

File Provided Natively

PLAINTIFFS TRIAL
EXHIBIT

P-03600_00001



Promotional Mix Optimization Brand Level Model Results and ROI

Prepared for Endo Pharmaceuticals
July 16, 2012

This document is solely for the use of client personnel. No part of it may be circulated, quoted or reproduced for distribution outside of the client organization without prior written approval of ZS Associates.

Agenda

- Project Objectives and Executive Summary
- UEO Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Pain Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Next Steps
- Appendix

Endo would like to better understand the effectiveness and efficiency of its marketing efforts for the Pain and UEO portfolios

Background

- Endo has been using a variety of marketing tactics to drive prescribing volume within the Pain and UEO portfolios
- The organization would like to better understand the effectiveness of each of these tactics, and to optimize marketing spending to drive efficiency

Key Business Questions

- How effective is each of Endo's marketing activities in terms of driving prescription volume for each Pain and UEO brand?
- What share of prescription volume is driven by current marketing efforts versus carryover from previous sales?
- What is the ROI for each marketing activity?
- How can Endo optimize its marketing mix within each brand? Within each portfolio?

ZS has completed regression analysis of historical promotional tactics. Next steps include benchmark development and optimization tool integration

Process Steps – Completed and Forward Looking



- Historical data has been integrated and analyzed via regression models to provide response curves and ROIs for each brand
- Some historical tactics could not be analyzed via regression due to level /timing of activity or lack of data
- ZS will identify appropriate benchmarks for new tactics and those that could not be modeled via regression based on brand input
- Once benchmarks are identified, ZS will integrate them into optimizer software for portfolio optimization and scenario planning
- With software developed, ZS will train internal users and develop portfolio scenarios

The objectives of today's model review are to...

Contribution to sales and return on investment

1. Review contribution to sales from various promotional channels
2. Review the return on investment and profitability of historical promotional activities
3. Discuss forward looking plan for 2013
4. Next steps ...

Promotional activity profitability varies across the UEO brands

Promotional tactics contribution to sales

- **For Endo's UEO products, promotional activities drive between 9-63% of sales**
 - FORTESTA Gel and VALSTAR derive a higher share of sales through promotional activity compared to SUPPRELIN LA and VANTAS
 - Branded website activity only drove statistically significant volume for SUPPRELIN LA
 - For FORTESTA Gel, Copay cards drove more than 20% of sales

Return on investment and profitability

- **SUPPRELIN LA promotional tactics are mostly profitable**
 - Detailing for SUPPRELIN LA is profitable when incremental sales driven through detailing are compared to prorated costs (allocated based on share of rep effort). If compared against fully loaded rep costs, detailing appears to be unprofitable
 - Website exposure for SUPPRELIN LA is highly profitable. SUPPRELIN LA may want to consider measures to drive greater (targeted) traffic to the branded website
- **Detailing for VALSTAR is profitable and could be increased**
 - Marginal ROI is positive indicating that additional sales force activity directed to VALSTAR will drive greater overall value to the portfolio
- **Detailing for VANTAS is not profitable at current levels**
 - VANTAS benefits from a strong carryover rate so scaling back on VANTAS sales force activities to focus more on VALSTAR may drive greater value to the organization
- **Only CoPay Cards drive positive ROI for FORTESTA Gel**

Sales force detailing remains the primary driver of sales for UEO brands; it is particularly strong for FORTESTA Gel and VALSTAR

% Contribution to annual sales and profitability by promotional tactic for each brand

Modeling time frame	Apr'11- Mar'12	Apr'10- Mar'12	Apr'11- Mar'12	Apr'11- Mar'12
Tactic	FORTESTA Gel	SUPPRELIN LA	VANTAS	VALSTAR
SF Detailing	● 34.8%	● 6.1%**	● 8.2%	● 43.7%
NPP	● 3.8%	N/A	N/A	N/A
Website	N/A	● 3.1%	● 0.5%*	● 0.3%*
Journals	● 0.2%	N/A	N/A	<i>Limited activity (one advertisement); impact was not statistically significant</i>
CoPay cards	● 23.1%	● 0.5%	N/A	N/A
Speaker programs	● 1.0%	<i>Could not be measured via regression analysis due to low match rate</i>		
AUA Symposium	N/A	N/A	<i>Could not be measured via regression analysis due to timing of event</i>	
Webcast	N/A	N/A	N/A	<i>Could not be measured via regression analysis due to low match rate</i>
ALL TACTICS	62.9%	9.7%	8.7%	44.0%
CARRYOVER	39.0%	26.1%	66.2%	25.6%
OTHER FACTORS	-1.9%	64.2%	25.1%	30.4%

- Positive mROI
- Approximately Breakeven mROI
- Negative mROI

* Not a statistically significant impact

**Impact of detailing to Pediatricians is approximately 1/3 of the total detailing impact

Endo's promotional efforts drive a strong share of sales for nearly all brands in the pain portfolio

Promotional tactics contribution to sales

- **For Endo's Pain products, promotional activities generate 13-23% of sales**
 - Sales force detailing is the most impactful tactic, detailing accounts for ~35-65% of all sales & marketing impact
 - NPP and co-pay cards are the tactics with the most impact on sales, next to sales force detailing

Return on investment and profitability

- While detailing drives a large proportion of impactable sales for VOLTAREN GEL, there is an opportunity to scale back spending
- Co-pay cards and NPP are profitable across most brands
- Sampling drives LIDODERM and VOLTAREN GEL sales and represents a profitable investment
- Websites contribute to ~2% of LIDODERM and OPANA sales and are profitable

Additional observations

- **Nurse practitioners and physicians' assistants show a higher responsiveness to detailing than physicians and have a lower carryover of sales**
 - Across products, a large proportion of NPP targets are also detailed suggesting NPP tactics might be influenced by SF effort
 - FROVA has the highest sales impact from NPP tactics (7%), primarily because a lot of geographies are not covered by any other sales promotion

While sales force detailing remains the primary promotional lever, NPP programs, copay cards and other tactics also drive sales for Pain brands

% Contribution to annual sales and profitability by promotional tactic for each brand

Modeling time frame	Apr'11- Mar'12	Jan'11- Dec'11		Apr'11- Mar'12
Tactic	LIDODERM	OPANA	Voltaren Gel	FROVA
SF Detailing	● 8.3%	● 11.7%	● 5.9%	● 8.2%
NPP	● 3.1%	● 0.0%*	● 3.5%	● 7.5%
Samples	● 5.0%	N/A	● 2.1%	● 1.0%
Website	● 2.0%	● 2.1%	● 0.0%*	● 0.1%
Journals	● 0.5%	● 0.3%	N/A	N/A
Copay cards	● 0.4%	● 4.4%	● 2.7%	● 6.4%
Speaker programs	Not planned for 2012	● 0.2%	N/A	N/A
ALL TACTICS	19.3%	18.7%	13.2%	23.2%
CARRYOVER	77.1%	73.4%	70.8%	45.2%
OTHER FACTORS	3.6%	7.9%	15.0%	31.6%

- Positive mROI
- Approximately Breakeven mROI
- Negative mROI

* Not a statistically significant impact

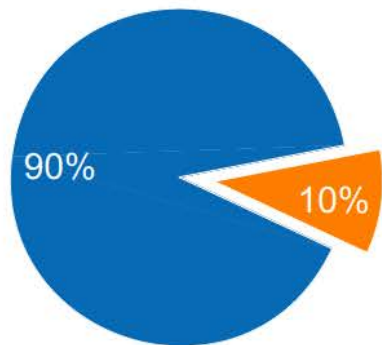
NP/PAs have a higher response to detailing than HCPs across all retail products

