

# “Give It a Shot”: Best Practices From HCPs for Administering Long-Acting Cabotegravir + Rilpivirine

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## Key Takeaways

- Healthcare providers (HCPs) who administered cabotegravir (CAB) + rilpivirine (RPV) long-acting (LA) intramuscular (IM) injections across the Phase 3/3b program (ATLAS, FLAIR, and ATLAS-2M trials) were surveyed on optimal gluteal injection techniques to inform clinical practice and improve patient/provider experience.
- These data, from a survey of HCPs experienced in administering IM injections, reinforce that simple techniques routinely used by injectors are helpful in optimizing administration of CAB + RPV LA injections.

## Introduction

- CAB + RPV dosed monthly or every 2 months is the first complete LA regimen approved for the maintenance of HIV-1 virologic suppression.<sup>1–3</sup>
- In the Phase 3/3b development program, CAB + RPV LA dosed every 4 weeks (Q4W) was noninferior to daily oral therapy, and CAB + RPV LA dosed every 8 weeks (Q8W) was noninferior to Q4W.<sup>4–8</sup>
- CAB + RPV LA therapy uses a novel antiretroviral delivery method via IM gluteal injection, which can potentially cause discomfort or pain.
- Previous data from Phase 3/3b studies show that CAB + RPV LA injections were well tolerated, associated with low rates of treatment discontinuation due to injection site reactions, and preferred by patients over daily oral therapy.<sup>4,9,10</sup>
- Given the paucity of data on best practices for administering chronic LA IM therapy, we surveyed injectors from across the CAB + RPV LA development program on optimal gluteal injection techniques to inform clinical practice and improve patient/provider experience.

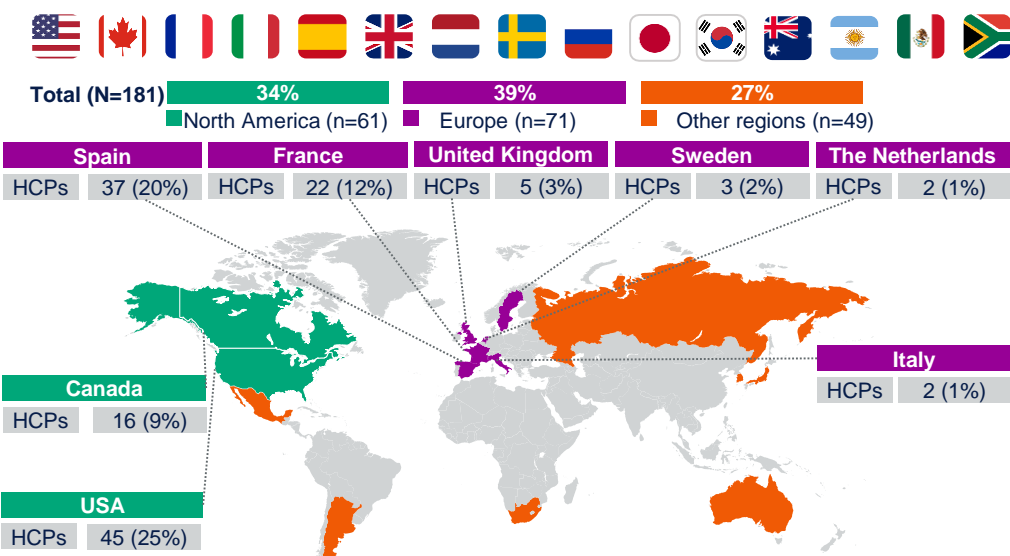
## Methods

- HCPs who administered injections across the Phase 3/3b program (ATLAS, FLAIR, and ATLAS-2M trials) participated in an anonymous, voluntary, self-administered online survey.
- The questionnaire, sent to 150 sites across 15 countries, contained 15 items with predefined response options and one open-ended item. Topics included:
  - Provider demographics.
  - Clinical and injection experience.
  - Techniques used to minimize pre- and post-injection discomfort.
  - Perceived effectiveness of these techniques (ranking based on number of HCPs who reported at least one technique as effective).
- Data were summarized using descriptive statistics.

