

# Results of Intensive Weight Loss Program (IWLP) in a Primary Care Office in Ohio. Comparison of IWLP and CDC Diabetes Prevention Program (CDC DPP). Effects of Short Term Use of Phentermine in Weight Loss and Regain.



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## Abstract

Patients and Primary Care Physicians (PCP) face difficulties in knowledge, motivation, expectation, appropriate setting, and affordability of services for a user friendly effective weight loss and maintenance program in a primary care office. This poster demonstrates the results of IWLP in primary care office in rural Ohio with one clinician and two support staff. Weight management data were compared between IWLP and CDC DPP. Weight loss and maintenance data were also compared between patients on short course Phentermine (OP group) and patients not on Phentermine (NOP group).

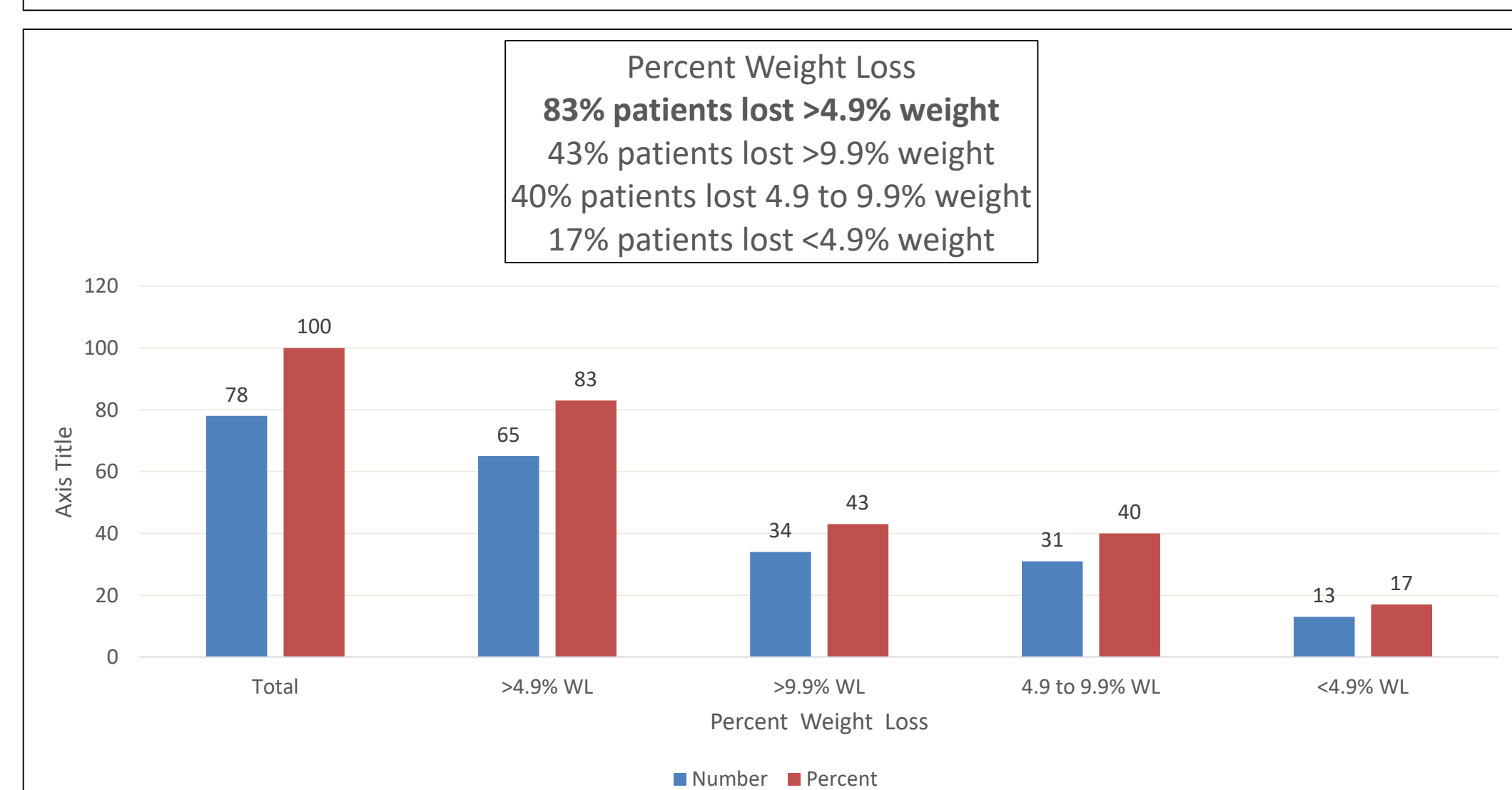
## Methods

We used tools from Obesity Medicine Association (OMA) to start a user friendly Intensive Weight Loss Program (IWLP) for an employer based Activate Health and Wellness Clinic in Ohio. Core concepts of obesity management from the Obesity algorithm by OMA were used in educational materials for the patients, office staff and the community.

