Thank you for your interest in CONCERTA® (methylphenidate hydrochloride). The following information is provided because of your specific unsolicited request and is not intended as an endorsement of any usage not contained in the Product Monograph.

For complete information, please refer to the CONCERTA® Product Monograph, available at http://www.janssen.com/canada/products. For additional information, please see the full scientific summary accompanying these materials.

Literature Summary

- The following summarized literature details CONCERTA® (OROS® MPH) compared with Teva-methylphenidate ER-C [MPH ER-C®], formerly Novo-methylphenidate ER-C
- A literature search did not identify any publications specific to OROS® MPH compared with Act-Methylphenidate ER, Apo-Methylphenidate ER and pms-methylphenidate ER

	Study	Design	Outcome Measure	Slides
1	Park-Wyllie 2017	Retrospective Analysis AE Database	Rates Therapeutic Failure	3 - 7
2	Park-Wyllie 2016	Retrospective Cohort Study: IMS Data	Persistence, Duration & Switch	8 - 15
3	Fallu 2016	Randomized Phase IV Study – Adult	Patient Satisfaction	16 - 19
4	Van Stralen 2013	Retrospective Chart Review – Pediatric	Rates Destabilization	20 - 24

Differences in Reported Rates of Therapeutic Failure Between Two Extended-release Methylphenidate Medications

Park-Wyllie L, et al. Clin Ther. 2017; 39(10):2006-23.

Clinical Therapeutics/Volume 39, Number 10, 2017

Differences in Adverse Event Reporting Rates of Therapeutic Failure Between Two Once-daily Extended-release Methylphenidate Medications in Canada: Analysis of Spontaneous Adverse Event Reporting Databases

Laura Park-Wyllie, PharmD, PhD[1]; Judy van Stralen, MD, FRCPC[2]; Genaro Castillon, MD[3]; Stephen E. Sherman, PhD[1]; and Doron Almagor, MD, FRCPC[4]

[1]*Janssen Inc, Toronto, Ontario, Canada;* [2]*Center for Pediatric Excellence, Ottawa, Ontario, Canada;* [3]*Université de Montréal, Montréal, Québec, Canada; and* [4]*Possibilities Clinic, Toronto, Ontario, Canada*

ABSTRACT

Purpose: Our study evaluated adverse events of therapeutic failure (and specifically reduced duration of action) with the use of a branded product, Osmotic Release Oral System (OROS) methylphenidate, which is approved for the treatment of attention deficit/hyperactivity disorder, and a generic product (methylphenidate, methylphenidate ER-C), which was approved for marketing in Canada based on bioequivalence to OROS methylphenidate. This study was initiated following reports that some US-marketed generic methylphenidate ER products had substantially higher reporting rates of therapeutic failure than did the referenced brands.

Methods: Through methodology similar to that used by the US Food and Drug Administration to investigate the issue with the US-marketed generic, reporting rates were calculated from cases of therapeutic failure identified in the Canadian Vigilance Adverse Reaction Online database for a 1-year period beginning 8 months after each product launch. Corresponding population exposure was estimated from the number of tablets dispensed. An in-depth analysis of narratives of individual case safety reports (ICSRs) with the use of the generic product was conducted in duplicate by 2 physicians to assess causality and to characterize the potential safety risk and clinical pattern of therapeutic failure. Similar secondary analyses were conducted on the US-marketed products.

Findings: Reporting rates of therapeutic failure with the use of methylphenidate ER-C (generic) and OROS methylphenidate (brand name) were 411.5 and 37.5 cases per 100,000 patient-years, respectively (reporting rate ratio, 10.99; 95% CI, 5.93–22.21). In-depth analysis of narratives of 230 ICSRs of therapeutic failure with the Canadian-marketed generic determined that all ICSRs were either probably (60 [26%]) or possibly (170 [74%]) causally related to methylphenidate ER-C. Clinical symptoms suggestive of overdose were present in 31 reports of loss of efficacy (13.5%) and occurred primarily in the morning, and premature loss of efficacy (shorter duration of action) was described in 98 cases (42.6%) and occurred primarily in the afternoon. Impacts on social functioning, such as disruption in work or school performance or adverse social behaviors, were found in 51 cases (22.2%).

Implications: The ~10-fold higher reporting rate of therapeutic failure with the generic product relative to its reference product in the present Canadian study resembles findings with US-marketed generic products. While these results should be interpreted with caution due to the limitations of spontaneous adverse event reporting, which may confound comparisons across products, similar findings nonetheless led the US Food and Drug Administration to declare in 2014 that 2 methylphenidate ER generic products in the United States were neither bioequivalent nor interchangeable with OROS methylphenidate—their reference product. Our results indicate a potential safety issue with the Canadian-marketed generic and suggest

Accepted for publication August 31, 2017.
http://dx.doi.org/10.1016/j.clinthera.2017.08.018
0149-2918/$ - see front matter

Click to open article

Objectives and Methods

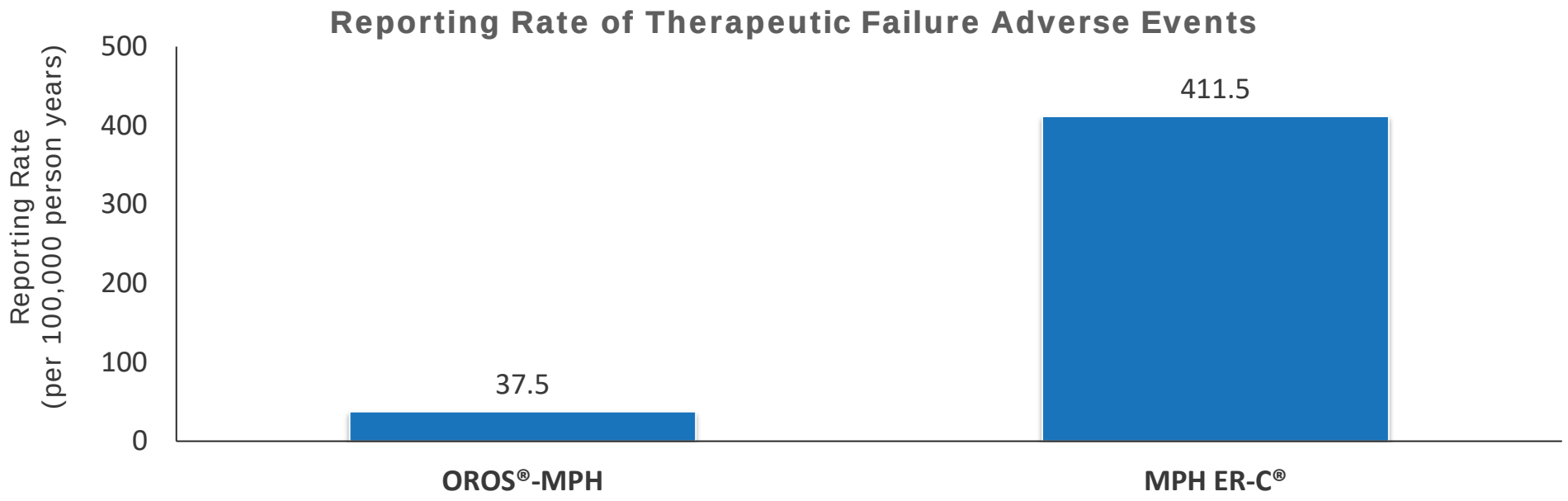
Retrospective analysis of adverse event data from the Canadian Vigilance Adverse Reaction database to:

1. Determine reporting rates of therapeutic failure with CONCERTA® (OROS MPH) and methylphenidate ER-C (MPH-ER-C®) for a 1-year period beginning 8 months after each product launch.
2. Conduct an in-depth review of individual case safety reports for therapeutic failure to evaluate temporal relationships, assess causality and characterize the clinical features and clinical course of the events.