## Results

- HCPs were recruited across 15 countries, split by **North America**, **Europe**, and **Other regions** (**Figure 1**).
- Surveys were sent to 150 sites across the 15 countries and were completed by 181 HCPs across 113 sites.

Figure 1. HCP Geographic Locations



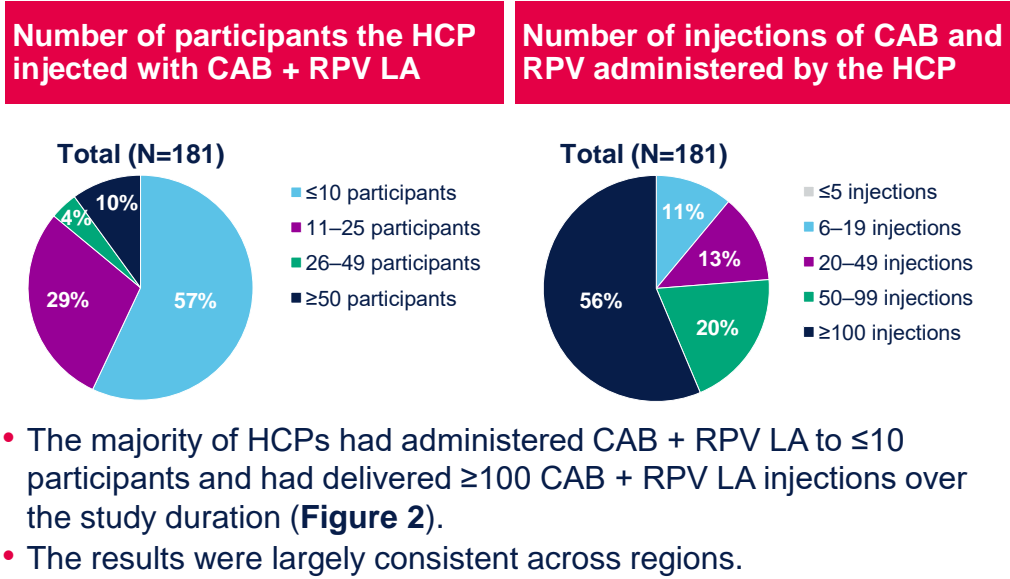
| Location              | Other regions |           |       |        |           |              |             |
|-----------------------|---------------|-----------|-------|--------|-----------|--------------|-------------|
|                       | Russia        | Argentina | Japan | Mexico | Australia | South Africa | South Korea |
| Number of HCPs (n, %) | 11 (6)        | 8 (4)     | 8 (4) | 8 (4)  | 5 (3)     | 5 (3)        | 4 (2)       |

Table 1. Primary Role of HCPs Administering Injections

| Role, n (%)                          | Total (N=181) | North America (n=61) | Europe (n=71) | Other regions (n=49) |
|--------------------------------------|---------------|----------------------|---------------|----------------------|
| Medical doctor                       | 44 (24)       | 4 (7)                | 10 (14)       | 30 (61)              |
| Licensed nurse                       | 99 (55)       | 32 (52)              | 57 (80)       | 10 (20)              |
| Nurse practitioner/prescribing nurse | 14 (8)        | 4 (7)                | 3 (4)         | 7 (14)               |
| Physician assistant                  | 2 (1)         | 2 (3)                | –             | –                    |
| Medical assistant                    | 9 (5)         | 9 (15)               | –             | –                    |
| Pharmacist                           | 1 (<1)        | 1 (2)                | –             | –                    |
| Other                                | 12 (7)        | 9 (15)               | 1 (1)         | 2 (4)                |