Intensive Weight Loss Program (IWLP) is a nonsurgical "Specialty" care directed by a Board Certified Medical Physician and clinical staff to utilize behavioral, nutritional, physical activity and pharmacological interventions to achieve and maintain significant weight loss in a medically safe and user friendly environment.

**Behavioral components** of IWLP include daily body weight check and changing eating habits to 3 meals a day with an adequate amount of water. **Nutritional components** include either a low calorie diet (< 1200 calorie/day) or low carbohydrates diet (goal 60 gram/day) with adequate amount of protein (goal 20 to 30 gram three times/day). **Physical activity** goal was 150 minutes per week (30 minutes/day for 5 days) or doubling up the daily step count from the baseline. **Pharmacological components** include multivitamins, Vitamin D and Fish Oil. Metformin, Phentermine (3 months only in Ohio) and Topiramate were used in selected patients.

The initial goal of IWLP was a 5% to 10% body weight loss in 3 to 6 months and to maintain the lost weight. Participants were required to see the physician monthly, starting with an initial H & P and coaching. They were offered an optional weekly or biweekly visit with the nurse for weight and vitals check for 3 months After finishing the 12 week program, further goals and appointments were individualized according to patient's need. Patients were advised to keep their daily weight, exercise and food intake logs. Weight loss data from 78 adults (51 female, 27 male, 23 to 63 YO) in a 7 to 92 week period (Average participation 41 weeks) is presented. Body weights presented here are initial, lowest and final body weight with corresponding weeks in each individual participant.



## Results

Parameters	01/01/16 to 12/31/17
Number of patients	78 (Female 51, Male 27)
Age	23 to 63 year old, Avg. age 43
Weeks	7 to 92 weeks, Avg. 41 weeks
Average max. weight loss	12.5% =30.3 pounds
Maximum weight loss range	7.2 pounds=4.6% to 130.4 pounds=35.7%
Average final weight loss range	1.6 pounds= 0.9% 130.4 pounds=35.7%
Average final WL %	9.8%

Parameters	Initial Average	Final Average	Final % Change
BMI	39.3	35.3	-10
WC inches	44.4	41.8	-5.8
HbA1c%	6.1	5.7	-6.5
TC mg/dl	175.5	164	-6.5
TG mg/dl	165	125	-24
HDL mg/dl	45.5	48	+5.5
LDL mg/dl	104	94.5	-9.5
TC/HDL	5.3	3.7	-30
TG/HDL	4.2	3	-28
Fram. score ♂	7.7%	4.8%	-38%
Fram. score ♀	1.8%	1.5%	-17%
ACC-AHA score ♂	11.4%	8.6%	-24.6%
ACC-AHA score ♀	4.2%	3.4%	-18%

Parameters	Activate Clinic	DPP by CDC *
Time	41 weeks	208 weeks
# of adults	78	14,747
Visits	1 in 30 days	1 in 12 days
% participants achieved 5% WL	83%	35.5%
Average WL	9.8%	4.2%

\* Diabetes Care 2017 Apr; dc162099, <https://doi.org/10.2337/dc16-2099>

## Results

**"High Risk Group" (M18,F38,Total 56)**  
**Criteria 3 out of 5 : WC(M>40",F>35"), BMI>30.**  
**HDL<40,HbA1c>5.7,TG>150**