Park-Wyllie L, et al. Clin Ther. 2017; 39(10):2006-23.

Results: Differences in AE Reporting Rates of Therapeutic Failure

Reporting rates of therapeutic failure were 10-fold higher for MPH ER-C® versus OROS® MPH over the prespecified period.



	OROS®-MPH	MPH ER-C®
Market Approval Date	Jun-2003	Jan-2010
Study Period (1 year)	Mar-2004 – Feb-2005	Oct-2010 – Sep-2011
Number of Reports of Therapeutic Failure	12	75
Population Drug Exposure† (patient-years)	32,041	18,227

† Total units of pills divided by 365 days

Results: Analysis of Individual Case Reports – MPH ER-C®

- 230 reports were included in the in-depth review
- Clinical presentation of therapeutic failure
  - 98 of the 230 cases (42.6%) reported lack of effect throughout the day with the majority (63/98) occurring in the afternoon
  - 31 cases (13.5%) suggested excessive methylphenidate exposure with the majority of these events occurring in the morning
  - Occurred within one week of starting treatment in 72% of patients (49/68 cases with information available)
  - Impact on social functioning was reported in 51 cases (22%) of patients

Park-Wyllie L, et al. Clin Ther. 2017; 39(10):2006-23.

Summary

- Pharmacovigilance studies using spontaneous reporting data have known limitations; however, these reporting systems remain an essential source of information for regulatory authorities in identifying evolving safety signals
- The present study found a >10-fold higher reporting rate of therapeutic failure with MPH ER-C® relative to OROS® MPH.
- Pattern of premature loss of efficacy (shorter duration of treatment action) arising in the afternoon hours with MPH ER-C® was identified in 64.3% of the 98 patients who reported therapeutic efficacy not lasting throughout the day.
  - The clinical pattern aligns with differences observed in the pharmacokinetic profiles.
- Adverse impacts on social functioning were reported in >20% of cases of therapeutic failure

Park-Wyllie L, et al. Clin Ther. 2017; 39(10):2006-23.

Medication Persistence, Duration of Treatment, and Treatment-switching Patterns Among Patients Taking Once-daily Methylphenidate Medications.*

Clinical Therapeutics/Volume 38, Number 8, 2016

Medication Persistence, Duration of Treatment, and Treatment-switching Patterns Among Canadian Patients Taking Once-daily Extended-release Methylphenidate Medications for Attention-Deficit/Hyperactivity Disorder: A Population-based Retrospective Cohort Study

Laura Park-Wyllie, PharmD, PhD[1]; Judy Van Stralen, MD[2]; Doron Almagor, MD[3]; Wendy Dobson-Belaire, PhD[4]; Katia Charland, PhD[5]; Andrew Smith, PhD[4]; and Jacques Le Lorier, MD, PhD[3]

[1]Janssen Inc., Toronto, Ontario, Canada; [2]Center for Pediatric Excellence, Ottawa, Ontario, Canada; [3]The Possibilities Clinic, Toronto, Ontario, Canada; [4]IMS Health Canada Inc, Kirkland, Quebec, Canada; and [5]University of Montreal, Montreal, Quebec, Canada

ABSTRACT

Purpose: We conducted a retrospective cohort study to compare medication use patterns of a long-acting extended-release methylphenidate (Osmotic Release Oral System [OROS®] methylphenidate, CONCERTA®) and Teva-methylphenidate (methylphenidate ER-C), a generic drug determined by the Canadian regulatory authority, Health Canada, to be bioequivalent to OROS® methylphenidate.

Methods: We established an OROS® methylphenidate–experienced and new-user population cohort to compare medication use patterns, including medication persistence, duration of therapy, and treatment-switching patterns. Multivariable log-binomial regression was used to adjust for confounders of the associations with persistence.

Findings: In the OROS® methylphenidate–experienced cohort (n = 21,940), OROS® methylphenidate was associated with a 70% higher rate of medication persistence at 12 months relative to methylphenidate ER-C (adjusted relative risk = 1.70; 95% CI, 1.64-1.77). In the new-user cohort (n = 20,410), OROS® methylphenidate had a 58% higher rate of medication persistence relative to methylphenidate ER-C (adjusted relative risk = 1.58; 95% CI, 1.51-1.65). Median duration of therapy was significantly longer in patients taking OROS® methylphenidate compared with those taking methylphenidate ER-C, and treatment-switching occurred significantly more frequently in patients taking methylphenidate ER-C compared with those taking OROS® methylphenidate.

Implications: Significant differences were observed in how the medications were used by patients in the real-world setting. Because the data sources were administrative databases, it was not possible to control for all potentially important confounding variables. Although differences in medication persistence may not directly reflect differences in treatment efficacy, the findings are important because these products are used interchangeably in a number of Canadian provinces. (Clin Ther. 2016;38:1789-1802) © 2016 Elsevier HS Journals, Inc. All rights reserved.

Key words: generic, methylphenidate, persistence, therapeutic equivalence.

INTRODUCTION

Attention-deficit/hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder in the pediatric population, affecting 2% to 5% of children and commonly persisting into adulthood.[1] Pharmacologic treatment with stimulant medication is commonly used as first-line therapy for ADHD, and

Accepted for publication July 1, 2016.

August 2016 1789

[Park-Wyllie L, et al. Clin Ther. 2016 Aug; 38(8):1789-802.](#)

* Online open access to this publication is not available.

