Review of Intrathecal Baclofen Pump Training in Physical Medicine and Rehabilitation Residency Programs in the United States

Nicole Hatchard DO[1], Natasha Romanoski DO[1]

Penn State College of Medicine, Hershey, PA[1]

INTRODUCTION

Physical Medicine and Rehabilitation (PM&R) physicians commonly treat spasticity and are expected to have knowledge of Intrathecal Baclofen (ITB) therapy as a treatment option; however, no standards exist when it comes to training requirements. We aim to analyze the state of ITB training in Accreditation Council for Graduate Medical Education (ACGME)-accredited PM&R residency programs from 2013-2023, as the ACGME is the organization that sets and monitors medical educational standards in the United States.

DESIGN

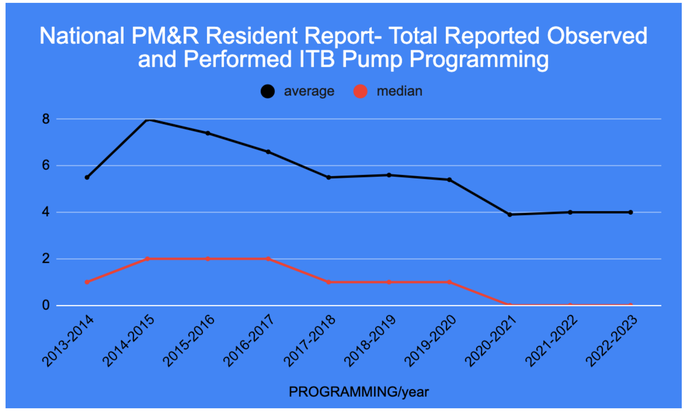
We reviewed the following ACGME requirements for ITB management:

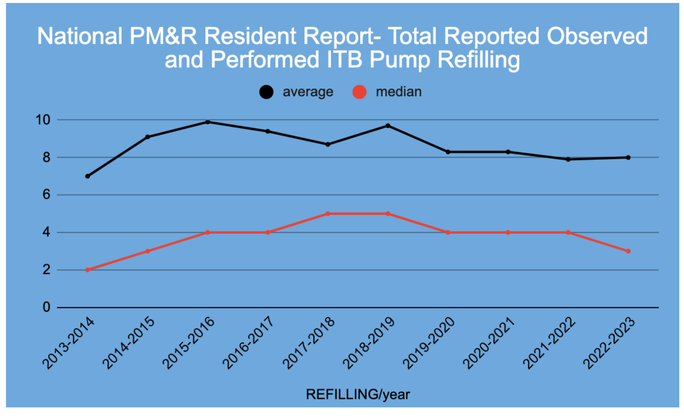
1. ACGME PM&R Case Log National Data Reports from 2013-2023 for ITB procedures.
2. ACGME Common Program Requirements and Milestones for PM&R in comparison to specialties also known to manage ITB therapy, including Neurological Surgery, Pain Management and Neurology. We searched for "pump," "baclofen," "intrathecal," and "device," effective July 1, 2024.

RESULTS

From 2013-2023, the averages for programming ITB pumps ranged from 3.9 to 7.4 (average SD of 10.9) with a median of 0-2. For refilling pumps, the average procedures range from 7 to 9.9 (average SD of 13.2) with a median of 2-5. The large standard deviation and low median values reveal wide variation in training experiences between programs. The most recently reported academic year 2022-2023 reveal procedural averages for both programming (4.0) and refilling ITB pumps (8.0) which fall in the bottom third of the last decade.

PM&R has no Common Program Requirements nor Milestones associated with ITB Management, similar to Neurology. Neurological Surgery has 1 program requirement and 3 milestones. Pain management has 2 program requirements and no milestones.





Specialty	Common Program Requirements
PM&R	NONE
Neurological Surgery	Residents must be able to perform …procedures for spinal conditions (stimulation, lesion, **pump**, other).
Pain Management	Fellows must demonstrate competence in their knowledge of interventional pain treatment, including: **intrathecal** drug administration systems. Identifying and mitigating risks for the following intervening factors: […] and other implanted **devices.**
Neurology	NONE

Specialty	MILESTONES
PM&R	NONE
Neurological Surgery	Surgical Treatment of … Movement Disorders. Interrogates and programs implanted **devices**. Recognizes and initiates work-up of routine complications (e.g., **device** infection). Manages … and recognizes complex complications (e.g., **intrathecal** drug overdose or withdrawal). Intrathecal catheter and **pump** placement
Pain Management	NONE
Neurology	NONE

DISCUSSION

ITB procedural experience is not required in US PM&R programs and wide variability exists. Results may be lower-than-expected with inaccurate trends.

Neurological Surgery and Pain Management have ACGME program and milestone requirements correlated to ITB training, however, PM&R does not.

The prevalence of ITB therapy in the US is unknown and may vary regionally, making it difficult to determine ITB training needs. With consideration for revisions to ACGME requirements, proper tracking of ITB procedures should be considered to identify training gaps and opportunities.

CONCLUSIONS

ITB training is not required in US ACGME PM&R programs, and wide variability exists in procedural experience. There may be benefit in standardizing procedural logging and educational requirements to optimize training opportunities for US PM&R programs.

Given the interdisciplinary nature of PM&R training as well as ITB management, further assessment and alignment should be considered across specialties to maximize ITB training needs.

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