(A) Relative responsiveness of NP/PA to HCPs



NP/PAs are twice as responsive as HCPs, however they have a lower carryover rate

(B) NP/PA share of total HCPs, sales, and effort – OPANA ER derives max benefit from them



Product	% Universe	% Sales	% Effort
LIDODERM	7%	8%	9%
OPANA ER	10%	17%	13%
VOLTAREN GEL	7%	8%	8%
FROVA	10%	9%	9%
FORTESTA GEL	5%	5%	4%

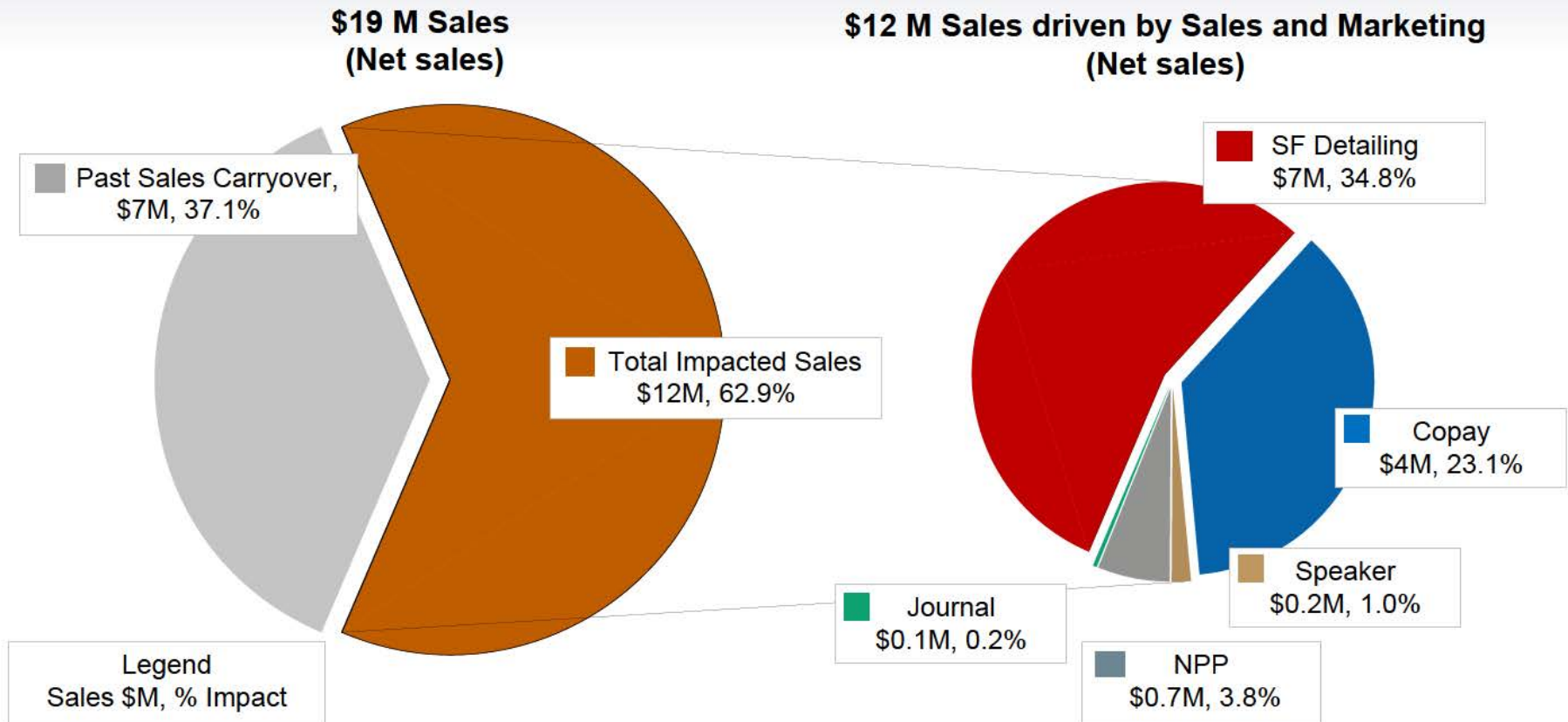
Agenda

- Project Objectives and Executive Summary
- UEO Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Pain Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Next Steps
- Appendix





FORTESTA gel marketing tactics measured in this analysis drive approximately 63% of annual sales



Note:\$/Rx = \$201.94; Refill Ratio = 1.54; Modeling timeframe: Apr'11 – Mar'12



Though gross sales are being sustained by promotion, FORTESTA Gel is still in an investment mode

Investment Level vs. Return on Investment



Sales Force Detailing and Copay have the highest impact on revenue

Note: Revenue, ROI includes long term factor based on carryover except Copay
 ROI calculations account for COGS; \$/Rx = \$201.94; Refill Ratio = 1.54; Margin = 86.2%;
 Modeling timeframe: Apr'11 – Mar'12



CoPay cards and Speaker programs are profitable in higher quintiles; detailing and NPP are not

Annual mROI, Reach and Frequency by Segment

Quintile	Detailing	Copay	Speaker	NPP
5	-70% (18.8,91%)	384% (11.5,33%)	123% (1.1,3%)	-100% (* ,92%)
4	-77% (13.9,82%)	416% (6.7,19%)	-63% (1.1,2%)	-100% (* ,78%)
3	-80% (9.9,64%)	347% (5.0,10%)	40% (1.1,1%)	-92% (* ,50%)
2	-83% (7.0,38%)	327% (4.1,4%)	-71% (1.1,1%)	-43% (* ,22%)
1	-80% (4.2,14%)	442% (2.8,1%)	-45% (1.1,0%)	87% (* ,4%)

May be self-selected audience

Specialty	Detailing	Copay	Speaker	NPP
END	-81% (8.6,43%)	462% (5.9,4%)	8% (1.1,0%)	-53% (* ,39%)
Pain	-70% (7.7,24%)	302% (5.4,3%)	-26% (1.1,1%)	-52% (* ,13%)
URO	-83% (11.7,62%)	387% (8.1,9%)	9% (1.1,1%)	-44% (* ,40%)

Key

- > 0% mROI
- 25%-0% mROI
- < -25% mROI

mROI
(Freq, Reach %)

Note: All mROI values include long term factor applied for carryover except Copay

*NPP tactics had a similar number of touches per reached HCP and were analyzed as a binary variable; Non-personal promotion (NPP) captures Email, Direct Mail and Teledetailing

Annual reach and frequency are based on 2011 numbers; Modeling Timeframe: Oct'11 – Mar'12





Approximately 10% of SUPPRELIN LA sales are driven by marketing activities

**\$58.1 M Sales
(Net sales)**

**\$5.6 M Sales driven by Sales and Marketing
(Net sales)**

■ Past Sales Carryover,
\$52.4M, 89.7%

■ Total Impacted Sales
\$5.6M, 9.7%

■ Websites
\$1.8M, 3.1%

■ CoPay
\$0.3M, 0.5%

■ Detailing
\$3.5M, 6.1%

Legend
Sales \$M, % Impact

A significant portion of SUPPRELIN LA sales force effort may be non HCP focused (and may not be recorded as “detailing”) The impact of this activity is captured as base sales

