

\$4.11 and Game Theory – ECONOMIC PERSPECTIVE



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Economic Perspective

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GAME THEORY

During my studies in the MBA program, there is a popular topic called **Game Theory**. This theory matured in 1994, but first began in 1944 with two mathematicians distinguishing two types of games. The first type is relevant to this discussion.

Type one – rule-based games: For rule-based games, game theory offers the principle, To every action, there is a reaction. But, unlike Newton's third law of motion, the reaction is not programmed to be equal and opposite. To analyze how other players will react to your move, you need to play out all the reactions (including yours) to their actions as far ahead as possible. You have to look forward far into the game and then reason backward to figure out which of today's actions will lead you to where you want to end up.

Significance: I can tell you right now that every head office pharmacy team and pharmacy owners in Ontario is figuring out how to approach the \$4.11 co-

pay waiving. With the co-pay going up to \$7.11, do we a) continue to waive \$2.00? b) waive \$3.00? Everyone is going to be looking at what the other does. With millions of prescription dollars on the line, \$1.00 can lead to millions in increased or lost market share – in the dispensary and in the front stores too.

- References: Coyne, Horn. Predicting Your Competitor's Reaction. Harvard Business Review 2009
- Brandenburger, Nalebuff. The Right Game: Use Game Theory to Shape Strategy. Harvard Business Review 1995

PRISONER'S DILEMMA

Now it would be completely rationale if everyone went ahead and increased their fees by the \$1.00. In essence, the profession would be better off financially, and these additional resources could fund pharmacy programs, staff, etc which would end up helping the patient. Pharmacy would be, in effect, be communicating the wishes of the Ontario Ministry of Health – which is to offload a portion of health care costs to the patient consumer.

The issue becomes that if a single stakeholder, a single pharmacy group/chain/banner decides to waive the additional \$1.00, it will ruin this shared benefit for everyone. As soon as ABC pharmacy chain promotes “waiving an additional \$1.00”, then 123 Pharmacy will have to crunch the numbers to determine if the loss in prescriptions will be offset by the retained \$1.00 co-pay.

This issue is also a component of Game Theory termed **Prisoner's Dilemma**. The common story of this theory goes as follows:



Classic Case

Two criminal are arrested and imprisoned. Each prisoner is in solitary confinement with no means of communicating with the other. The prosecutors lack evidence to convict the pair on the main charge. They hope to get both sentenced to a year in prison on a lesser charge. At the same time, the prosecutors offer each prisoner a bargain. Each prisoner is given the opportunity either to: betray the other by testifying that the other committed the crime, or to cooperate with the other by remaining silent. The offer is:

- If A and B each betray the other, each of them serves 2 years in prison
- If A betrays B but B remains silent, A will be set free and B will serve 3 years in prison (and vice versa)
- If A and B both remain silent, both of them will only serve 1 year in prison (on the lesser charge)

	Prisoner B stays silent (cooperates)	Prisoner B betrays (defects)
Prisoner A stays silent (cooperates)	Each serves 1 year	Prisoner A: 3 years Prisoner B: goes free
Prisoner A betrays (defects)	Prisoner A: Goes Free Prisoner B: 3 Years	Each Serves 2 Years

Reference: Fehr, Fischbacher. The Nature of Human Altruism. Nature 2003: 425

This same example can be translated to the \$4.11 issue at heart.

	Pharmacy B raises fee by \$1.00 (cooperates)	Pharmacy B waives \$3.00 (defects)
Pharmacy A raises fee by \$1.00 (cooperates)	Increased revenue No change in market share	Pharmacy A: loses market share Pharmacy B: gains market share
Pharmacy A waives \$3.00 (defects)	Pharmacy A: gains market share Pharmacy B: loses market share	Market share remains the same Both lose market share

Significance: So it would then make perfect sense for everyone to raise their fee by \$1.00! As already mentioned, as soon as one group waives the fee increase, it hurts the committed groups. As a result, the competitors are forced to waive as well, which stabilizes market share – except now both groups have less revenue. If one group commits to raising their fee by a dollar, they will be hurt if even a single competitor decides to waive.

RELEVANCE TO EVERYONE

Staff Pharmacists: Practicing community pharmacists – I urge you to take note of this development. Yes, as a practicing clinician the community pharmacist may leave the big financial decisions to the manager, owner, head office team to sort out. But crunch the numbers for a second. If your pharmacy has anywhere from 25% to 50% of your clients as ODB, this could have a huge impact on the bottom line.

If your location fills say 200 Rx/day @ \$10.00 margin a prescription x 25-50% ODB clients, this will have \$500 to \$1000 a day coming in from ODB.

If your location waives another dollar, in this example this would lead to \$450 to \$900 coming in – that's a 10% decrease depending on volume.



Now readers, please do not pick apart my math --- the point here is that whatever the dollar amount lost is, it will have to come from somewhere. Typically one of the largest expenses in a business is labour. So you better be prepared for more frozen wages and/or reductions if your location starts to waive.

Patients: With less resources available at the pharmacy, this means poorer care to patients. This means less money to pay for point of care tests, pharmacist overlap, assistants and technicians to support the team. Waiving will end up hurting patient care.

Profession: As a profession, this is going to reflect poorly across Ontario and Canada. On the one hand we are asking for scope expansion to make up for losses, and on the other hand we are giving away co-payments. The government is going to continue to read this action that pharmacy can continue to take more punishment.

SOLUTION

Alright enough doom and gloom. What are our options? Throughout this entire discussion, I have been referring to the decision to waive or not to waive the \$1.00 increase. Here I will propose we go a step further.

Stop waiving any portion of the co-pay. Raise your fee for ODB patients to \$7.11.

The only way this will work is if all pharmacy groups unanimously agree to raise their fees. Stop giving away our professional integrity and compromising patient care.

Wait Bryan, if everyone got together and raised their prices, isn't this collusion? Yes – if we all got in a room and decided this, it would be collusion. Which is illegal. Which brings me to my second proposition.

I propose that the Ontario Pharmacists' Association and the Ontario College of Pharmacists make it unethical for the waiving of prescription dispensing fees.

These are the only two groups that can make all the pharmacies play together. Without a unify decree such as this, we are going to see prescription fees continue to be waived which will lead to all the issues I've already discussed. This is my proposed starting point. Where can we go from here? Next steps would be for pharmacies to start following the OPA fee guide. Prescription deliveries, calls to insurance plans, blister packing, tablet splitting. We can and should be charging for all of these value-add services – but we can't for the very issues I've already identified.

So here's my call to action. **No more waiving of dispensing fees and make it unethical to waive dispensing fees. Then we can start expanding to additional pharmacy services.**

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