

# Adoption, Adherence and Preferences Regarding Injectable Drug Delivery by Patients with Rheumatoid Arthritis: Results of a Research Survey

C. Bennison<sup>1</sup>, M. Chansler<sup>1</sup>, J. Hibbard<sup>2</sup> and J. Turanin<sup>2</sup>; <sup>1</sup>Battelle, <sup>2</sup>Zogenix

Zogenix®

**Battelle**  
The Business of Innovation

## ABSTRACT

Patient adoption of injectable biologics, such as TNF alpha antagonist disease-modifying anti-rheumatic drugs (DMARDs), and adherence to self-dosing regimens are keys to addressing disease progression and quality of life. Rheumatoid arthritis (RA) patients were surveyed to understand preference, adoption, and adherence to self-injected biologic therapies.

## APPROACH

A research survey was conducted to assess the preference of Rheumatoid Arthritis (RA) patients for a needle-free device, DosePro<sup>®1</sup>, compared to a needle-based device, all other factors being equal.

• **Part 1 (n= 11)** was designed to obtain actual video footage of RA sufferers demonstrating how to use two different injectable delivery systems:

1. A traditional needle-based auto-injector
2. The DosePro needle-free injection



• **Part 2 (n= 310)** was an online survey, consisting of 28 multiple choice, Likert-scale, open-ended questions to RA sufferers, in which the videos obtained in Part 1 were presented and background and preference questions were asked.

- Mix of acceptors and rejecters of an injectable RA product.
- Mix of current oral, current injectable, current infusion and past injectable users.

<sup>1</sup> DosePro is a registered trademark of Zogenix

## RESULTS

### Patient Demographics

- Patient demographics closely match the US RA population: 78% female, 22% male, 35-74 years of age.
- 47% of participants had ever used injectable DMARDs
- 23% were current users of injectable DMARDs (Adalimumab, Etanercept, etc.).
- 10% were current users of infusion DMARDs (Infliximab, Abatacept, etc.).
- 45% self-reported “needle phobia” (8% - Extreme, 14% - Very, 23% - Somewhat).

### Acceptance of Injection DMARD Therapy (Figure 1)

- Before seeing DosePro used, 53% of respondents said that they would (“definitely”/“probably”) consider using an injection device.
- After seeing the auto-injector demo, 48% would accept a prescription requiring self-injection using the autoinjector; 20% would not.
- After seeing the DosePro demo, 70% would (“definitely”/“probably”) consider using this type of device.
- Of the 21% of respondents who previously self-injected with autoinjector or syringe and have discontinued therapy, 38% would have continued self-injecting if instantaneous delivery was offered.
- 44% of respondents ranked needle-free more preferable over other injection methods (syringe, auto-injector and infusion). After viewing a video of DosePro’s instantaneous injection technology compared to the typical auto-injector, this number increased to 54%.

### Ability to Meet Requirements of Self Injection

- 74% of respondents were extremely confident in their ability to press and hold the DosePro until all the medication was gone, compared to 57% for the auto-injector.
- 75% of respondents were extremely confident in their physical ability to use DosePro, compared to 62% for the auto-injector.

### Participant Injector System Preference (Figure 2)

- 75% of respondents were extremely confident in their physical ability to use DosePro, compared to 62% for the auto-injector.
- Preference for injection system for all participants was needle-free (54%), autoinjector (19%), infusion (18%), and syringe (9%).
- While needle-free was preferred over other alternatives across all user experience groups, it was highest among injection-naïves (58%) and lowest among current syringe users (34%).
- Of the user groups with injection experience, the second most preferred injection system was the system which they currently or most recently used. The strongest secondary preference was for infusion by current infusion users (39%).