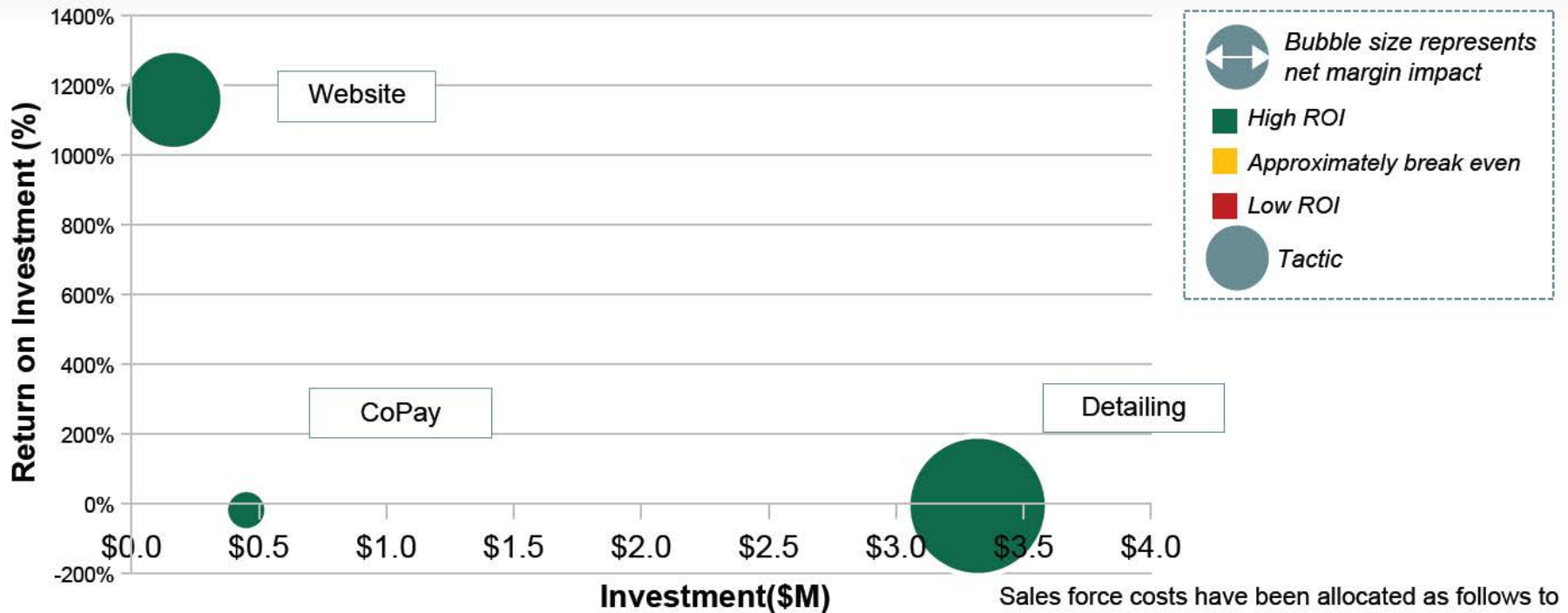
Net Sales/Unit = \$13,953

Modeling timeframe: Oct’11 – Mar’12 (12 month vs. 12 month models)



The SUPPRELIN LA website generates a high ROI; detailing is also ROI positive

Investment Level vs. Return on Investment



Note: Margin, ROI and mROI include long term factor based on carryover
 ROI and mROI calculations based on net margin
 Net Sales/Unit = \$13,953; Margin = 91.0%
 Modeling timeframe: Oct'11 – Mar'12 (12 month vs. 12 Month models)



The marginal ROI of SUPPRELIN LA CoPay cards is positive

Annual mROI, Reach and Frequency by Segment

Segment	Detailing	CoPay Cards
Historical Writers	-14% (24.5, 90%)	364% (1.4, 18%)
Historical Non Writers	-78%* (8.42, 74%)	<i>Not Measurable: Only one case</i>

Key	
mROI	> 0% mROI
(Freq, Reach %)	-25%-0% mROI
	< -25% mROI

Note: Note: All mROI values include long term factor applied for carryover except Copay
12 Month reach and frequency are based on April '11 – Mar'12