Objectives & Methods

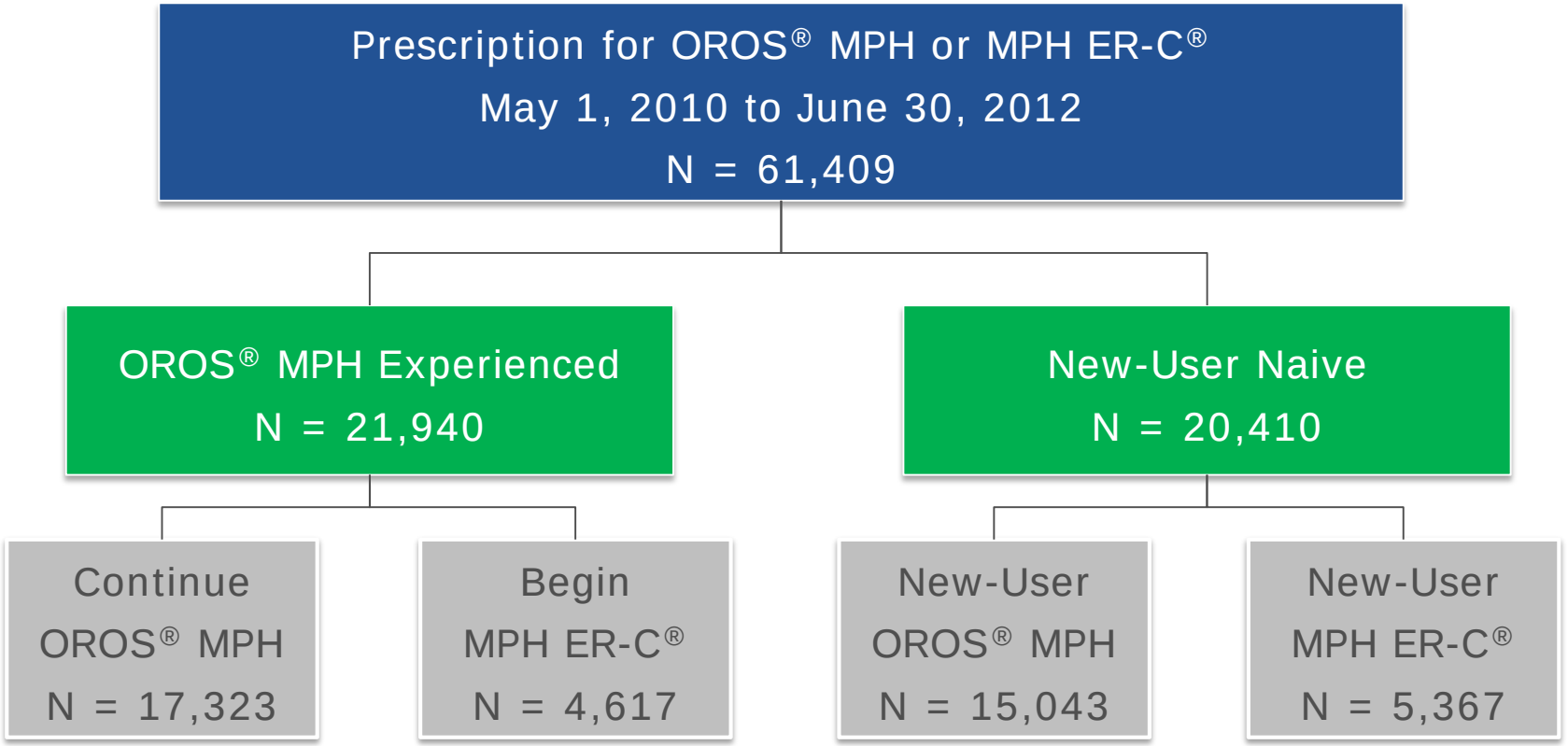
Population-based retrospective cohort study examining medication persistence, duration of treatment and treatment switching patterns in patients treated with branded OROS® MPH vs MPH ER-C®

Persistence	• Patient supply of drug at 12 months regardless of gap periods in adherence
Duration of Therapy	• Number of days from first to end of days' supply of last prescription
Treatment Switching	• Patients that were no longer persistent within the first 12 months and subsequently switched to another ADHD medication within 90 days.

Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

Study Results: Identification of Patient Cohorts

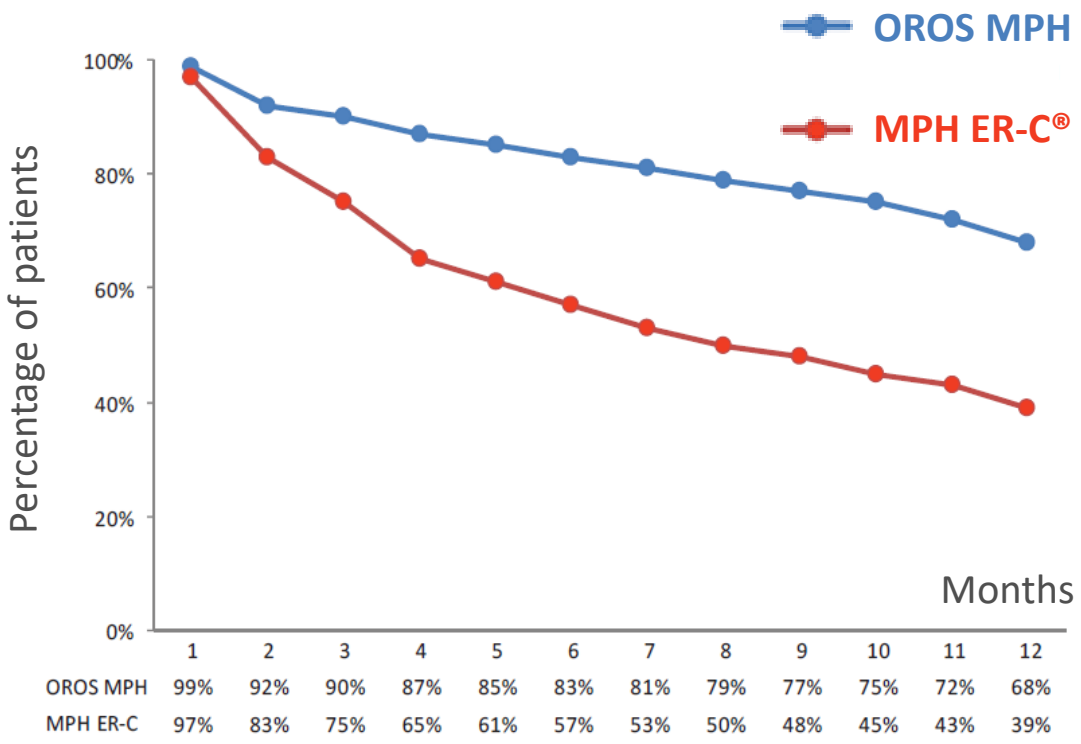
Two cohort populations of patients were established using the IMS Brogan insurance claims database focused on Ontario and Québec.



Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

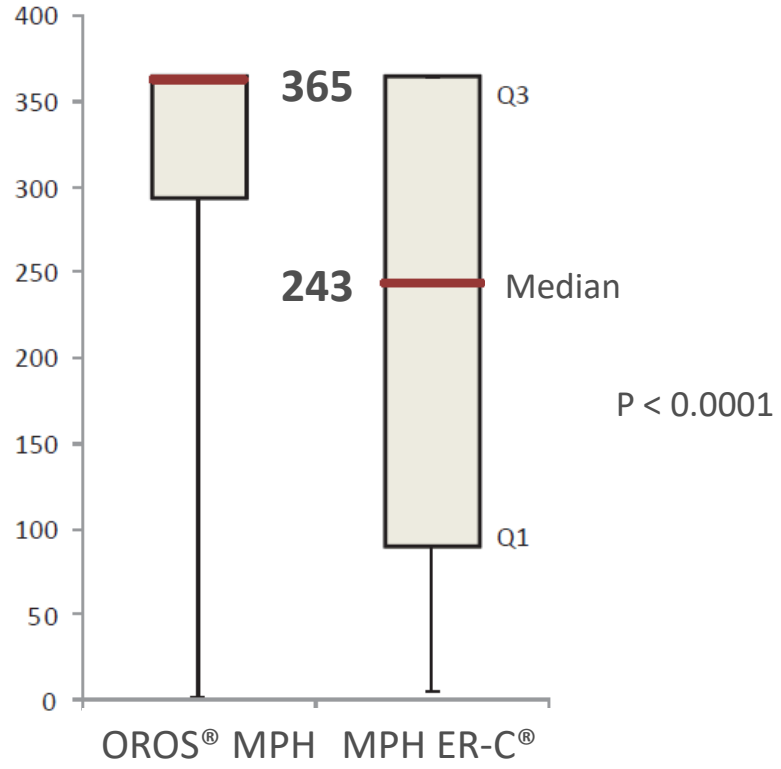
Study Results: Persistence & Duration of Treatment

OROS® MPH Experienced Cohort



Months	1	2	3	4	5	6	7	8	9	10	11	12
OROS MPH	99%	92%	90%	87%	85%	83%	81%	79%	77%	75%	72%	68%
MPH ER-C	97%	83%	75%	65%	61%	57%	53%	50%	48%	45%	43%	39%

