

# Video Education Increases Patient Attainment of Target Phosphorus Levels

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## INTRODUCTION

The value of video education in the dialysis setting is unknown. We assessed the acceptance of a video education project and its effectiveness in improving the percent of patients with phosphorus levels at or below the recommended target ( $\leq 5.5$  mg/dL).

## METHODOLOGY

- Eleven of 13 dialysis centers (n=13 to 141) in one region of a large dialysis organization (LDO) participated in the video education project.
- Lab results for patients were compared for the 6 months before the intervention (8/09-1/10) to the 3 months after the intervention (4/10-6/10).
- A mixed linear model (PROC MIXED, SAS 9.2) was employed with a repeated measure by center over the 3 time periods (before, during, and after intervention). The first and third periods were contrasted.
- The analysis was weighted by the number of patients at each center due to the wide range of center sizes (13 to 141 patients per center).
- The 2 non-participating centers are provided for reference only and cannot be used for direct comparison.

## RESULTS

### Video Education Project

- One video was shown for eight consecutive weeks beginning February 1, 2010 to in-center hemodialysis patients while the patients were receiving their treatments.
- Patients were given a hand-out summarizing the main topic of each video.
- Watching the videos was encouraged but voluntary.
- Videos offered (by week):
  - The Dialysis Experience: Parts 1 & 2
  - Sharon's Place
  - Adequate Dialysis
  - Living Well on Dialysis
  - Diet and Dialysis
  - Delicate Balance
  - DaVita Kitchen
  - Go Fistula: A Patient's CathAway