*Reach = Not a statistically significant impact

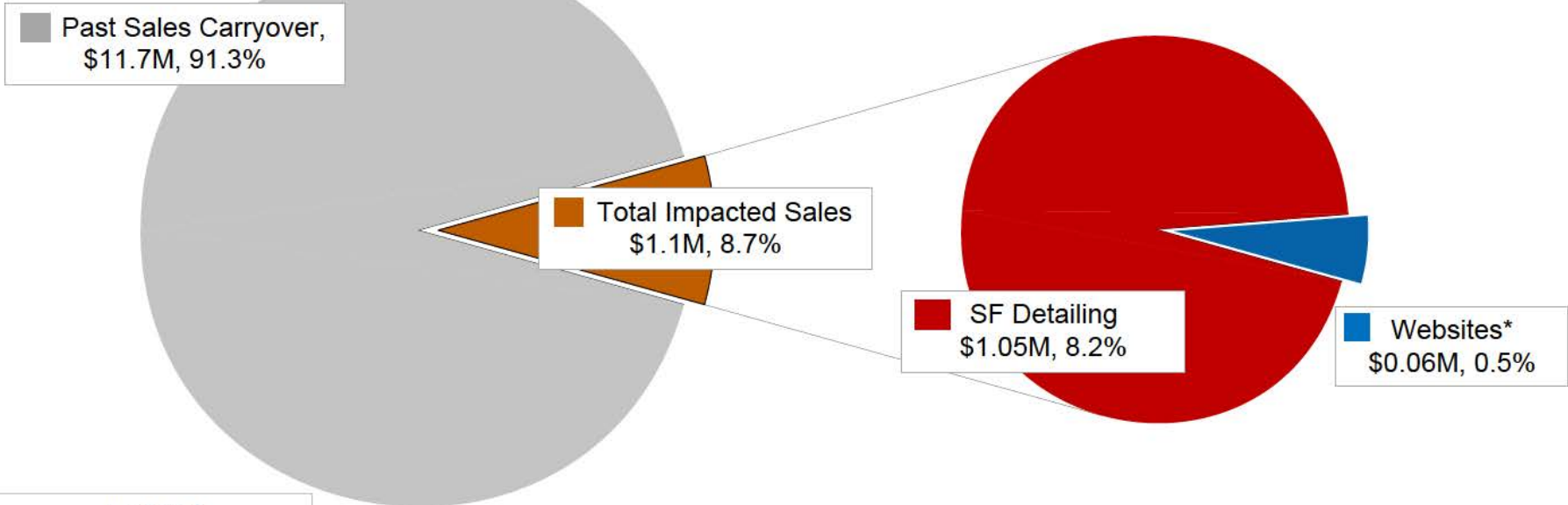


ONCE-YEARLY
VANTAS[®]
(histrelin acetate) subcutaneous implant

Approximately 9% of VANTAS sales are driven by marketing activities

**\$12.8 M Sales
(Net sales)**

**\$1.1 M Sales driven by Sales and Marketing
(Net sales)**

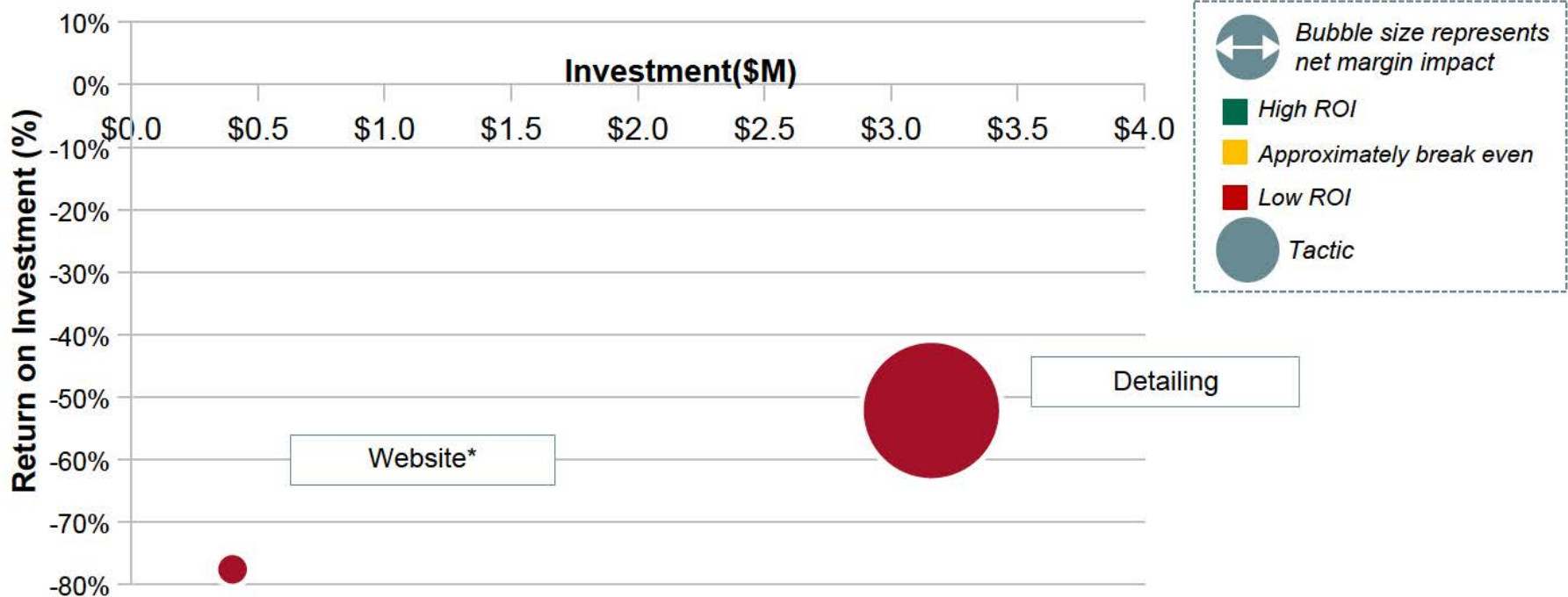


Legend
Sales \$M, % Impact

Net Sales/Unit = \$1,685
 Modeling timeframe: Oct'11 – Mar'12
 *Not a statistically significant impact

Neither detailing nor website visits drive positive ROI for VANTAS

Investment Level vs. Return on Investment



Note: Margin, ROI and mROI include long term factor based on carryover

ROI and mROI calculations based on net margin

Net Sales/Unit = \$1,685; Margin = 71.5%

*Website mROI = ROI, not a statistically significant impact

Modeling timeframe: Oct'11 – Mar'12

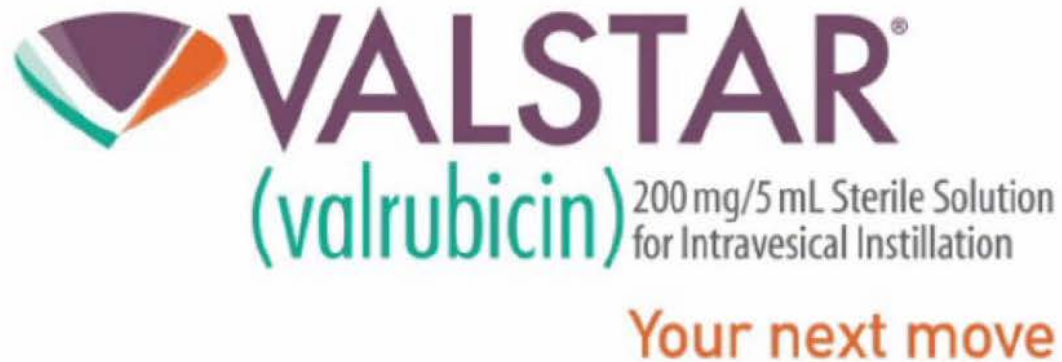
Additional VANTAS details are not expected to be profitable

Annual mROI, Reach and Frequency by Segment

Segment	Detailing
Historical Writers	-67% (44.5, 82%)
Historical Non Writers	-24% (16.7, 69%)

Key	
mROI	> 0% mROI
(Freq, Reach %)	-25%-0% mROI
	< -25% mROI

Note: All mROI values include long term factor applied for carryover
 12 Month reach and frequency are based on April '11 – Mar'12



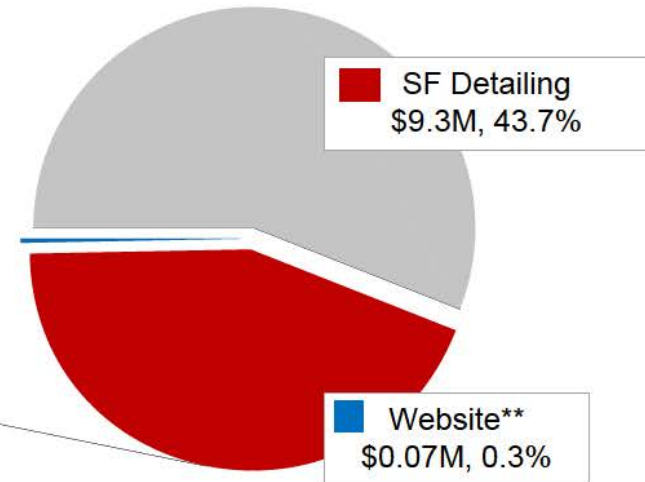
A significant portion of VALSTAR sales are driven by sales force effort

\$21.3 M Sales*
 (Net sales)

\$11.7 M Sales driven by Sales and Marketing
 (Net sales)