Percentage of Patients Persistent over 12 months

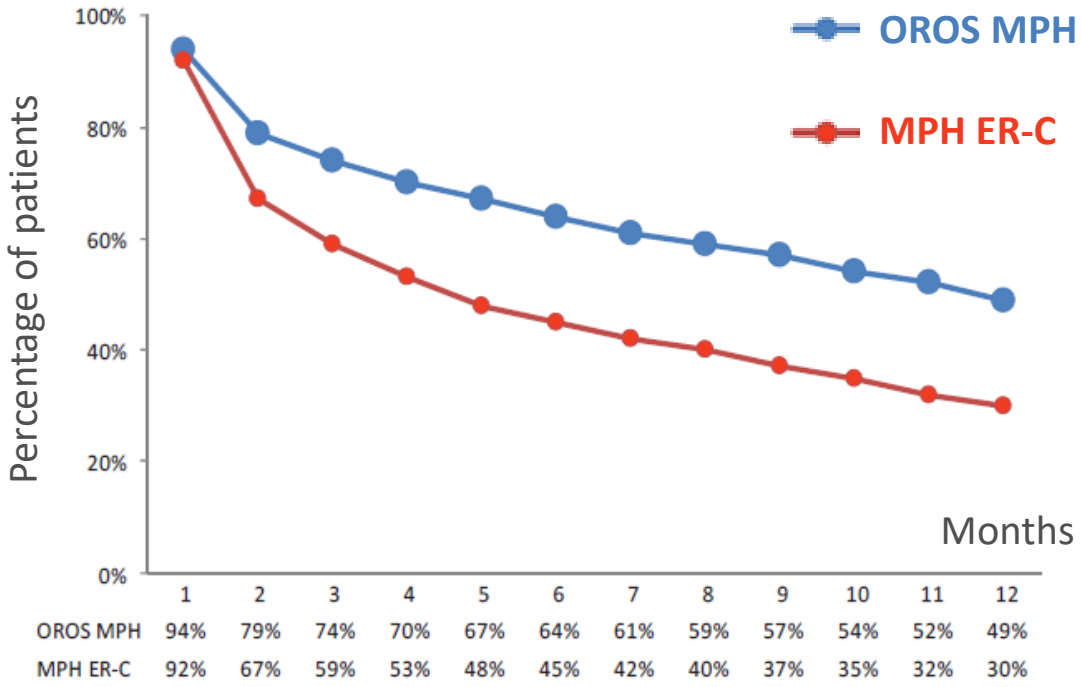


Median Duration of Treatment

Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

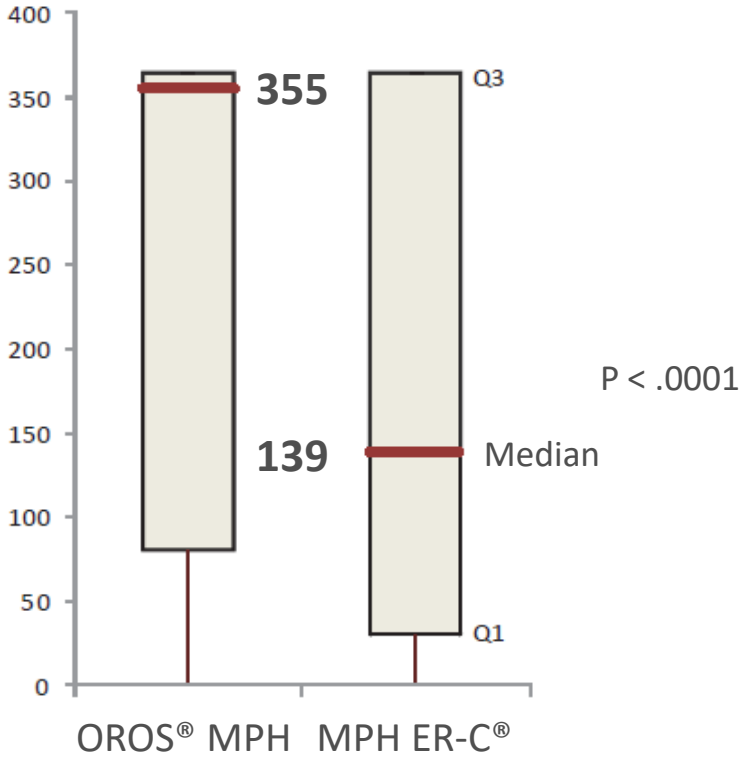
Study Results: Persistence & Duration of Treatment

New-User Naive Cohort



	1	2	3	4	5	6	7	8	9	10	11	12
OROS MPH	94%	79%	74%	70%	67%	64%	61%	59%	57%	54%	52%	49%
MPH ER-C	92%	67%	59%	53%	48%	45%	42%	40%	37%	35%	32%	30%

Percentage of Patients Persistent over 12 months



Median Duration of Treatment

Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

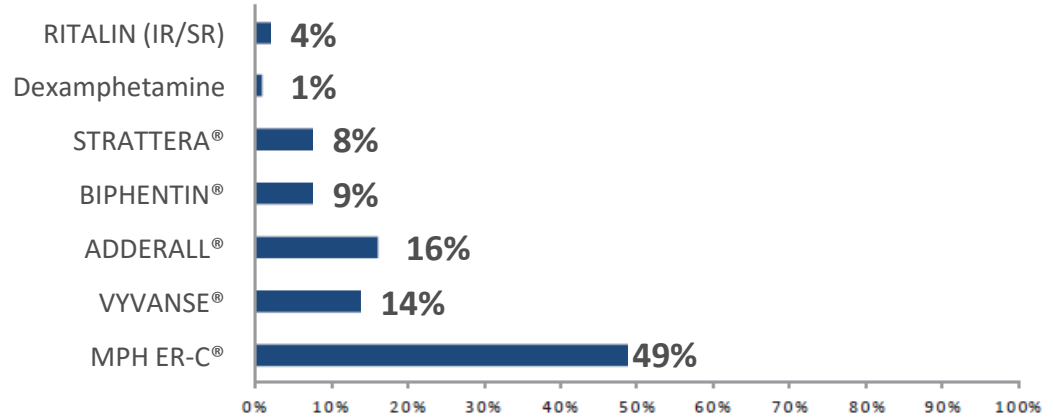
Study Results: Treatment Switching Patterns

OROS® MPH Experienced Cohort

OROS® MPH → Switch

N=17,323 n=1,992 (11%)

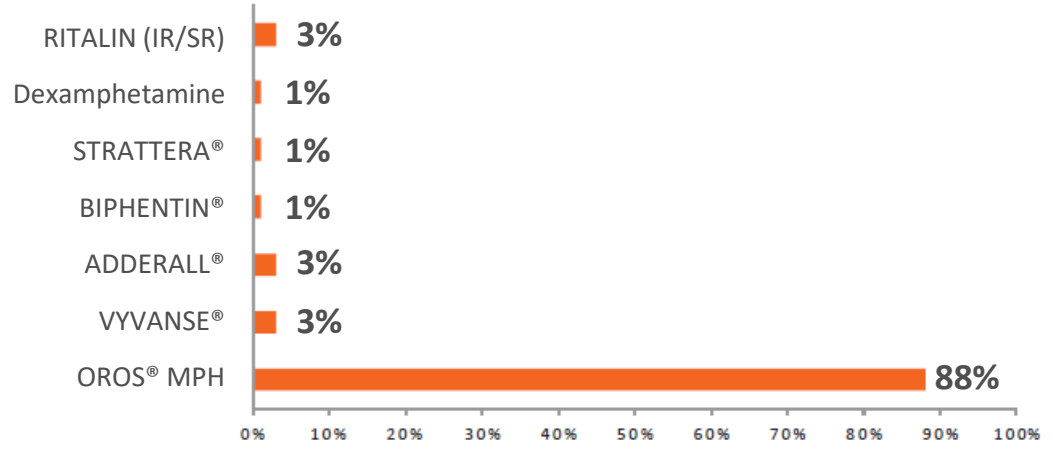
Switching Breakdown



MPH ER-C® → Switch

N=4,617 n=1,807 (38%)

