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Analysis of a Pilot HIV Care Management Program

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Background

- In 2018 there were approximately 38,000 new HIV infections and over 15,000 deaths among adults and adolescents with diagnosed HIV in the US and dependent areas[1]
- Improvements in antiretroviral therapy (ART) have positively impacted people living with HIV that are able to access and maintain drug treatment
- Optimum care for these individuals requires that they know they are infected, be engaged in regular care, and receive and adhere to effective therapy[2]
- Introduction of the single tablet regimen (STR) options has increased adherence for HIV patients and resulted in decreased pharmacy costs and hospitalizations compared to existing multiple tablet regimen (MTR)[3-5]
- Adherence is also associated with sustained viral suppression[6,7]
- However, many HIV-infected individuals are not actively engaged in the care system and adherence is sub-optimal for many patients even if on therapy
- A pharmacy-based pilot care management program (CMP) was implemented for Medicaid patients to encourage HIV patients to engage in their healthcare and improve ART medication adherence

Objective

- Analyze the impact of CMP on healthcare engagement, ART medication adherence, and proportion of patients who are virologically suppressed among patients with HIV

Methods

- Medicaid HIV patients aged 18 years or older with at least 1 HIV medication were identified using retrospective analysis claims data between October 1, 2018 and April 30, 2020
- Patients on PrEP therapy were excluded
- HIV medication non-adherence, defined at <80% proportion of days covered (PDC), was not required for inclusion in the program
- CMP was implemented on November 1, 2019 on a rolling basis and continued for a 12-month period from the start of implementation
- The program consists of clinical pharmacists educating patients on HIV including exploring the member's awareness of the importance of viral load levels, CD4 cell counts, and medication adherence
  - The clinical team provided pharmacist-led telephonic outreach directly to members of the target population (following member approval) and providers with prescriptive authority and responsibilities for patients with HIV included in the target population
  - Prior to the calls, the clinical team reviewed each member's adherence to ART therapy so this information could be discussed with the member
  - The program reinforces the importance of follow through with office visits, prescribed laboratory testing, and medication therapy to improve management of HIV and help prevent worsening of HIV
- Patient recruitment and program implementation for additional patients is ongoing for a 12-month period from the start of implementation
- Outcomes of interest
  - ART adherence (PDC) change from baseline to post-program contact
    - Final adherence will be stratified by regimen (MTR and STR)
  - PDC measured at different timepoints of patient contact

Results

- 122 Medicaid patients with a mean age of 47 enrolled in the program; 57% were male
- Over half (51%) had PDC <80% in the 12-month period prior to enrollment
- Enrolled patients on STR therapy had higher pre-program average PDC than patients on MTR therapy (78% vs. 72%)
- Preliminary results of patients that had at least 6 months of follow-up after enrollment (n=105) indicated an 8.5% increase in average PDC, 77.1% pre- vs. 85.6% post-enrollment (Table 3a)
- In patients that had at least 12 months of follow-up after enrollment (n=34) there was a 5.5% increase in average PDC, 74.7% pre- vs. 80.3% post-enrollment (Table 3b)
- After 12 months of follow-up (n=34), 62% of patients had a PDC ≥ 80% in the post-contact period compared to 50% in the pre- period (Figure 1)
  - Additionally, 47% of patients had a PDC ≥ 90% in the post-contact period compared to 32% in the pre- period (Table 3b)

A program such as the pharmacy-based pilot care management program (CMP) presented, may be **beneficial for improving healthcare engagement and increasing ART adherence** in patients living with HIV.

Results cont.

Table 1. Patient Demographics and Clinical Characteristics

Measure		No. of members	Proportion
Patients enrolled		122	100%
Age-group in years	18-29	12	9.8%
	30-39	28	23.0%
	40-49	24	19.7%
	50-59	38	31.1%
	60-69	19	15.6%
	70-79	1	0.8%
Age in years, Mean (SD) [median]		46.93 (12.29) [48.50]	
Gender	Female	52	42.6%
	Male	70	57.4%
Rx-Risk-V*	0	15	12.3%
	1	7	5.7%
	2	16	13.1%
	≥3	84	68.97%
Rx-Risk-V* Mean (SD) [median]		5.16 (3.87) [5.00]	