■ Past Sales Carryover,
 \$12.0M, 56.0%

■ Total Impacted Sales
 \$9.4M, 44.0%

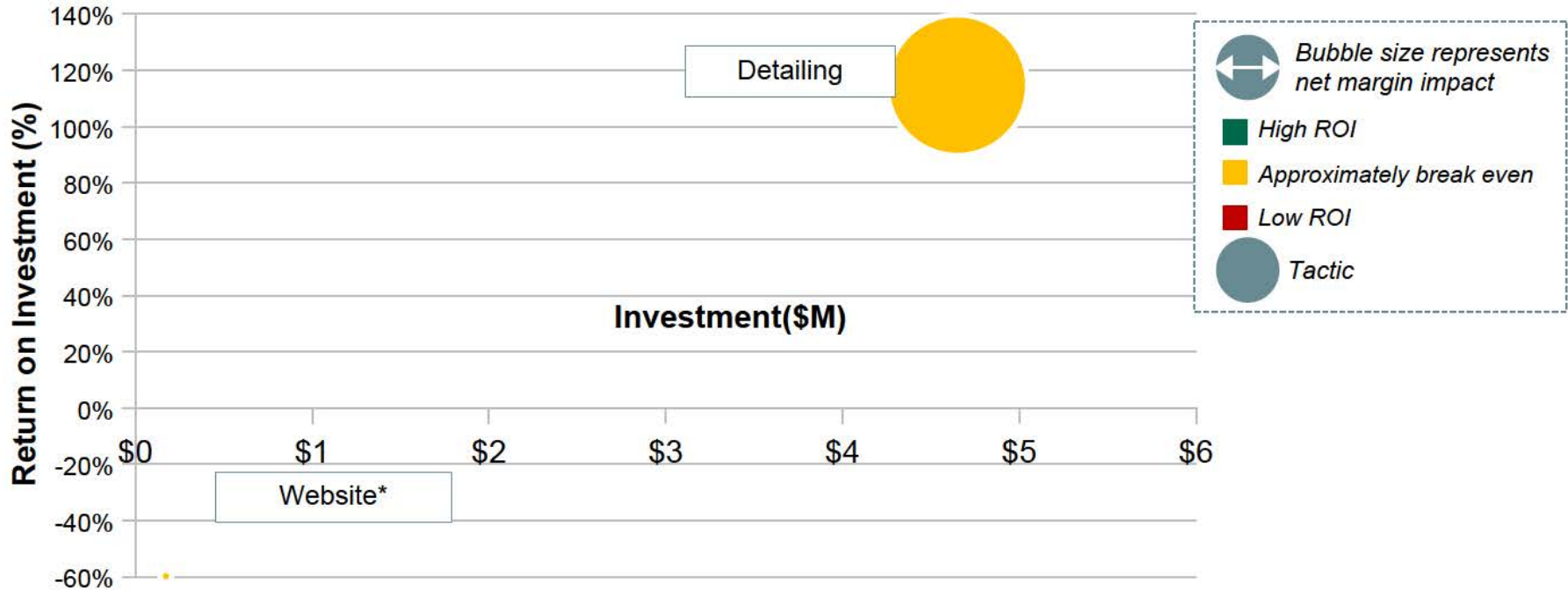


Legend
 Sales \$M, % Impact

Net Sales / Unit = \$3,251;
 Modeling timeframe: Oct'11 – Mar'12
 **Excludes Pharmacy / Distributor Sales
 *Not a statistically significant impact

Detailing is profitable for VALSTAR

Investment Level vs. Return on Investment



Note: Margin, ROI and mROI include long term factor based on carryover

ROI and mROI calculations based on net margin

Net Sales/Unit = \$3,251; Margin = 80.3%

*Website mROI = ROI, not a statistically significant impact

Modeling timeframe: Oct'11 – Mar'12



VALSTAR has an opportunity to increase profits by increasing details to both historical writers and non writers

Annual mROI, Reach and Frequency by Segment

Segment	Detailing
Historical Writers	104% (53.6, 90%)
Historical Non Writers	130% (18.9, 73%)

Key	
mROI	> 0% mROI
(Freq, Reach %)	-25%-0% mROI
	< -25% mROI

Note: All mROI values include long term factor applied for carryover
12 Month reach and frequency are based on April '11 – Mar'12

2012 – 2013 Planning



Development of benchmarks for upcoming tactics and adjustments to historical responses require input from the team

Product	Details	Samples	Copay	Journal	Speaker	Direct Mail	Rep Triggered Letters	Branded Website	SEO/ SEM	Email	Tele-detailing	Voucher	Banner Ads	Disease Website	Webcast
SUPPRELIN LA	Measured via Regression		Measured via Regression		Historically executed; not measureable via regression	Future activity	Future activity	Measured via Regression	Future activity	Future activity				Future activity	
FORTESTA Gel	Measured via Regression	Future activity	Measured via Regression	Measured via Regression	Measured via Regression	Measured via Regression	Future activity	Historically executed; not measureable via regression	Future activity		Measured via Regression	Future activity	Future activity		
VANTAS	Measured via Regression				Historically executed; not measureable via regression	Future activity		Measured via Regression	Future activity	Future activity					
VALSTAR	Measured via Regression			Historically executed; not measureable via regression	Historically executed; not measureable via regression		Future activity	Measured via Regression	Future activity	Future activity					Historically executed; not measureable via regression

- Measured via Regression
- Historically executed; not measureable via regression
- Future activity
- Not a part of future brand plans

- Any key events for the product/market in 2012-13?
- For channels used in the past :
 - Which ones will continue in a similar way vs changing their effectiveness / message significantly?
 - Which ones will need benchmarks for the future because past measurement was not possible?
- Are there any new channels under consideration for 2013 planning?

Agenda

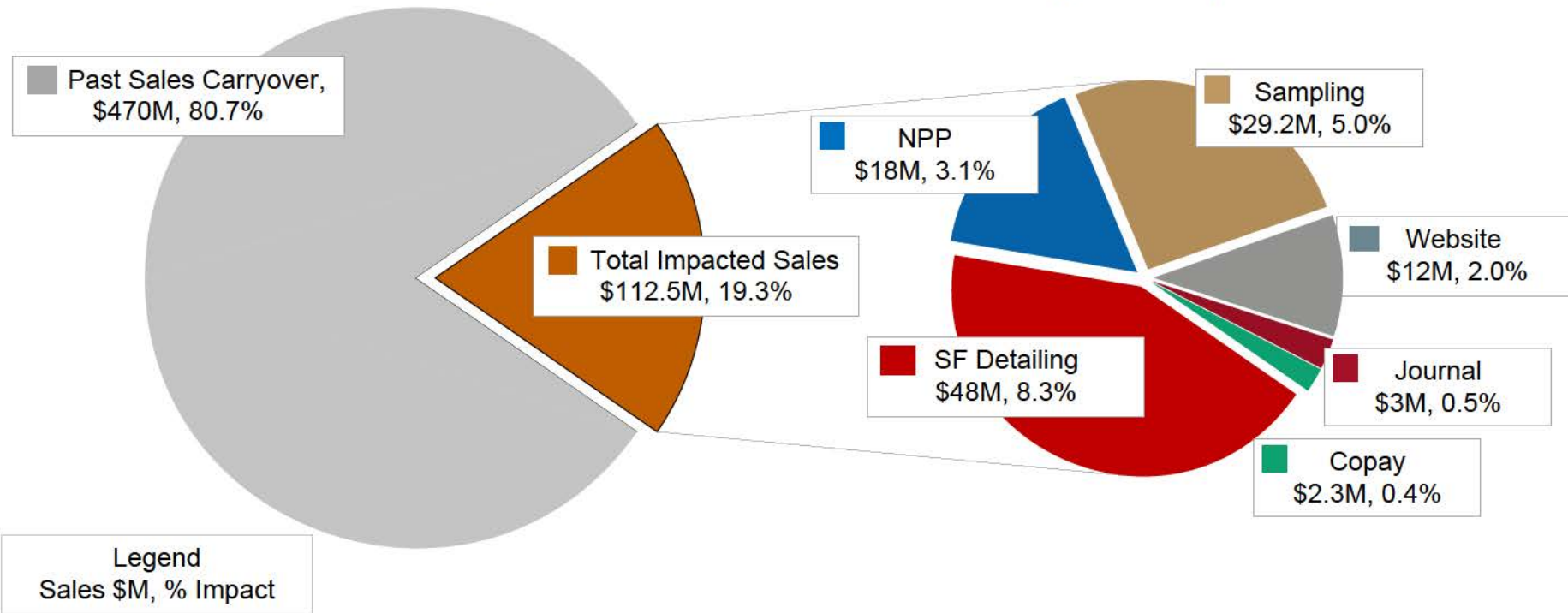
- Project Objectives and Executive Summary
- UEO Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Pain Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Next Steps
- Appendix