Switching Breakdown



Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

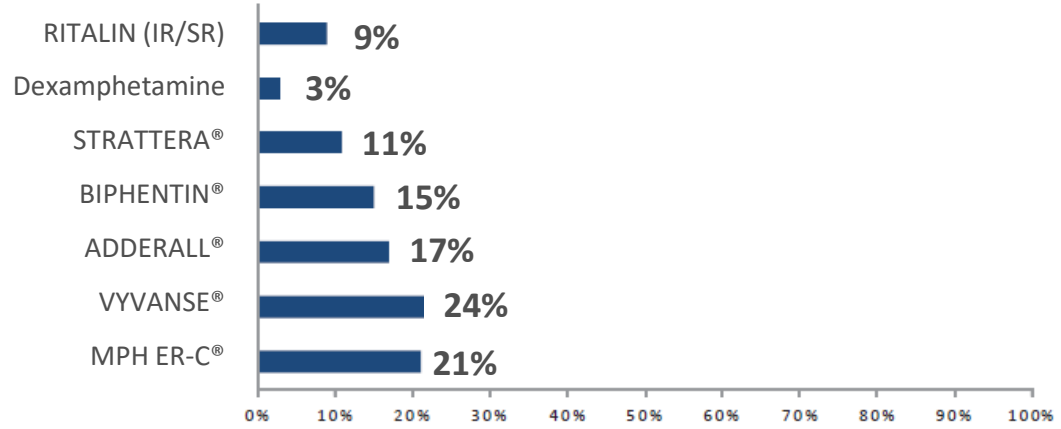
Study Results: Treatment Switching Patterns

New-User Naive Cohort

OROS MPH → **Switch**

N=15,043 n=2,532 (17%)

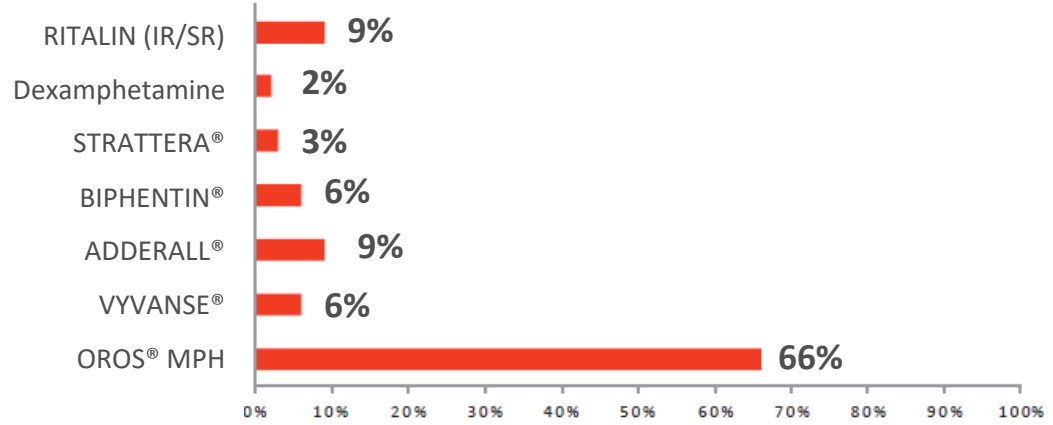
Switching Breakdown



MPH ER-C → **Switch**

N=5,367 n=1,601 (30%)

Switching Breakdown



Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

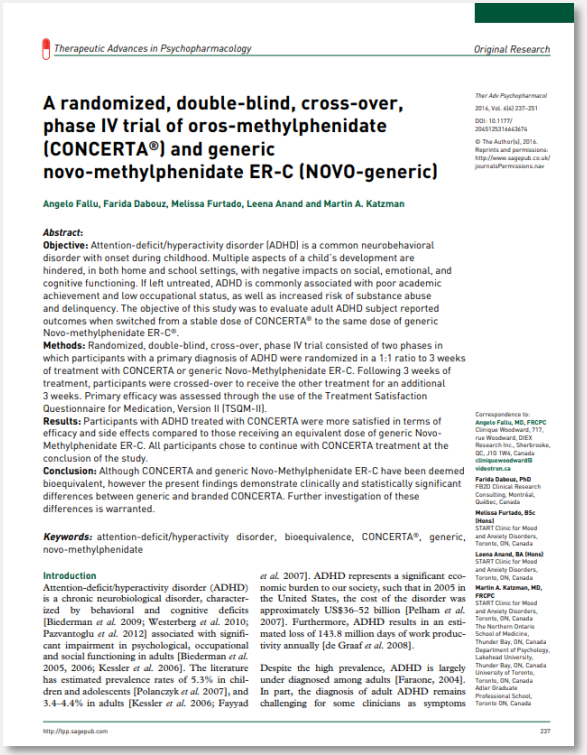
Summary

- Significant differences were observed in how OROS® MPH & MPH ER-C were used by patients in the real-world setting
  - In the OROS® MPH experienced cohort, OROS® MPH was associated with a 70% higher rate of medication persistence at 12 months relative to MPH ER-C® (adjusted relative risk [ARR] = 1.70; 95% CI, 1.64-1.77)
  - In the new-user cohort, OROS® MPH had a 58% higher rate of medication persistence relative to MPH ER-C® (ARR = 1.58; 95% CI, 1.51-1.65)
  - Median duration of therapy was significantly longer ($P < 0.0001$) in patients taking OROS® MPH compared with those taking MPH ER-C®
  - Treatment-switching occurred significantly ($P < 0.0001$) more frequently in patients taking MPH ER-C® compared with those taking OROS® MPH

Park-Wyllie L, *et al*. Clin Ther. 2016 Aug; 38(8):1789-802.

A Randomized, Double-Blind, Cross-Over, Phase IV Trial of OROS®-MPH and Generic MPH ER-C®

Fallu A, et al. Ther Adv Psychopharmacol. 2016 Aug; 6(4):237-51.



Therapeutic Advances in Psychopharmacology — Original Research

A randomized, double-blind, cross-over, phase IV trial of oros-methylphenidate (CONCERTA®) and generic novo-methylphenidate ER-C (NOVO-generic)

Angelo Fallu, Farida Dabouz, Melissa Furtado, Leena Anand and Martin A. Katzman

Abstract:

Objective: Attention-deficit/hyperactivity disorder (ADHD) is a common neurobehavioral disorder with onset during childhood. Multiple aspects of a child's development are hindered, in both home and school settings, with negative impacts on social, emotional, and cognitive functioning. If left untreated, ADHD is commonly associated with poor academic achievement and low occupational status, as well as increased risk of substance abuse and delinquency. The objective of this study was to evaluate adult ADHD subject reported outcomes when switched from a stable dose of CONCERTA® to the same dose of generic Novo-methylphenidate ER-C®.

Methods: Randomized, double-blind, cross-over, phase IV trial consisted of two phases in which participants with a primary diagnosis of ADHD were randomized in a 1:1 ratio to 3 weeks of treatment with CONCERTA or generic Novo-Methylphenidate ER-C. Following 3 weeks of treatment, participants were crossed-over to receive the other treatment for an additional 3 weeks. Primary efficacy was assessed through the use of the Treatment Satisfaction Questionnaire for Medication, Version II (TSQM-II).