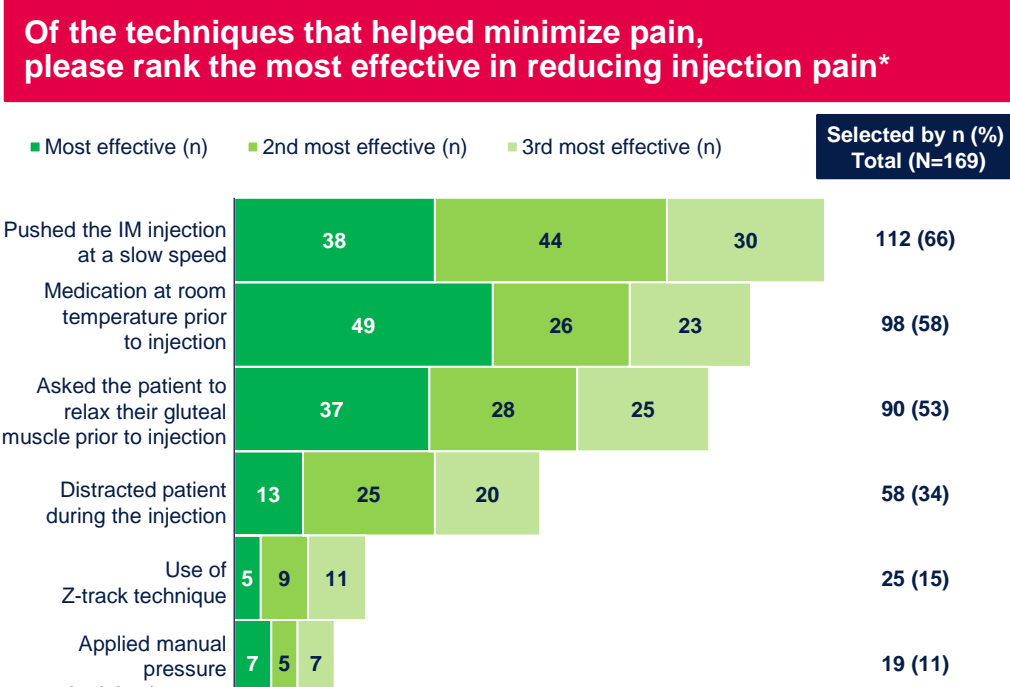
- 46% of HCPs reported having more than 10 years of prior experience administering gluteal injections prior to CAB + RPV LA study participation.
- Overall, 181 providers returned the survey, of whom the majority were licensed nurses or medical doctors (**Table 1**).
  - Survey responses were received from 75.3% (n=113/150) of sites, with a mean response of 1.6 HCPs per site (range 1–8) among responding sites.

Figure 2. Overview of HCPs’ CAB + RPV LA Injecting Experience



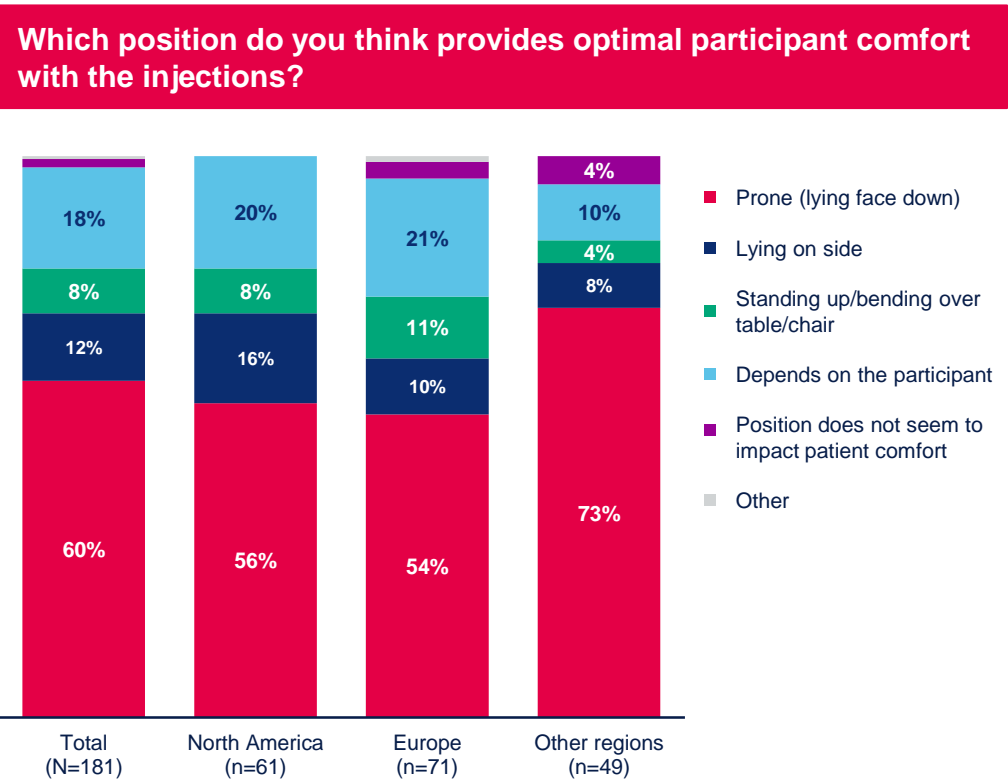
- The majority of HCPs had administered CAB + RPV LA to ≤10 participants and had delivered ≥100 CAB + RPV LA injections over the study duration (**Figure 2**).
- The results were largely consistent across regions.

