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PIVOT
STRATEGIC TRANSFORMATION

Value Demonstration with Private Payers Adherence to Treatment & Employer Economic Impact: Literature Review

Final Report
October 2018

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1. | Context, Scope, Sponsors,
Summary & Conclusions

Context (1/2)

- According to the World Health Organization (WHO), non-adherence to treatment is a major problem, especially in people with chronic diseases. Numerous studies have been published in this regard, particularly to better understand the factors causing non-adherence and the various effects of non-adherence.
- Assuming that the person treated has been correctly diagnosed and that the doctor has prescribed the right medication at the right dose, taking into account his/her personal characteristics, there are good reasons for seeking to improve adherence to treatment. Expected benefits include improved health outcomes, improved quality of life, and savings for the individual, the health system and society. In many cases, non-adherence may result in lower treatment outcomes and increased risk of complications and hospitalization as well as higher health costs.
- It is widely documented that health care professionals who provide services involving medication need to make every effort to help patients improve adherence to their treatment, especially when considering the aging population and the increased prevalence of chronic diseases.
- This issue remains a shared responsibility between public authorities, health professionals and patients associations and individual patients. The private sector has also role to play as attested to by the various programs put in place by pharmaceutical companies, group benefits consultants, insurers, employers and unions.
- Employers, often in collaboration with unions, offer drug and other benefits to employees and are increasingly engaging in initiatives to promote healthy lifestyle and better disease management.

Context (2/2)

- A working group composed of key Canadian insurance companies, group benefits consultants and innovative pharmaceutical companies, created by Innovative Medicines Canada (IMC), the Canadian association of innovative pharmaceutical companies, identified in 2017 the need to better validate the value of drug treatment adherence, especially in terms of productivity gains for employers and return on investment.
- Value demonstration initiatives to date in Canada and elsewhere have focused heavily on the value of medicines, in terms of the health impacts for patients and the savings in the health system.
- This is the case of a recent study by the Conference Board of Canada and the demonstration project piloted by Concerto in Quebec, in collaboration with manufacturers and the Quebec Ministry of Health and Social Services. The objective of the Concerto study was to demonstrate the impact of best-in-class first-line management on the health of the patients and on the savings in the health network, particularly in terms of stay of averted hospitalizations.
- However, the relevant performance indicators for employers and payers are metrics related to productivity rather than to health care costs, namely presenteeism, absenteeism and disability rates of the employees. Although this topic appears at first sight less exploited, there are nevertheless several studies into the link between the use of drugs and employee productivity metrics.

The scope of the study

In this context, the Innovative Medicines Canada working group commissioned Pivot Strategy/ Concerto to validate the link between drug adherence and workplace productivity impacts

Scope of the study:

1. Identify relevant value indicators for private employers and payers in Canada
2. Identify therapeutic areas that lend themselves to a value demonstration evaluation related to adherence to treatment
3. Validate, through a review of the literature, the impact of adherence to treatment on productivity value indicators for employers

Study Sponsors



Summary

- The review of this literature review was done based on 26 selected scientific publications from 2009 to 2017, mainly in the United States, covering 55 studies.
- The literature review focused in on 40 studies that studied patients with four chronic conditions that represent some of the highest levels of expenditure for employers in terms of work productivity, absenteeism, presenteeism and short-term disability, namely depression, diabetes, hypertension and asthma.
- These therapeutic areas are the most identified in the literature (about 75% of all studies). They account for 25% of drug expenditures and 44% of group insurance program employees.
- The levels of medication adherence for these conditions fell within the 50% range, and below 40% for some studies for patients with asthma, hypertension and depression.
- The literature review confirmed a positive correlation between adherence to treatment and economic impact for employers. Absenteeism, followed by disability rates of the employees, were the indicators most commonly used to measure the economic impact on employers.
- In most cases, the lack of a positive correlation is attributable to the low number of employees enrolled in the study.
- Studies show significant economic impacts related to non-adherence are as follows:
 - 2 to 10 days lost (missed workdays) /employee/year in absenteeism and disability
 - \$1,000 to \$ 5,000 in salary losses/employee/year
- Savings generated by average treatment adherence rates ranging between \$714 and \$1870 (or between 3 and 16 saved workdays) per employee per year.

An illustrative study which looked at diabetes, hypertension and depression found savings generated by average treatment adherence rates between \$700 and \$3,300 per employee per year

Baseline : Average adherence rate			
Chronic Condition	Average adherence rate ¹	Average days saved/year at average adherence ¹	Employer savings by employee/year (2018\$US) at average adherence
Diabetes	61%	16.1	\$3,306
Hypertension	63%	3.5	\$714
Depression	43%	9.1	\$1,870

Methodology: Findings from a US econometric study on the impact of drug adherence and number of days lost per year for 3 chronic conditions. Study used the employed respondents of the 1987 Medical Expenditure Survey (approx. 10 000 respondents)²

Sources

1. Rizzo et al (1996). Labour Productivity Effects of Prescribed Medicines for Chronically Ill Workers. Health Economics, Vol 5: 249-265. Pivot Calculations

An increase of drug treatment adherence to 80% optimizes outcomes for patients and generates additional net savings (factoring in the additional cost of medicines) between \$300 and \$2,200 per employee per year

Savings from achieving 80% compliance			Difference		
Chronic Condition	Average days saved/year at 80% adherence ²	Employer savings by employee/year (2018\$US) at 80% adherence ³	Additional savings per employee/year (2018\$US) from achieving 80% adherence	Additional Drug Cost	Net savings of adherence
Diabetes	26.2	\$5,420	\$2,114	\$109	\$2,005
Hypertension	5.3	\$1,134	\$420	\$134	\$286
Depression	21.2	\$4,350	\$2,480	\$264	\$2,216

There is clearly an opportunity to generate additional savings and optimize outcomes for patients by improving adherence

Methodology: Findings from a US econometric study on the impact of drug adherence and number of days lost per year for 3 chronic conditions. Study used the employed respondents of the 1987 Medical Expenditure Survey (approx. 10 000 respondents)²

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Conclusion

- Beyond health outcomes of drug treatments confirmed in several studies, the key findings of this literature review show clear value of drug treatment in terms of impact on improved productivity, low pharmacologic treatment adherence among employees and an opportunity to generate additional savings for employers by improving adherence.
- Governments and health networks are focused on the need for improved adherence and seeking innovative solutions with stakeholders to achieve better results for the benefit of patients, the health system and the economy. These solutions include better access to data in real-life settings, care pathways that promote better patient care, improved communication and awareness patient programs, and technological tools to monitor patient treatments.
- But beyond the interventions of public networks, an increased dialogue between pharmaceutical companies, insurers, employers and patient associations is needed to identify additional initiatives to improve employee adherence rates to pharmacological treatments.
- The benefits to employers and employees are numerous and this literature review provides concrete data on low adherence rates in important therapeutic areas and underscores the return on investment from improved adherence stemming in terms of improved productivity.
- Thus, building on this evidence, the private sector should be encouraged to continue to act even more effectively in terms of adherence to treatment.
- But many questions remain and additional data, particularly data collected in the Canadian environment would better promote and target promising initiatives for employees and employers: What are the rates of adherence to treatment in Canadian employers? What programs exist and what results are they yielding? What are some current best practices? What are the benefits in real Canadian settings of a treatment adherence program?
- The stakeholders involved in the Canadian private sector have an opportunity to take leadership role in advancing research in Canada on the impact of medicines of productivity as well as documenting the return on investment of better adherence to treatment.