Lidoderm marketing tactics measured in this analysis drive 19% of the total sales

\$583 M PHN eligible Sales (Net sales)

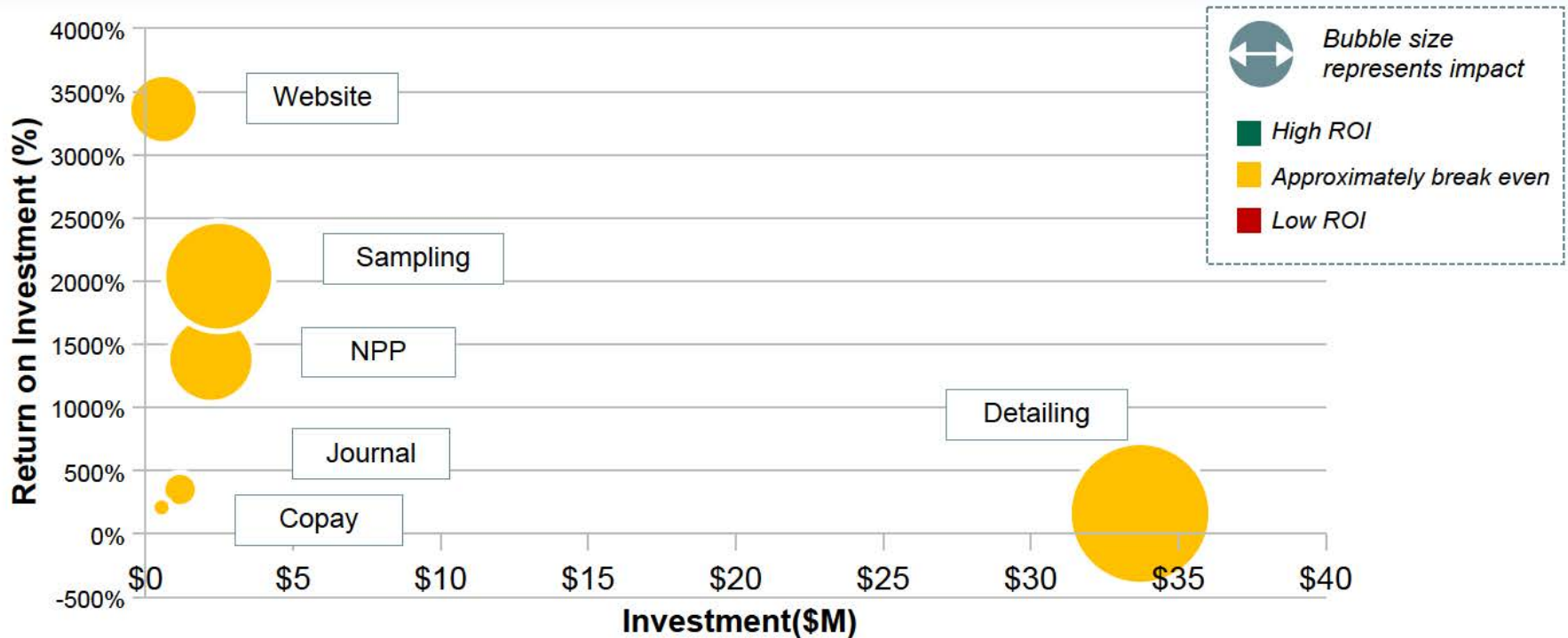
\$113 M Sales driven by Sales and Marketing (Net sales)



Note: Modeling results are shown for PHN eligible universe; \$/Rx = \$200.47; Refill Ratio = 1.8; Modeling timeframe: Apr'11 – Mar'12

Most of the promotional channels for Lidoderm have high ROI

Investment Level vs. Return on Investment



Sales Force Detailing and Sampling have the highest impact on revenue

Note: Revenue, ROI includes long term factor based on carryover except Copay
 ROI calculations account for COGS; \$/Rx = \$200.47; Refill Ratio = 1.8; Margin = 72.4%;
 Modeling timeframe: Apr'11 – Mar'12

All of Lidoderm's promotional channels are profitable by segment

Annual mROI, Reach and Frequency by Segment

Quintile	Detailing	Sampling	Copay	NPP
5	69% (14.3,82%)	731% (148.9,72%)	64% (3.3,18%)	-33% (* ,68%)
4	86% (10.5,70%)	576% (89.2,58%)	110% (2.5,10%)	912% (* ,54%)
3	106% (8.4,56%)	618% (69,45%)	233% (2.2,7%)	1147% (* ,41%)
2	217% (5.9,38%)	448% (51.6,29%)	281% (2.0,4%)	1203% (* ,26%)
1	120% (4.7,26%)	189% (42.8,20%)	528% (1.8,2%)	1982% (* ,13%)

Specialty	Detailing	Sampling	Copay	NPP
PCP	50% (7.4,40.0%)	630% (62.7,31.7%)	348% (2.1,4.3%)	1053% (* ,27.8%)
SPEC	189% (10.1,65.8%)	395% (112.1,53.7%)	139% (2.9,12.5%)	1031% (* ,46.1%)

Non-personal promotion was relatively less profitable for Q5 HCPs

Key
 mROI
 (Freq, Reach %)

