Ferric Derisomaltose for the Treatment of Iron Deficiency Anemia: A Real-World Evidence Study Guinan K¹, Patenaude J¹, Seshadri S², Attarian R², and Lachaine J¹

INTRODUCTION

- Iron deficiency anemia (IDA) often requires intravenous (IV) iron therapy when oral iron is ineffective or poorly tolerated.
- Currently available IV iron formulations in Canada include:
- Iron sucrose (IS) and,
- Ferric derisomaltose (FDI)
- The efficacy and safety of FDI was evaluated in the PROVIDE and FERWON-IDA trials, demonstrating greater effectiveness compared to IS in achieving rapid hemoglobin improvement. ^{1,2}
- Additionally, FDI allowed for higher cumulative dosing with fewer administrations.

OBJECTIVES

- Evaluate the financial burden of managing IDA by estimating hospital costs, healthcare resource utilization (HCRU) and societal impacts.
- Collect real-world data on the usage and costs of IV iron products for the treatment of IDA in Ontario hospitals.

METHODS

- A survey was performed with seven pharmacists across Ontario hospitals
- Five pharmacists reported data for the outpatient setting
- Three pharmacists reported data for the inpatient setting
- Key parameters collected during the survey included:
- Number of IDA patients treated with IV iron products in their hospital
- Proportion of utilization of each IV iron products (FDI, iron sucrose [brand and generic versions])
- Proportion of nurse presence during each step of the administration
- Materials used for the administration (IV device, saline bag, line, etc.)
- Chair time necessary for each IV treatment
- Number of patients visits for each IV iron products
- Time lost per visit for each patient
- Mean values of the collected data was calculated to reflect Ontario wide average results
- The costing model was developed over a 1-year time horizon, from a hospital and societal perspective. Costs included:
- Treatment acquisition costs
- Preparation and administration costs
- Monitoring costs
- Patient productivity loss (societal perspective only)
- Transportation/parking costs (societal perspective only)

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RESULTS

Cost per Patient Results

- **From a hospital perspective**, FDI results in cost savings of \$543/patient, achieved by fewer doses and reduced administration time.
- From a societal perspective, FDI results in costs savings of \$1,027/patient, due to by lower productivity loss by patients.

Figure 1. Total Costs per Patient



Real-World Setting Results

- Annually, in a real-world setting, each hospital treats on average 889 IDA inpatients and 928 outpatients.
- From a hospital perspective, implementing FDI at a utilization rate of 51% resulted in savings of \$254,499 in the outpatient setting. For inpatients, implementing FDI at 33% saved \$161,345. Results were similar from the societal perspective (**Table 1**).

Table 1. Real-World Costs of Implementing FDI

Perspective	Setting	Scenario <u>Without</u> FDI	Scenario <u>With</u> FDI	Savings
Hospital	Outpatient (n= 928)	\$1,134,494	\$879,995	\$254 <i>,</i> 499
	Inpatient (n=889)	\$1,087,213	\$925 <i>,</i> 868	\$161,345
Societal	Outpatient (n= 928)	\$1,766,857	\$1,262,310	\$504,547
	Inpatient (n=889)	\$1,693,000	\$1,327,307	\$365 <i>,</i> 693

Abbreviations: FDI: Ferric Derisomaltose.

HCRU Results

• When compared to IS, FDI:



Offers an additional **3 hours of free time** for nurses per month (based on a 40hour work week).

Frees up an additional 8 hours of chair time per month (based on 40-hour weekly availability).



Lowers patient time lost from work by **10 hours** per treatment course

Summary of Results – FDI vs. IS:

Study Strengths:

- formulations.

Study Limits:

- each analysis set.

- abstract.
- may hold equity.



DISCUSSION

 Generates costs savings from a hospital and societal perspective as well as inpatient and outpatient settings.

Increases nurse efficiency, offering them additional free time.

• Provides further availability of chair time for other treatments.

Results in reduced patient productivity loss and out-of-pocket costs.

• Provides insightful real-world data on the use of IV iron for the treatment of IDA in Ontario hospitals.

Explores impact on nurse efficiency and chair time availability.

• Assesses two different perspectives - hospital and societal - allowing consideration of the impact on the patient.

• 1-year time horizon captures key impacts of using IV iron

• Small sample size (only 7 pharmacists were interviewed for this study). Not all pharmacists were able to provide data for the inpatient (n=3) and outpatient (n=5) settings, reducing further the sample size for

Results are specific for Ontario hospitals and generalizability in other Canadian provinces remains to be confirmed.

CONCLUSIONS

FDI offers substantial cost savings compared to IS.

Increased utilization of FDI is projected to increase total costs savings as well as valuable time savings for Ontario hospitals.

REFERENCES

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DISCLOSURES

• Jean Lachaine is a partner at PeriPharm Inc., a company that has served as a consultant to Pfizer Canada and has received funding from Pfizer Canada to conduct the study.

• Kimberly Guinan and Julie Patenaude are employees of PeriPharm Inc.

• Jean Lachaine, Kimberly Guinan and Julie Patenaude from PeriPharm Inc., have participated in the study conduct, data interpretation and the preparation of this

• Seshadri S and Attarian R are employees of Pfizer Canada. Employees of Pfizer Canada

• Pfizer Canada provided financial support for the study. No honoraria or payments were made for authorship.