Results: Participants with ADHD treated with CONCERTA were more satisfied in terms of efficacy and side effects compared to those receiving an equivalent dose of generic Novo-Methylphenidate ER-C. All participants chose to continue with CONCERTA treatment at the conclusion of the study.

Conclusion: Although CONCERTA and generic Novo-Methylphenidate ER-C have been deemed bioequivalent, however the present findings demonstrate clinically and statistically significant differences between generic and branded CONCERTA. Further investigation of these differences is warranted.

Keywords: attention-deficit/hyperactivity disorder, bioequivalence, CONCERTA®, generic, novo-methylphenidate

Introduction

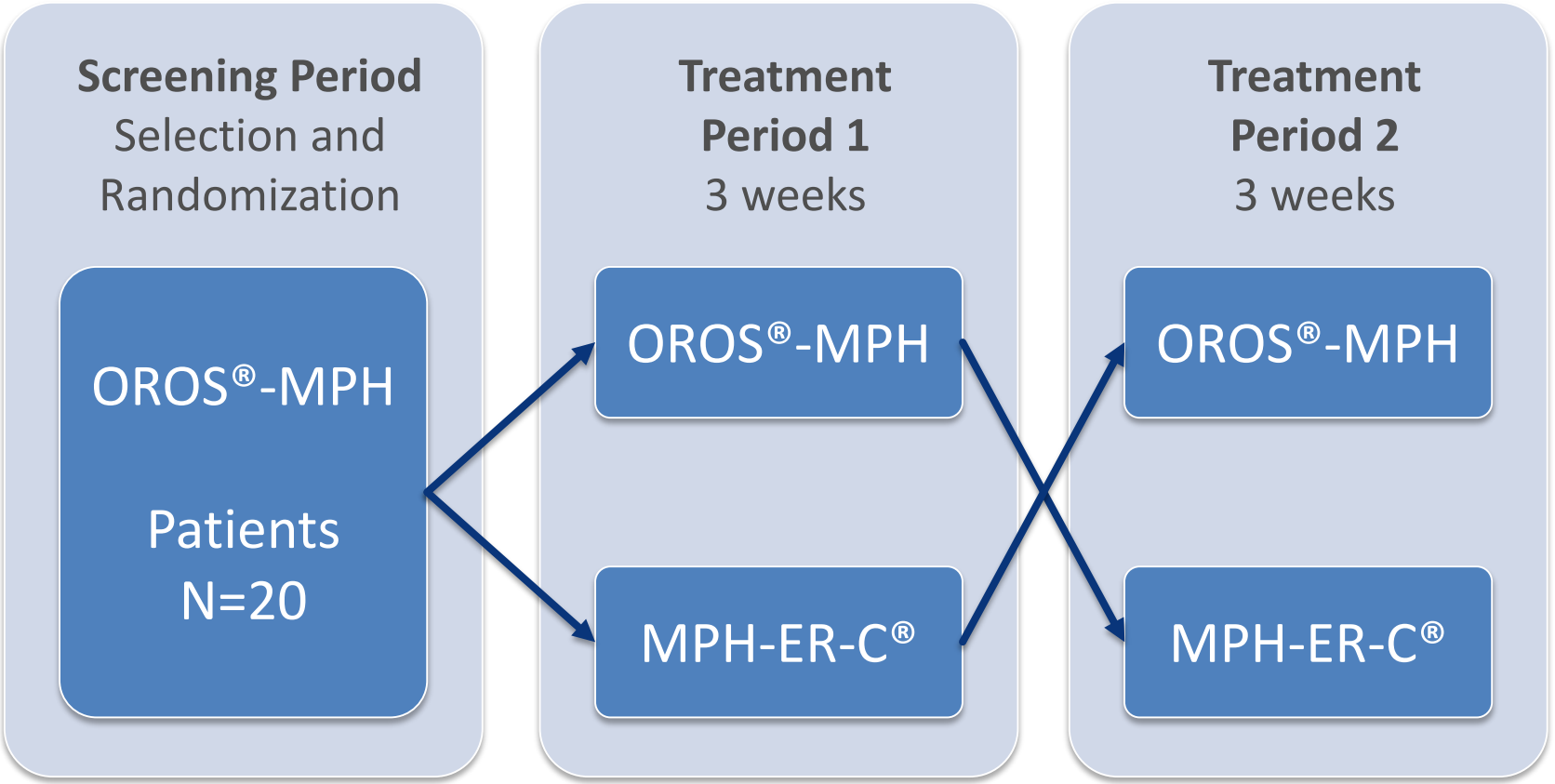
Attention-deficit/hyperactivity disorder (ADHD) is a chronic neurobiological disorder, characterized by behavioral and cognitive deficits [Biederman *et al.* 2009; Westerberg *et al.* 2010; Pazvantoglu *et al.* 2012] associated with significant impairment in psychological, occupational and social functioning in adults [Biederman *et al.* 2005, 2006; Kessler *et al.* 2006]. The literature has estimated prevalence rates of 5.3% in children and adolescents [Polanczyk *et al.* 2007], and 3.4–4.4% in adults [Kessler *et al.* 2006; Fayyad *et al.* 2007]. ADHD represents a significant economic burden to our society, such that in 2005 in the United States, the cost of the disorder was approximately US$36–52 billion [Pelham *et al.* 2007]. Furthermore, ADHD results in an estimated loss of 143.8 million days of work productivity annually [de Graaf *et al.* 2008].

Despite the high prevalence, ADHD is largely under diagnosed among adults [Faraone, 2004]. In part, the diagnosis of adult ADHD remains challenging for some clinicians as symptoms

Click to open article

Objective & Methods

A single centre, randomized, double-blind, crossover Phase IV study with no washout, evaluating adult ADHD patient satisfaction when switched from a stable dose of OROS®-MPH to the same dose of the generic MPH-ER-C®



Fallu A, *et al*. Ther Adv Psychopharmacol. 2016 Aug; 6(4):237-51.

Study Results: Primary Efficacy Endpoint

Randomization Group Change from Screening		OROS®MPH (n=17)	MPH ER-C® (n=19)	p-value (between treatments)
TSQM-II Effectiveness	p-value (vs screening)	No Change 0.5852 (NS)	Significantly decreased 0.0037	0.0433
TSMQ-II Side Effects	p-value (vs screening)	No Change 0.1252 (NS)	Significantly increased 0.0001	0.0321
TSMQ-II Global Satisfaction	p-value (vs screening)	No Change 0.1015 (NS)	Significantly decreased 0.0004	0.0791 (NS)

TSMQ II : Treatment Satisfaction Questionnaire for Medication, version II

Fallu A, *et al*. Ther Adv Psychopharmacol. 2016 Aug; 6(4):237-51.