*HIV Rx's not included

Table 2. Patient Adherence Pre-Program Contact

Measure		Total no. of enrolled members	Proportion	No. of members	Proportion	No. of members	Proportion
				STR		MTR	
Patients enrolled		122	100%	68	100%	54	100%
PDC groups	0-9	0	0%	0	0%	0	0%
	10-19	2	2%	0	0%	2	4%
	20-29	3	2%	2	3%	1	2%
	30-39	7	6%	3	4%	4	7%
	40-49	5	4%	2	3%	3	6%
	50-59	12	10%	8	12%	4	7%
	60-69	16	13%	5	7%	11	20%
	70-79	17	14%	10	15%	7	13%
	80-89	12	10%	9	13%	3	6%
	90-99	48	39%	29	43%	19	35%
PDC Mean (SD)[median]		75.52 (22.85) [78.00]		78.25 (21.69) [83.50]		72.07 (23.99) [73.00]	

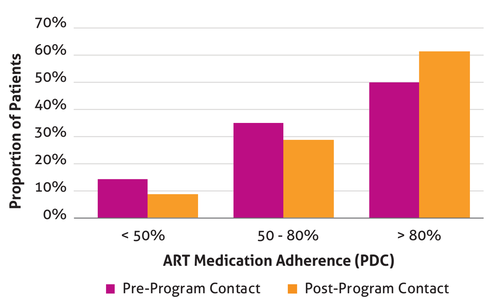
Table 3a. Patient Adherence Pre- and 6-months Post-Program Contact

Measure		12-months pre-program contact		6-months post-program contact	
		No. of members	Proportion	No. of members	Proportion
Patients enrolled		105	100%	105	100%
PDC groups	0-9	0	0%	0	0%
	10-19	1	1%	2	2%
	20-29	2	2%	1	1%
	30-39	5	5%	2	2%
	40-49	5	5%	2	2%
	50-59	8	8%	7	7%
	60-69	15	14%	3	3%
	70-79	14	13%	9	9%
	80-89	12	11%	16	15%
	90-99	43	41%	58	55%
	100	0	0%	5	5%
PDC Mean (SD) [median]		77.12 (21.72) [82.00]		85.61 (20.12) [97.00]	

Table 3b. Patient Adherence Pre- and 12-months Post-Program Contact

Measure		12-months pre-program contact		12-months post-program contact	
		No. of members	Proportion	No. of members	Proportion
Patients enrolled		34	100%	34	100%
PDC groups	0-9	0	0%	0	0%
	10-19	0	0%	0	0%
	20-29	1	3%	0	0%
	30-39	2	4%	2	6%
	40-49	2	3%	1	3%
	50-59	4	12%	3	9%
	60-69	4	7%	3	9%
	70-79	4	15%	4	12%
	80-89	6	13%	5	15%
	90-99	11	32%	15	44%
	100	0	0%	1	3%
PDC Mean (SD) [median]		74.74 (22.11) [80.00]		80.26 (19.95) [88.50]	

Figure 1. Patient Adherence Pre- and Post-Program Contact



Discussion

- Approximately 51% of the enrolled patients had PDC <80% in the 12-month pre-contact period
- In general, patients on STR regimens have higher adherence.[7] Enrolled patients on STR therapy had higher pre-contact average PDC than patients on MTR therapy.
- In the pre-contact period, 44% of the STR therapy patients and 59% of the MTR patients enrolled had PDC <80%
- At 6-months after enrollment into the program, there was an increase in PDC compared to pre-enrollment period
  - Similarly, despite the small number of patients that had 12-months of follow-up after enrollment, there was an increase in PDC compared to pre-enrollment period

Conclusion

- A program such as the pilot presented, may be beneficial for improving patient healthcare engagement and increasing ART adherence in patients living with HIV

Limitations

- Analysis is based on real-world claims data. Services performed but not billed are not captured in the data. This may include physician samples for pharmaceutical products
- Claims data analyzed represent data submitted by the provider and validated within tolerance limits. Undetectable data quality issues may exist that are common to all claims data sources, such as submitting a valid code or day supply that were not intended

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Disclosures

- This research was conducted by Magellan Method, A Division of Magellan Rx Management, Phoenix, AZ, with external funding from ViiV Healthcare, Research Triangle Park, NC.

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