Figure 3. Pain-/Discomfort-Minimizing Techniques Prior to or During Injection



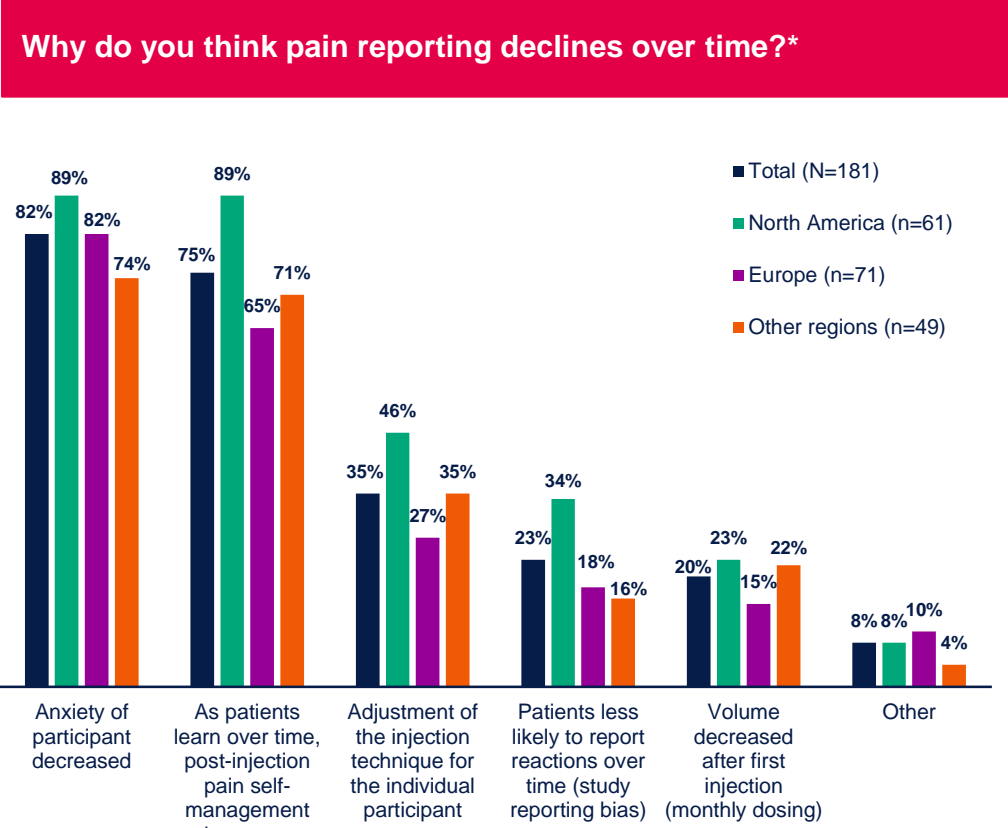
\*Those reported by ≥10% of HCPs are shown. Those ranked by <10% included: use of ventrogluteal site for injection (7%), administered pain relief prior to injection (7%), use of a dorsogluteal site for injection (6%), used a smaller bore needle (i.e. 25 gauge) for the injection (5%), use of a different needle length (other than 1.5 inch) to accommodate body type (5%), use of a topical or injectable anesthetic (i.e. lidocaine) (2%), pushed the IM injection at a faster speed (1%), applied a hot pack just prior to injection (1%), applied a cold pack just prior to injection (0%), and “other” techniques (4%).