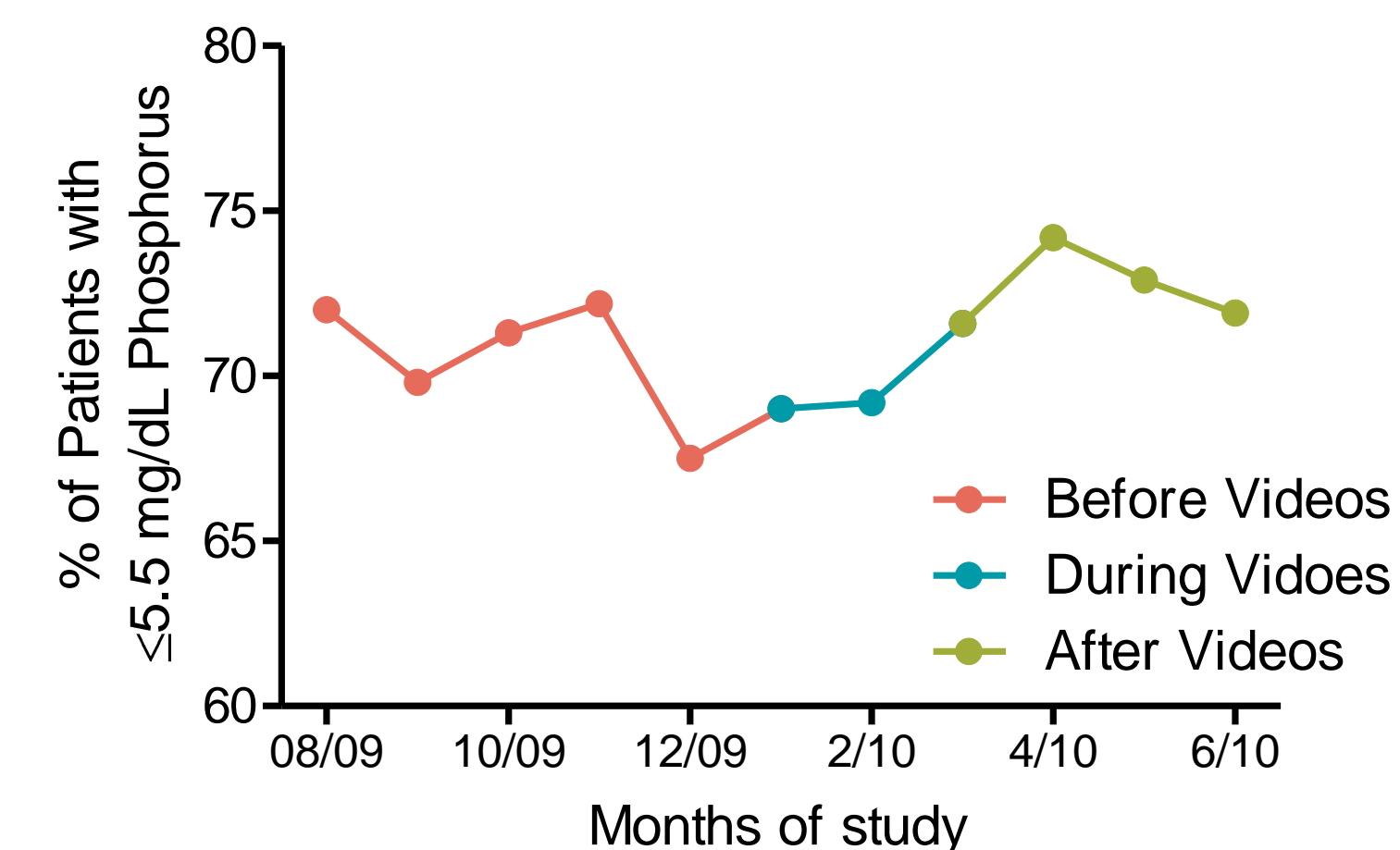


Figure 1. Percentage of Patients Achieving  $\leq 5.5$  mg/dL Phosphorus at Participating Centers

Table 1. Percent of Patients Achieving  $\leq 5.5$  mg/dL Phosphorus

Participating Center	Mean # of pts with monthly P result	Percent of patients achieving $\leq 5.5$ mg/dL P			
		Before program (8/09-1/10)	During program (2/10-3/10)	After program (4/10-6/10)	Change (After-Before)
A	141	65.7	68.4	72.5	6.8
B	57	74.4	76.1	72.2	-2.2
C	79	75.9	77.7	77.6	1.7
D	13	55.8	62.5	82.1	26.2
E	33	68.5	58.0	61.4	-7.2
F	24	67.5	64.0	76.4	9.0
G	21	75.7	71.9	66.7	-9.1
H	38	75.0	73.0	72.3	-2.8
I	40	65.9	72.8	73.5	7.6
J	53	71.8	69.3	76.0	4.2
K	36	72.9	67.1	70.3	-2.7
<b>Center-level mean</b>	<b>49</b>	<b>69.9</b>	<b>69.2</b>	<b>72.8</b>	<b>2.9</b>
<b>Patient-level mean</b>		<b>70.3</b>	<b>70.4</b>	<b>73.0</b>	<b>2.7</b>
<b>Non-participating Center</b>					
Non-A	13	79.6	88.7	70.3	-9.3
Non-B	72	82.7	77.9	81.7	-1.0
<b>Center-level mean</b>	<b>42</b>	<b>81.2</b>	<b>83.3</b>	<b>76.0</b>	<b>-5.2</b>
<b>Patient-level mean</b>		<b>82.4</b>	<b>79.6</b>	<b>80.1</b>	<b>-2.3</b>

## SUMMARY of RESULTS

- The percentage of patients achieving target levels for phosphorous ( $\leq 5.5$  mg/dL) was higher after participation in a video education program intended to improve patient phosphorus levels (Table 1 and Figure 1).
- Of the over 300 patients who completed a post-video questionnaire:
  - 79% indicated that videos increased their overall knowledge of dialysis
  - 80% wanted more video education in the future
  - 87% reported the video handouts reinforced what they had learned

## KEY LEARNINGS

- ✓ The percentage of patients achieving  $\leq 5.5$  mg/dL phosphorus after a video education program increased 2.9%, which was marginally significant (p=0.059).
- ✓ The use of video education appears to be an effective way to improve phosphorus levels in dialysis patients.
- ✓ Due to resources requirements for such programs, corroboration of effectiveness with more rigorous study designs would be desirable.

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