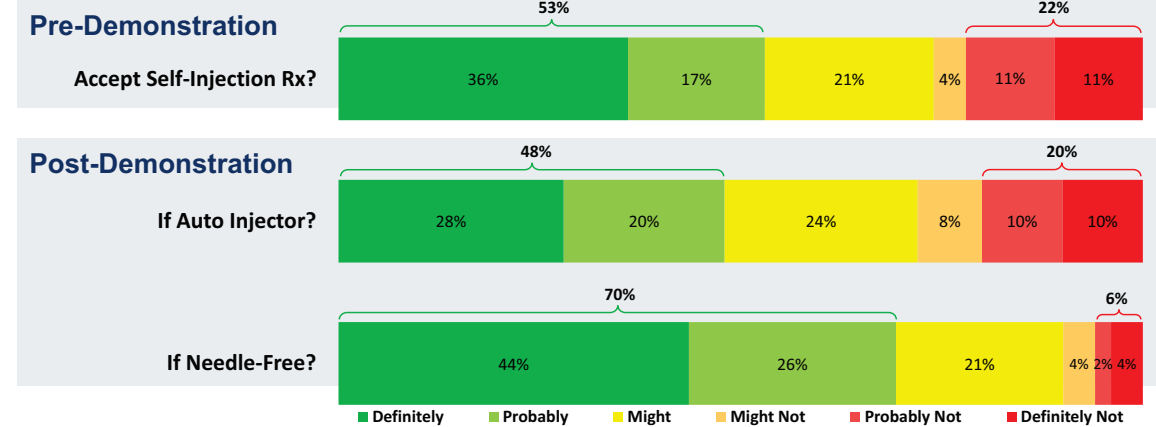


Figure 1

### Preference for Injection System by User Experience

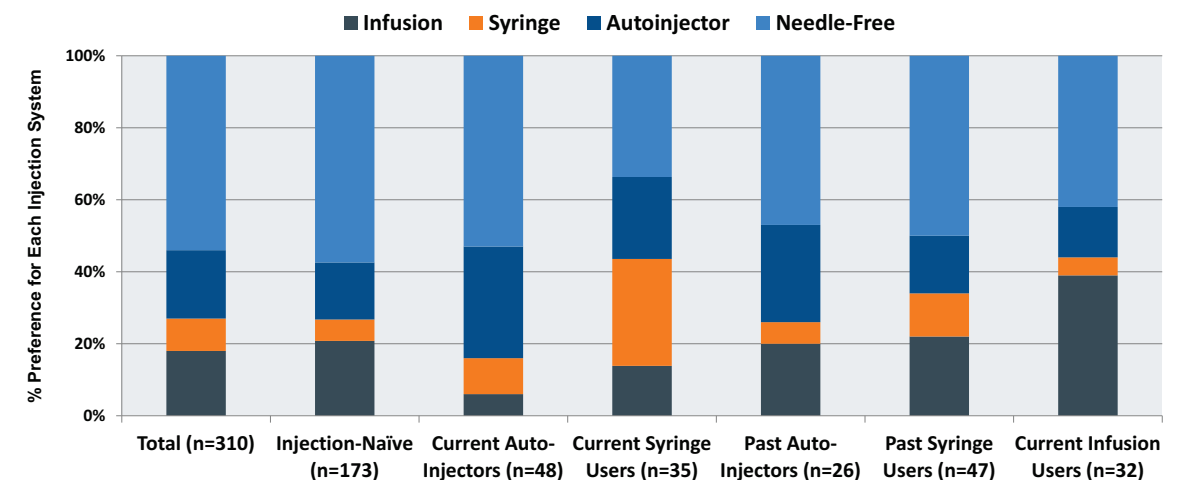


Figure 2

## CONCLUSIONS

The research survey shows that instantaneous, needle-free delivery for self-injection of biologics may increase patient confidence, acceptance, and adherence with prescribed therapy, and could provide meaningful combination product marketplace differentiation over standard autoinjector devices. Because of robust secondary preference among current infusion and current syringe users for their current method, a portfolio approach whereby multiple injection options are offered for a drug product may maximize patient adoption and adherence to injectable therapies.