- > 0% mROI
- 25%-0% mROI
- < -25% mROI

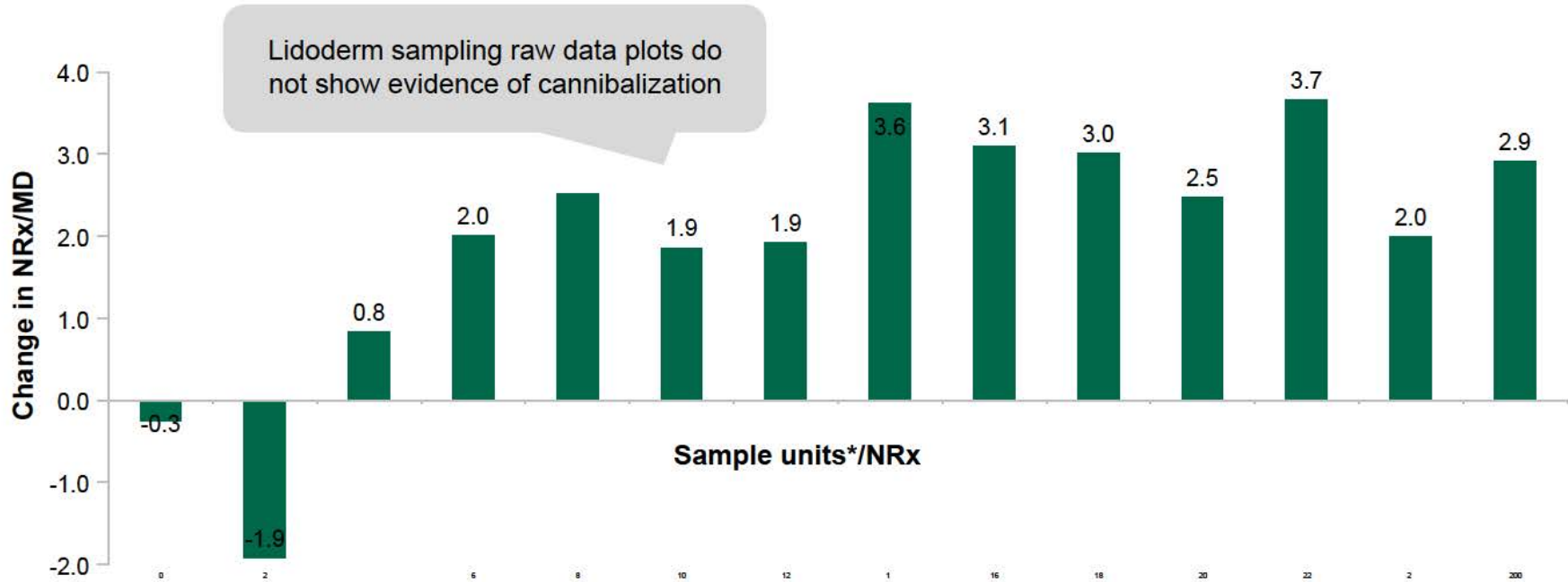
Note: All mROI values include long term factor applied for carryover except Copay

*NPP tactics had a similar number of touches per reached HCP and were analyzed as a binary variable; Non-personal promotion (NPP) captures Email and Direct Mail

Annual reach and frequency are based on Apr'11 – Mar'12

A revised approach to sample modeling showed sample impact of 5%, higher than previously estimated

Avg NRx change per MD vs sample units/NRx in recent 6 months (Oct'11-Mar'12)



Sales force detailing and sampling combined impact is 13.3 % -- the split is somewhat sensitive to methodology but about 60-40

* 1 sample unit =1 patch, 1 TRx=41 patches, Upper limit shown

** #MDs based on PHN value deciles 6-10

Note: Activity is based on recent 6 months of data (Oct'11-Mar'12) ; Δ NRx = (Oct'11-Mar'12) NRx - (Apr'11 - Sep'11)NRx



opana[®]ER
(oxymorphone HCl) 

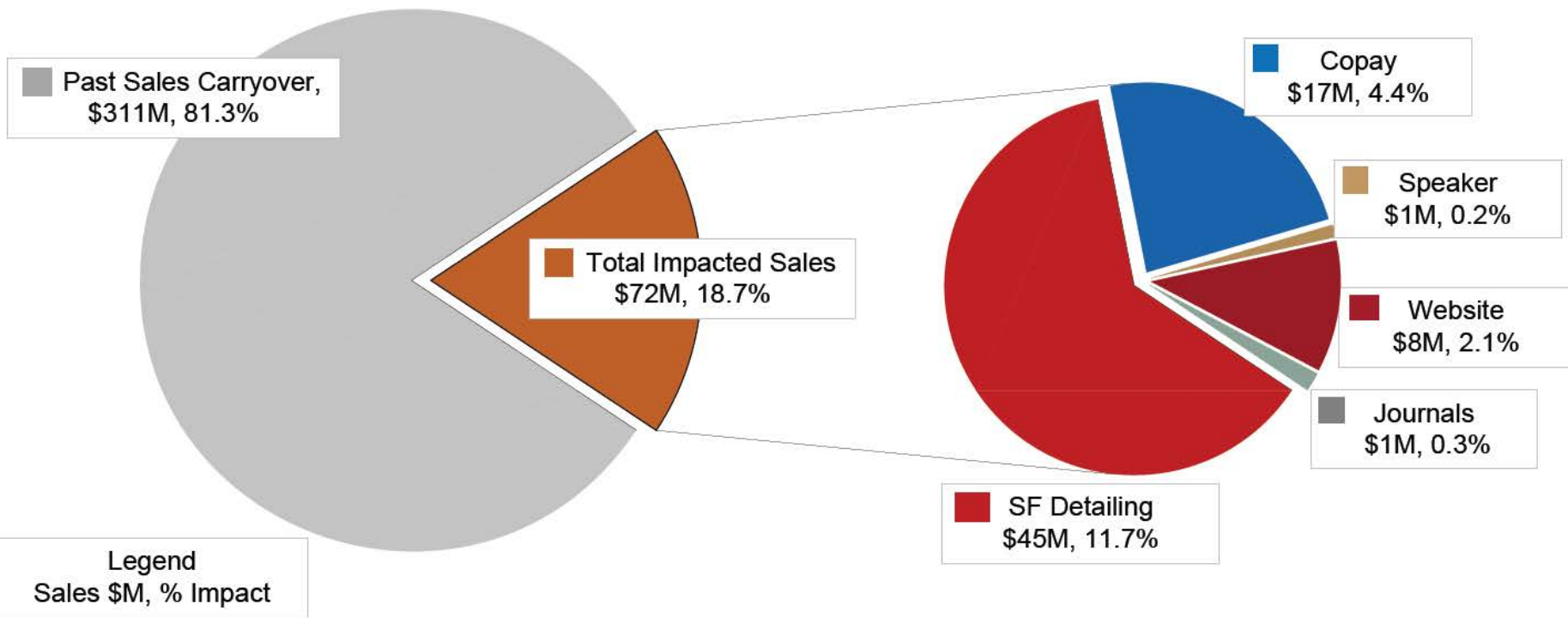
EXTENDED-RELEASE TABLETS
5 mg • 10 mg • 20 mg • 30 mg • 40 mg



OPANA ER marketing tactics measured in this analysis drive 19% of the total sales

\$383 M Sales (Net sales)

\$72 M Sales driven by Sales and Marketing (Net sales)

