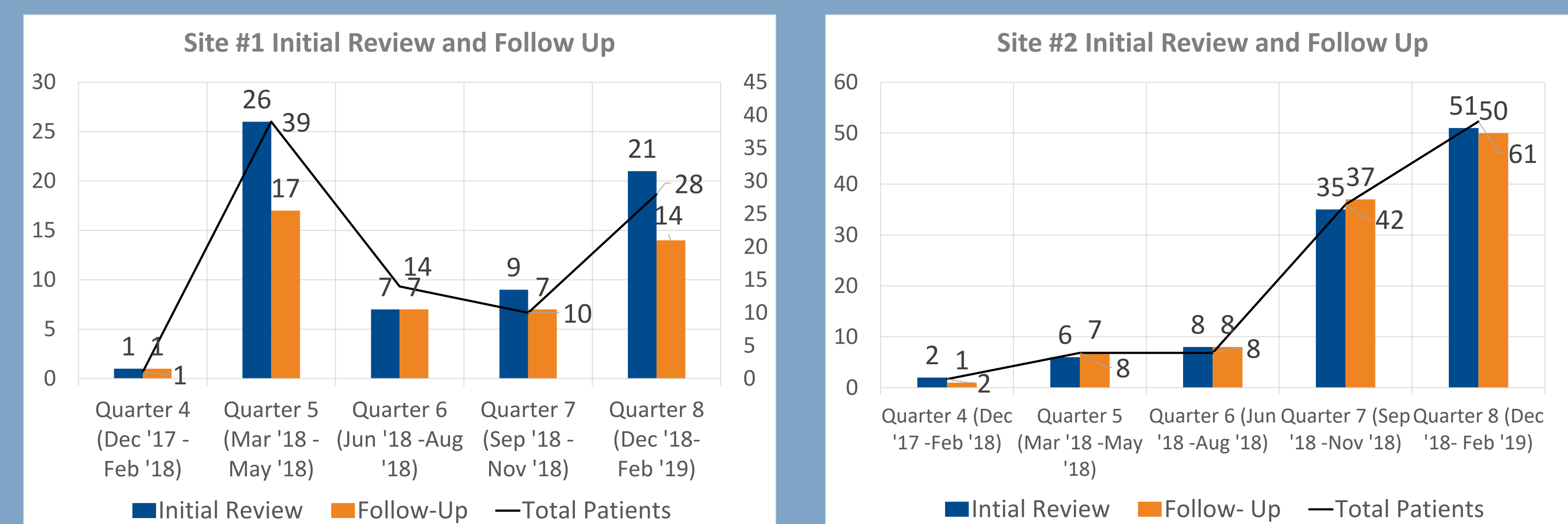
Hospital Location #1



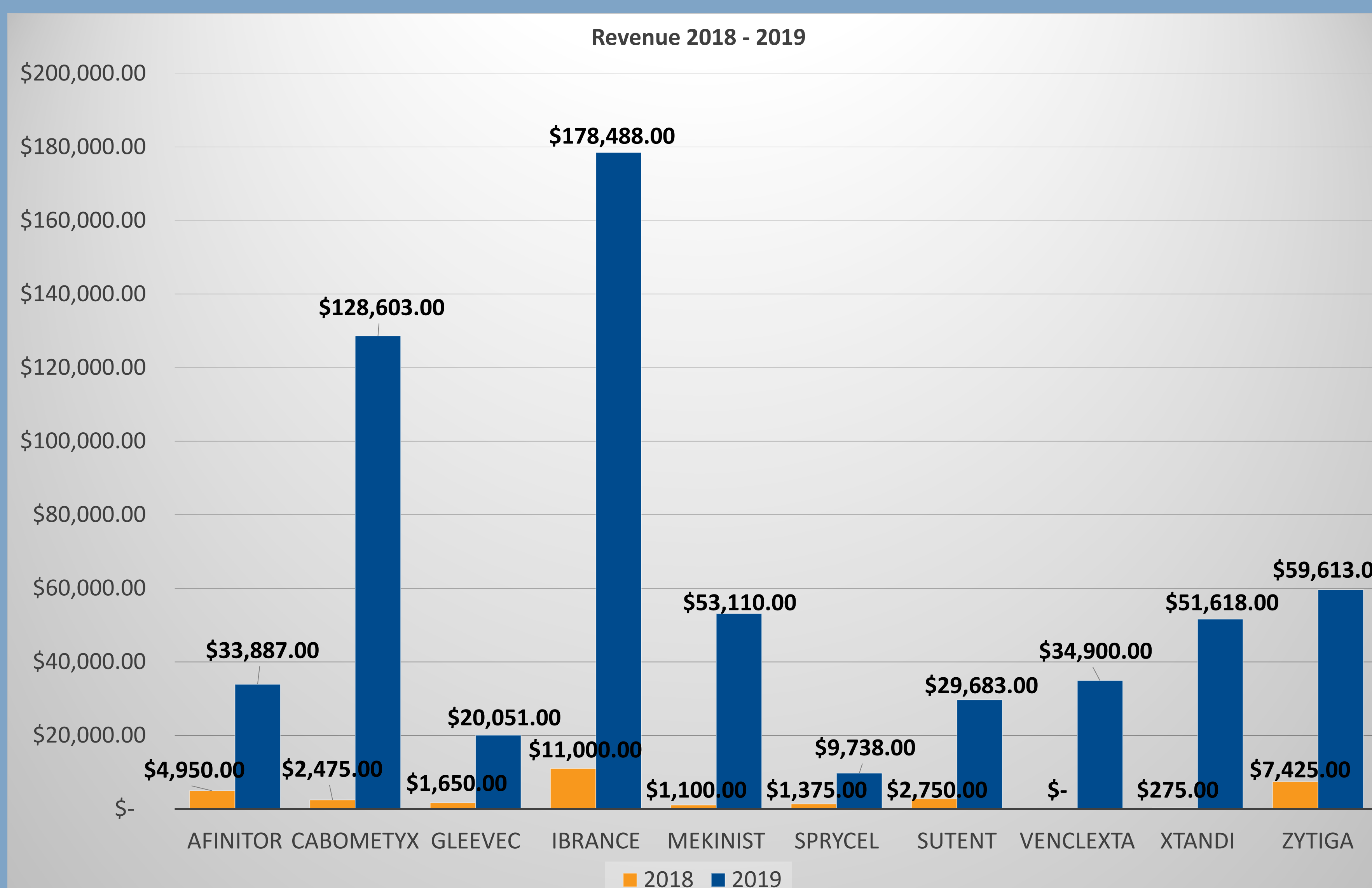
Hospital Location #2



Pharmacist Initial Consult and Follow ups Location #1 and #2



Revenue



Discussion

Results

Number of Prescriptions

- Pharmacists utilize the home specialty site (Credena-Halsey) instead of sending the prescription out of network
- Trend of prescriptions correlates appropriately to the increase in patients being seen at Providence Cancer Institute
- In early months, pharmacists could have been under utilized as service line developed
- Examination of data outside timeline continues to show increase in prescriptions filled in house

Revenue

- Credena Health can fill prescriptions for all Providence Health Plans, a majority of Medicare Part D plans and Oregon Medicaid plans
- Medication agreements negotiated into action the start of 2019
- Revenue calculated between both sites are based off dispensing fees and reimbursement from insurance

Clinical Outcomes

- The pharmacist is ensuring that prescriptions are successfully received and are getting to the patients.
- Documentation regarding clinical outcomes were not clearly defined prior to the study, therefore found a lack of interventions
- Pharmacists reviewed supportive care, completed medication reconciliations, provided information on drug-drug interactions, coordinated lab checks, adjusted doses based on medications, labs and diagnoses.

Data Limitations

- Retrospective study with manual data collection illustrating a short time frame
- Due to 340B pricing and differences in insurance reimbursement per person, revenue is not patient specific

Conclusions & Next Steps

- Addition of pharmacists to the ambulatory care team has increased continuity of care for patients, increased revenue and prescription capture rate through Credena specialty pharmacy
- Create revenue report to allow for number of oral antineoplastic prescriptions being filled by Credena Health, specifically by Providence physicians
- Generate report that calculates revenue generated by oral antineoplastic prescriptions
- Determine standardization between the sites and clear documentation of number of pharmacist interventions (I-vents)
- Reconcile changes in medication regimens as direct result of pharmacist inclusion

References

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2. Howard A, Kerr J, McLain M, Modlin J. Financial impact from in-office dispensing of oral chemotherapy. J Oncol Pharm. 2019. 25 (7): 1570-1575.
3. Randolph LA, Walker CK, Nguyen AT, Zachariah SR. Impact of pharmacist interventions on cost avoidance in an ambulatory care center. J Oncol Pharm. 2018. 24 (1): 3-8.

Disclosures:
Kasey Rubin - nothing to disclose
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Shannon Buxell - nothing to disclose