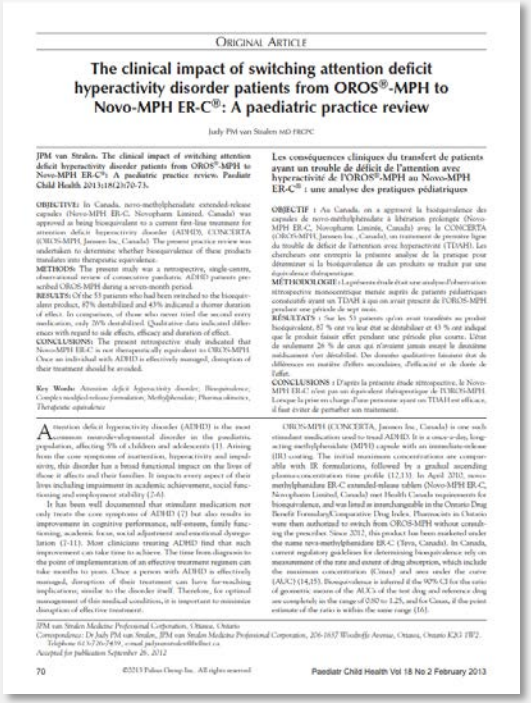
Study Conclusions

- This study showed clinically and statistically significant differences between the MPH-ER-C® and OROS® MPH treatments in both subject- and physician-reported treatment outcomes as well as in subject discontinuation rates
  - Adults treated with a stable dose of OROS®-MPH were more satisfied, as per the Treatment Satisfaction Questionnaire for Medication (TSQM-II) in terms of efficacy and side effects than those receiving an equivalent dose of the MPH-ER-C®
  - All subjects elected to return to OROS®-MPH at the conclusion of the trial
  - The authors note that the number of subjects is also too small to draw definitive conclusions and a larger head-to-head trial is needed to confirm this trend

Fallu A, *et al*. Ther Adv Psychopharmacol. 2016 Aug; 6(4):237-51.

Clinical impact of switching patients from OROS®-MPH to MPH ER-C®: A pediatric practice review

van Stralen JP. Paediatr Child Health. 2013 Feb;18(2):70-3.



ORIGINAL ARTICLE

The clinical impact of switching attention deficit hyperactivity disorder patients from OROS®-MPH to Novo-MPH ER-C®: A paediatric practice review

Judy PM van Stralen MD FRCPC

JPM van Stralen. The clinical impact of switching attention deficit hyperactivity disorder patients from OROS®-MPH to Novo-MPH ER-C®: A paediatric practice review. Paediatr Child Health 2013;18(2):70-73.

OBJECTIVE: In Canada, novo-methylphenidate extended-release capsules (Novo-MPH ER-C, Novopharm Limited, Canada) was approved as being bioequivalent to a current first-line treatment for attention deficit hyperactivity disorder (ADHD), CONCERTA (OROS-MPH, Janssen Inc, Canada). The present practice review was undertaken to determine whether bioequivalence of these products translates into therapeutic equivalence.

METHODS: The present study was a retrospective, single-centre, observational review of consecutive paediatric ADHD patients prescribed OROS-MPH during a seven-month period.

RESULTS: Of the 53 patients who had been switched to the bioequivalent product, 87% destabilized and 43% indicated a shorter duration of effect. In comparison, of those who never tried the second every medication, only 26% destabilized. Qualitative data indicated differences with regard to side effects, efficacy and duration of effect.

CONCLUSIONS: The present retrospective study indicated that Novo-MPH ER-C is not therapeutically equivalent to OROS-MPH. Once an individual with ADHD is effectively managed, disruption of their treatment should be avoided.

Key Words: Attention deficit hyperactivity disorder; Bioequivalence; Complex modified-release formulation; Methylphenidate; Pharmacokinetics; Therapeutic equivalence

Les conséquences cliniques du transfert de patients ayant un trouble de déficit de l'attention avec hyperactivité de l'OROS®-MPH au Novo-MPH ER-C®: une analyse des pratiques pédiatriques

OBJECTIF : Au Canada, on a approuvé la bioéquivalence des capsules de novo-méthylphénidate à libération prolongée (Novo-MPH ER-C, Novopharm Limitée, Canada) avec le CONCERTA (OROS-MPH, Janssen Inc., Canada), un traitement de première ligne du trouble de déficit de l'attention avec hyperactivité (TDAH). Les chercheurs ont entrepris la présente analyse de la pratique pour déterminer si la bioéquivalence de ces produits se traduit par une équivalence thérapeutique.

MÉTHODOLOGIE : La présente étude était une analyse d'observation rétrospective monocentrique menée auprès de patients pédiatriques consécutifs ayant un TDAH à qui on avait prescrit de l'OROS-MPH pendant une période de sept mois.

RÉSULTATS : Sur les 53 patients qu'on avait transférés au produit bioéquivalent, 87 % ont vu leur état se déstabiliser et 43 % ont indiqué que le produit faisait effet pendant une période plus courte. L'état de seulement 26 % de ceux qui n'avaient jamais essayé le deuxième médicament s'est déstabilisé. Des données qualitatives faisaient état de différences en matière d'effets secondaires, d'efficacité et de durée de l'effet.

CONCLUSIONS : D'après la présente étude rétrospective, le Novo-MPH ER-C n'est pas un équivalent thérapeutique de l'OROS-MPH. Lorsque la prise en charge d'une personne ayant un TDAH est efficace, il faut éviter de perturber son traitement.

Attention deficit hyperactivity disorder (ADHD) is the most common neurodevelopmental disorder in the paediatric population, affecting 5% of children and adolescents (1). Arising from the core symptoms of inattention, hyperactivity and impulsivity, this disorder has a broad functional impact on the lives of those it affects and their families. It impacts every aspect of their lives including impairment in academic achievement, social functioning and employment stability (2-6).

It has been well documented that stimulant medication not only treats the core symptoms of ADHD (7) but also results in improvement in cognitive performance, self-esteem, family functioning, academic focus, social adjustment and emotional dysregulation (7-11). Most clinicians treating ADHD find that such improvement can take time to achieve. The time from diagnosis to the point of implementation of an effective treatment regimen can take months to years. Once a person with ADHD is effectively managed, disruption of their treatment can have far-reaching implications, similar to the disorder itself. Therefore, for optimal management of this medical condition, it is important to minimize disruption of effective treatment.

OROS-MPH (CONCERTA, Janssen Inc, Canada) is one such stimulant medication used to treat ADHD. It is a once-a-day, long-acting methylphenidate (MPH) capsule with an immediate-release (IR) coating. The initial maximum concentrations are comparable with IR formulations, followed by a gradual ascending plasma concentration time profile (12,13). In April 2012, novo-methylphenidate ER-C extended-release tablets (Novo-MPH ER-C, Novopharm Limited, Canada) met Health Canada requirements for bioequivalence, and was listed as interchangeable in the Ontario Drug Benefit Formulary/Comparative Drug Index. Pharmacists in Ontario were then authorized to switch from OROS-MPH without consulting the prescriber. Since 2012, this product has been marketed under the name teva-methylphenidate ER-C (Teva, Canada). In Canada, current regulatory guidelines for determining bioequivalence rely on measurement of the rate and extent of drug absorption, which include the maximum concentration (C_{max}) and area under the curve (AUC) (14,15). Bioequivalence is inferred if the 90% CI for the ratio of geometric means of the AUCs of the test drug and reference drug are completely in the range of 0.80 to 1.25, and for C_{max}, if the point estimate of the ratio is within the same range (16).

JPM van Stralen Medicine Professional Corporation, Ottawa, Ontario

Correspondence: Dr Judy PM van Stralen, JPM van Stralen Medicine Professional Corporation, 206-1657 Woodroffe Avenue, Ottawa, Ontario K2G 1W2.