Figure 4. HCP Perceptions on Optimal Positioning for Patient Comfort



- Prone was the most frequently used position (60%), with slightly higher use in Other regions (73%) (**Figure 4**).

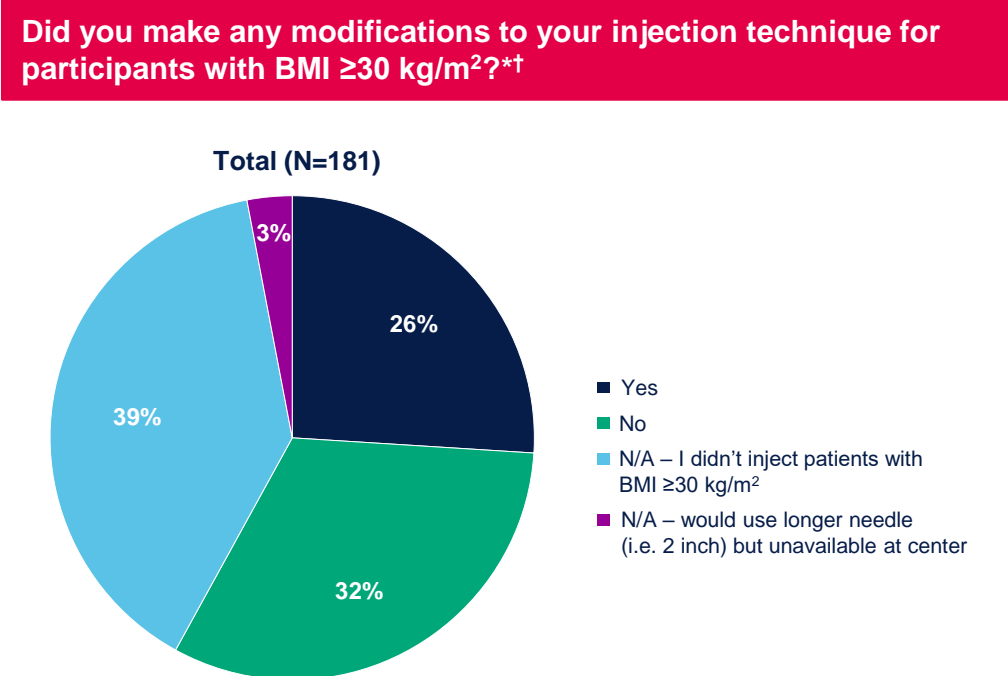
Figure 5. HCP Perceptions on Decreased Pain Reporting Over Time



\*HCPs could select more than one response option to this question.

- Decline in patient reporting of pain over time was perceived mostly due to decreased anxiety and improvements in patient self-management post-injection; this was consistent across regions (**Figure 5**).