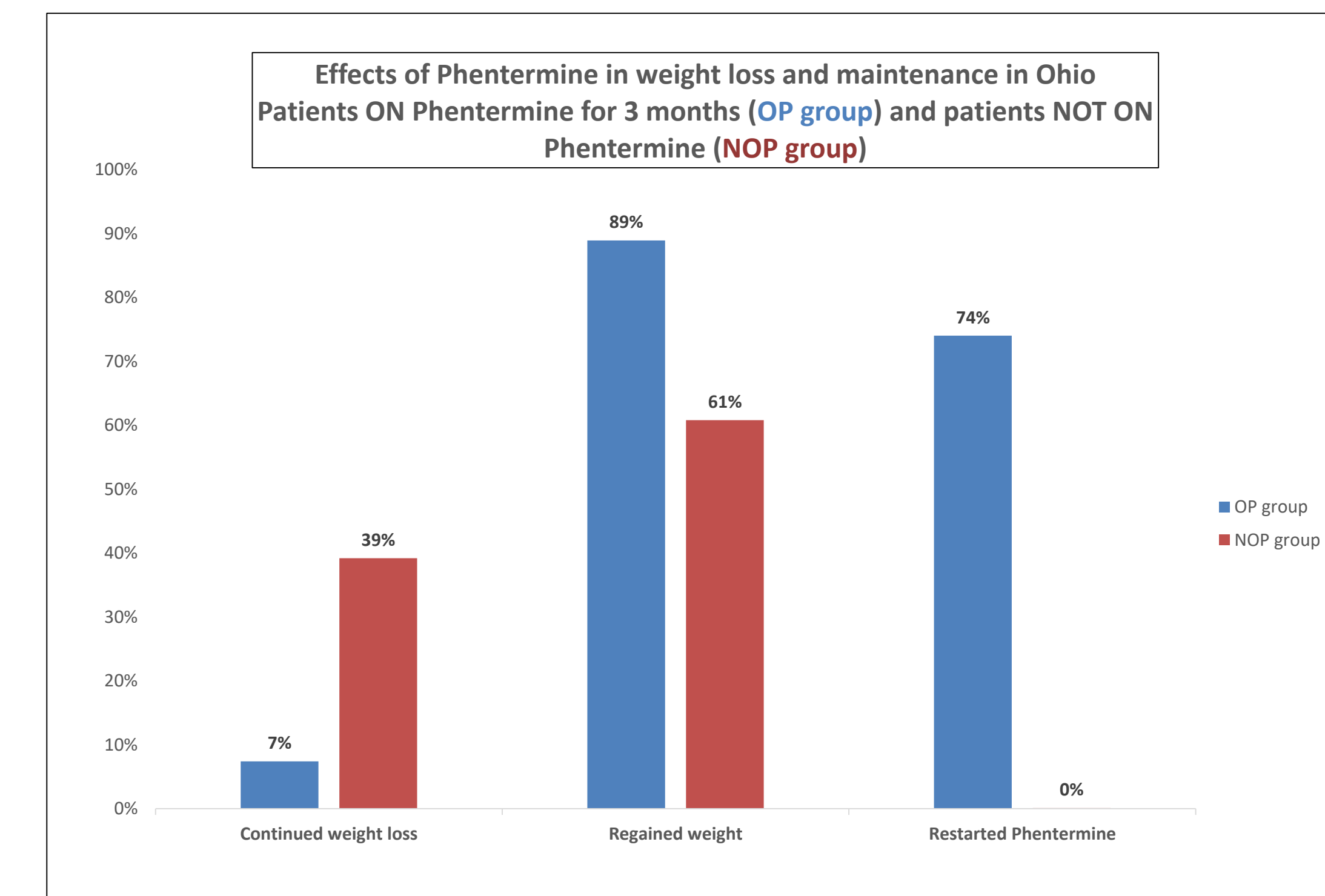
Parameters average percent	Male (Initial-Final)%	Female (Initial-Final)%
Maximum WL	-10.6%	-13.5%
Final WL	-7.7%	-10.7%
BMI	-7.9%	-10.3%
WC inches	-5.4%	-4.9%
HbA1c%	-6%	-3.6%
TC mg/dl	-12.8%	+0.4%
TG mg/dl	-15.7%	-23.8%
HDL mg/dl	+0.7%	+4.3%
LDL mg/dl	-10.2%	+0.7%
TC/HDL	-13.3%	-32%
TG/HDL	-18.4%	-23.5%
Frm. score	-25.8%	-11.9%
ACC-AHA score	-2.9%	-16.1%

**Comparison of patients ON Phentermine (M3+F24=27)(OP group) and NOT ON Phentermine (M24+F27=51) (NOP group) in Ohio**

Parameters average	ON Phentermine (OP group) (Initial-Final)%	NOT ON Phentermine (NOP group) (Initial-Final)%
Maximum WL	-14.4%	-11.4%
Final WL	-10.8%	-9.3%
BMI	-10.4%	-8.7%
WC inches	-4.8%	-6.4%
HbA1c%	-7%	-6.5%
TC mg/dl	-4.4%	-9.9%
TG mg/dl	-23.9%	-22.3%
HDL mg/dl	+1.2%	+7.6%
LDL mg/dl	-7.4%	-9.3%
TC/HDL	-5.2%	-43%
TG/HDL	-30.5%	-23%

Metformin	Phentermine	Topiramate	All 3	Phen+Topir	Metf.+Phen
59%	35%	27%	18%	22%	26%

## Results



## Conclusion

- (1) This poster demonstrates that knowledge and resources from OMA can provide effective user friendly intensive weight loss program (IWLP) in primary care office with limited available resources
- (2) Average maximum and final weight loss were 12.5% and 9.8 % respectively.
- (3) Weight loss data were associated with improvement in biometrics, lab values, and cardiovascular risk scores, thus overall wellness.
- (4) Comparison on IWLP with CDC-DPP program as follows: Number of participants achieved 5% weight loss 83% vs 35.5% and average weight loss 9.8% vs. 4.2%
- (5) Results of the "High Risk Group" indicates that weight management could be added with the traditional practice to improve the outcome and prevention of metabolic diseases.
- (6) Affordable medications such as Metformin, Phentermine and Topiramate can be used to assist in weight management.
- (7) In Ohio, the FDA approved medication Phentermine can be used 3 months continuously in treating patients with obesity. It can be restarted after 6 months if patients regain weight. Comparison of patients in OP group with NOP group as follows: Max. average weight loss 36.6 pounds(14.5%) vs. 26.7 pounds(11.4%). Continued weight loss 7.4% vs. 39.2%, Regained weight 88.9% vs.60.8%. Seventy four percent of the patients in OP group had to restart Phentermine to prevent excessive regain. This data clearly demonstrates that OP group lost more weight compared to NOP group, but fell behind in continued weight loss and increased their rate of regain. This data also points towards the benefits of continued use of Phentermine in patients with obesity in Ohio.

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