Telephone 613-276-7459, e-mail judyvanstralen@bellnet.ca

Accepted for publication September 26, 2012

Click to open article

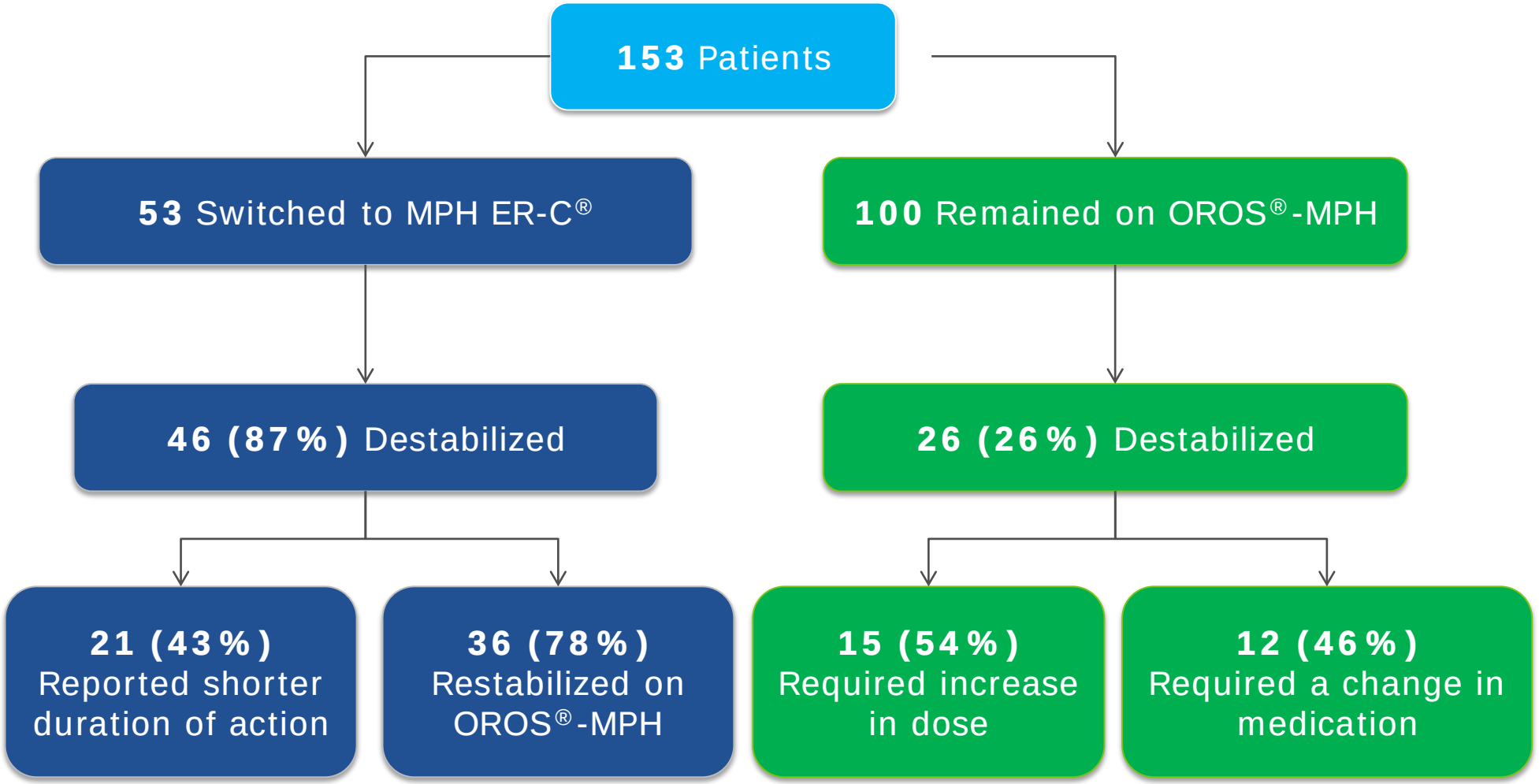
Objectives & Methods

Retrospective, observational, chart review of consecutive ADHD patients (aged 5-18 years) from a single pediatric practice who were prescribed OROS® MPH from May 1 to November 27, 2010 to determine the clinical impact of switching to MPH ER-C®.

Primary Outcome	• Proportion of patients destabilized • Destabilization: change in symptoms and/or function resulting from a ADHD medication or dosage change
Secondary Outcome	• Qualitative assessment of the effects of the switch

van Stralen JP. Paediatr Child Health. 2013 Feb;18(2):70-3.

Study Results: Primary Efficacy Endpoint



van Stralen JP. Paediatr Child Health. 2013 Feb;18(2):70-3.

Study Results: Secondary Efficacy Endpoints

Secondary endpoints were reported by the study author in a qualitative manner without incidence rates nor statistical significance.

Efficacy	MPH ER-C® appeared to be less effective than OROS®-MPH: • Comments: "*feels like not taking the medication at all*" the patient was "*completely destabilized*" and "*bouncing off the walls*"
Adverse Events	Different side effects while treated with MPH ER-C®: • Dizziness, eating more, not sleeping well and anger.
Duration of Action	MPH ER-C® was reported to have a shorter duration of action vs OROS®-MPH: • Patients/parents reported 7 or 8 h of effect and some patients required an additional dose of immediate release MPH.

van Stralen JP. Paediatr Child Health. 2013 Feb;18(2):70-3.

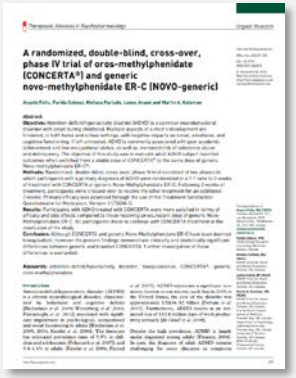
Study Conclusions

- 87% of patients who were switched from OROS®-MPH to MPH ER-C® clinically destabilized, corresponding to a 66% increase in destabilization compared with those who were left on OROS®-MPH
- Qualitative reports indicated inferior tolerability, lower effectiveness and a shorter duration of action with MPH ER-C®

van Stralen JP. Paediatr Child Health. 2013 Feb;18(2):70-3.

Summary


Differences in Adverse Event Reporting Rates of Therapeutic Failure Between Two Once-daily Extended-release Methylphenidate Medications in Canada: Analysis of Spontaneous Adverse Event Reporting Databases


A randomized, double-blind, cross-over, phase IV trial of oros-methylphenidate (CONCERTA®) and generic novo-methylphenidate ER-C (NOVO-generic)


Medication Persistence, Duration of Treatment, and Treatment-switching Patterns Among Canadian Patients Taking Once-daily Extended-release Methylphenidate Medications for Attention-Deficit/Hyperactivity Disorder: A Population-based Retrospective Cohort Study


The clinical impact of switching attention deficit hyperactivity disorder patients from OROS®-MPH to Novo-MPH ER-C®: A paediatric practice review

Clinical Summary Conclusions

Study	Design	Slides
Park Wyllie 2017 Retrospective Analysis	Canada Vigilance Adverse Reaction Database analysis: 10-fold higher reporting rate of therapeutic failure for MPH ER-C® vs. OROS® MPH over 1-year period.	3 - 7
Park Wyllie 2016 Retrospective Cohort Study	Patients taking OROS® MPH remained on treatment for significantly longer and were less likely to become non-persistent over 12-month period vs. MPH ER-C®	8 - 15
Fallu 2016 Adult Randomized, Double-Blind, Crossover Study	Greater satisfaction with efficacy & side effects on OROS® MPH vs. MPH ER-C®. All participants chose to continue with OROS® MPH treatment at study conclusion	16 - 19
Van Stralen 2013 Pediatric Retrospective Chart Review	87% destabilized for those switched from OROS® MPH to MPH ER-C® vs. 26% who remained on OROS® MPH. Of the destabilized patients who switched to MPH ER-C®, 43% reported a shorter duration of effect.	20 - 24

Please refer to the full scientific summary for additional summarized literature.

If you have any additional questions please contact Janssen Medical Information

 1-800-567-3331 or 1-800-387-8781

 www.janssenmedicalinformation.ca