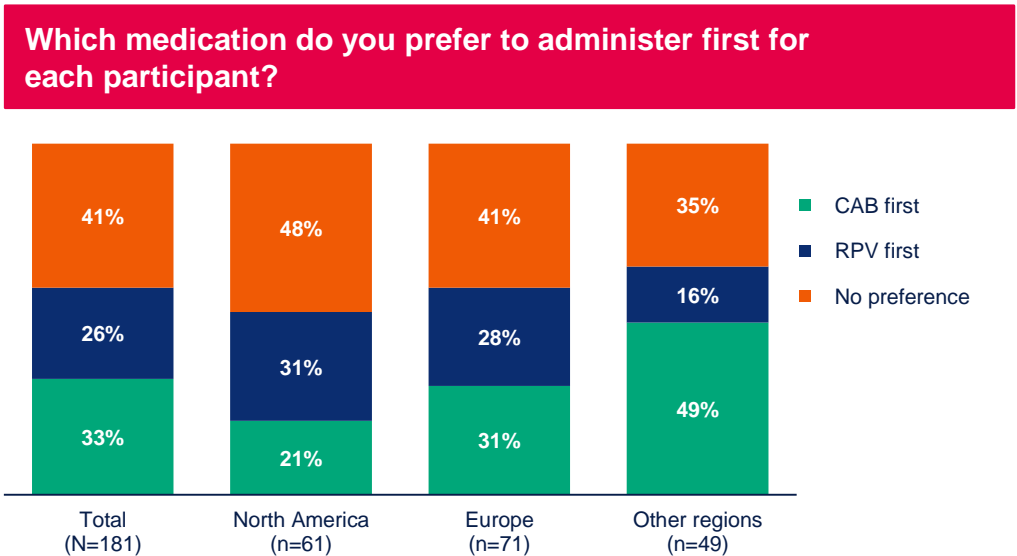
Figure 6. Injection Modifications for Participants With BMI ≥30 kg/m²



\*Modifications as specified in the trials’ protocols. \*Per the prescribing information, longer needle lengths may be required for patients with BMI ≥30 kg/m² to ensure that injections are administered intramuscularly.<sup>11</sup> N/A, not applicable.

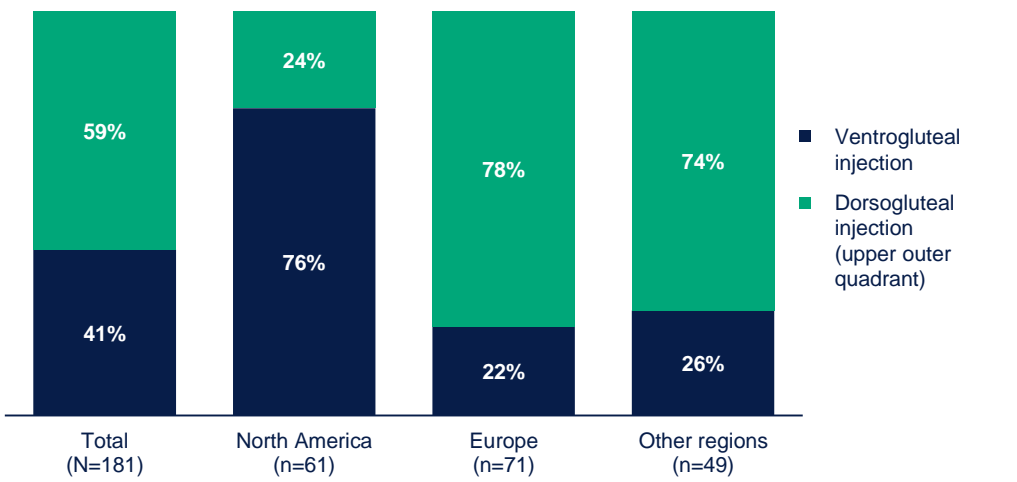
- Overall, one in four HCPs modified their injection technique for patients with a higher body mass index (BMI) (**Figure 6**).
- This trend was higher in North America vs. Europe and Other regions; however, the number of HCPs responding to this question from Europe (n=18/71, 25%) and Other regions (n=5/49, 10%) was low compared with HCPs from North America (n=24/61, 40%).
- Using a longer needle (i.e. 2 inch) was the most common modification (reported by n=46/47 HCPs), followed by use of the Z-track technique (n=11/47), positioning the patient differently (n=2/47), and using a different landmarking method to locate the injection site (n=2/47).

Figure 7. Preferred Medication to Administer First



- There was no consensus on preference for CAB or RPV to be injected first, although HCPs in the Other regions were more likely to prefer to inject CAB before RPV (primarily by HCPs in Argentina, Mexico, and Russia) (**Figure 7**).
- The order of drug administration was often dependent on patient and HCP perception of discomfort, preferred order for receiving/ administering each drug, room setup, and consistent documentation (e.g. RPV on right).

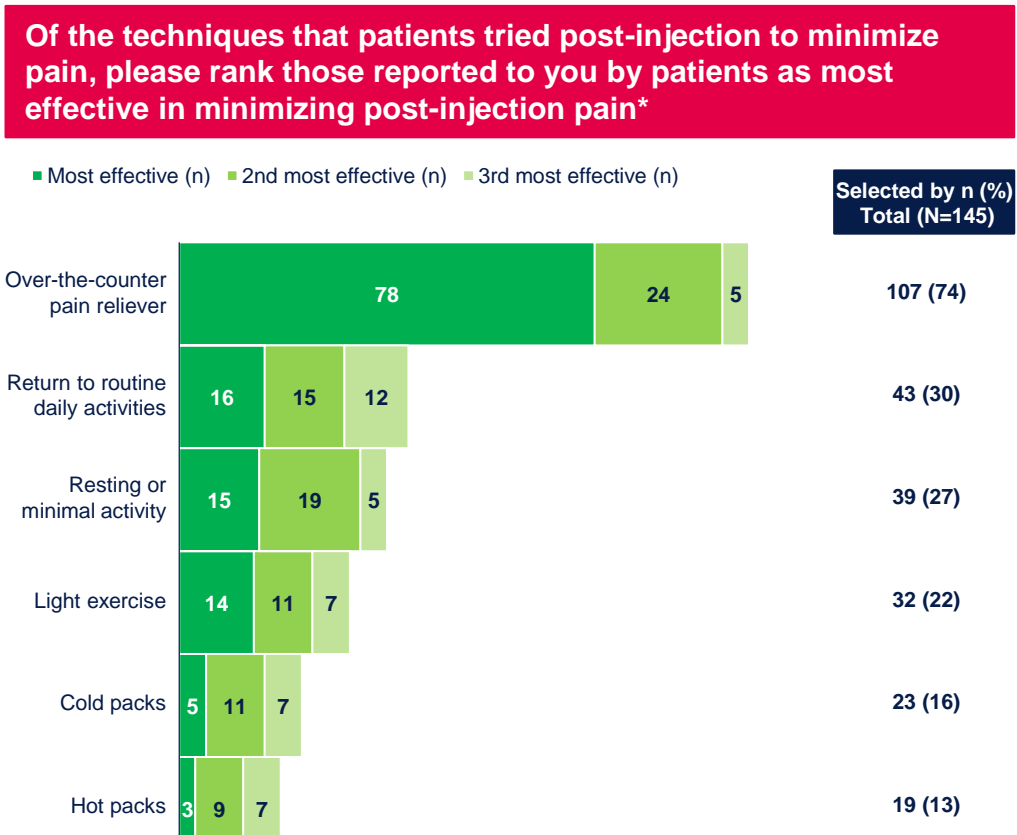
Figure 8. HCP Preferred Injection Location



\*Among HCPs who responded from the Netherlands (100%), Sweden (98%), and Australia (82%), the use of ventrogluteal injections was low; however, the numbers of HCPs who responded to this question from these countries were low (n=2–5 per country).

- HCPs in North America utilized ventrogluteal injections more commonly than dorsogluteal injections, while dorsogluteal injections were more common in Europe and Other regions (**Figure 8**).

Figure 9. Pain-/Discomfort-Minimizing Techniques Post-Injection



\*Those reported by ≥10% of HCPs are shown. Those ranked by <10% included: vigorous exercise (8%), stretching (8%), and “other” techniques, including massaging the area and/or application of shea butter (8%).

## Conclusions

- Pushing the IM injection at a slow speed (66%), bringing the medication to room temperature (58%), relaxing the gluteal muscle prior to injection (53%), and distracting the patient (34%) were ranked as the most effective techniques in minimizing pain prior to/during injections.
- Over-the-counter pain relievers (74%) and returning to routine daily activities (30%) were ranked as the most effective techniques in minimizing post-injection pain.
- Findings were broadly comparable across regions.
- These data, from a survey of HCPs experienced in administering IM injections, reinforce that simple techniques routinely used by injectors are helpful in optimizing administration of CAB + RPV LA injections.

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