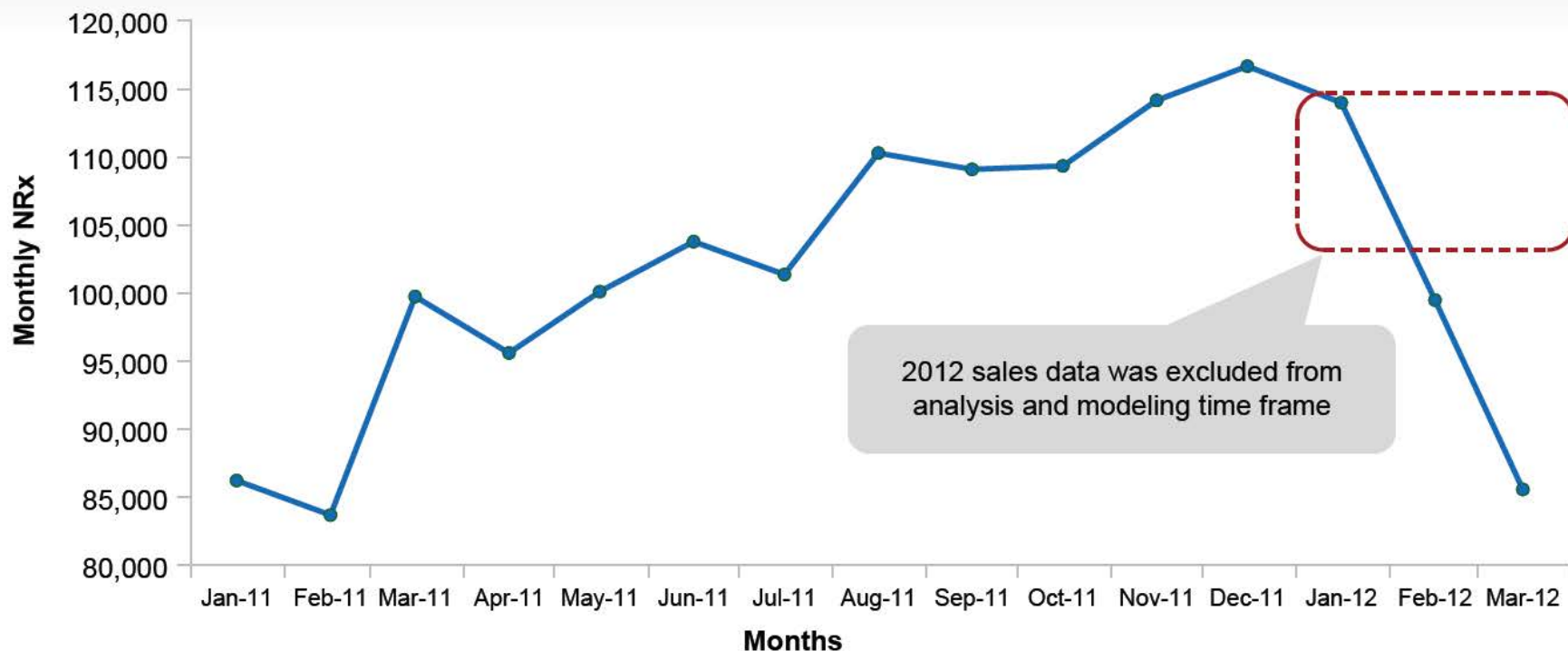


Note: \$/Rx = \$284.69; Refill Ratio = 1.01; Modeling timeframe: Jan'11 – Dec'11
 OPANA ER non-personal promotion did not show any impact on sales



OPANA ER analysis focused on 2011 sales, due to production issues in early 2012

OPANA ER NRx Sales from Jan'11 – Mar'12



2012 sales data was excluded from analysis and modeling time frame

- OPANA sales had a steep decline in 2012 due to production issues
- Sales force messaging was changed in early 2012 to inform HCPs about the OPANA production issues and aimed at avoiding generation of new patient scripts



Historical Merkle non-personal promotion analysis focused on 2012 sales

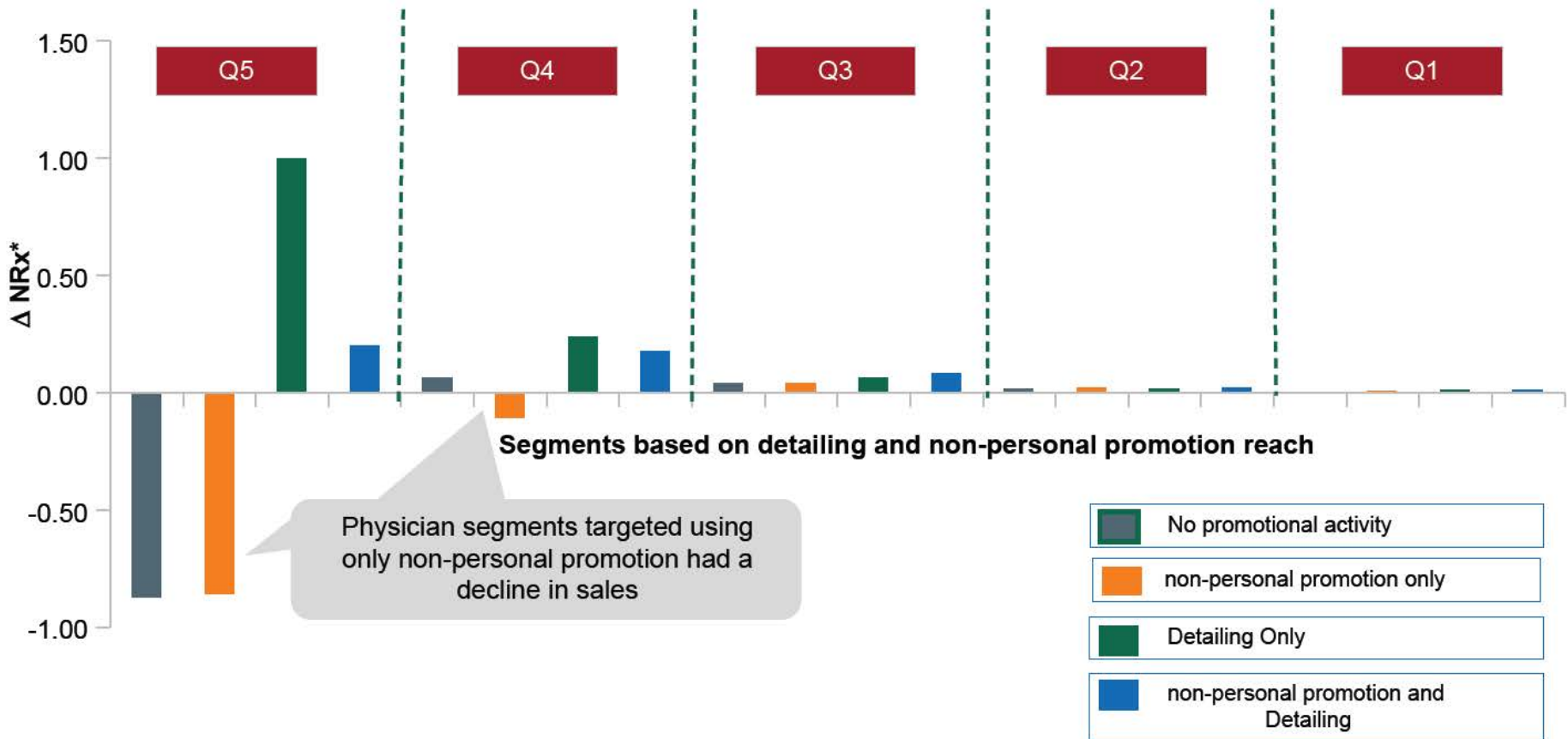
	Merkle analysis	PMO approach
Methodology	<ul style="list-style-type: none"> Analysis was based on 2012 sales data (Jan'12 – Apr'12) The analysis was based on test-control methodology and did not control for rep-driven co-pay cards, due to limitations in accurately identifying the source of co-pay cards The analysis also shows that a greater number of HCPs targeted using non-personal promotion responded to non-personal activity focused on co-pay cards 	<ul style="list-style-type: none"> Based on 2011 sales (Jul'11 – Dec'11), 2012 was excluded from analysis due to production issues The analysis was based on regression models accounting for all sales force driven tactics including co-pay cards
Difference in results and interpretation	<ul style="list-style-type: none"> 2012 sales force messaging was changed to inform HCPs about the OPANA production issues and aimed at avoiding generation of new patient scripts, however non-personal promotion did not change. This could have potentially led to a better non-personal promotion impact in 2012 Historical non-personal promotion could have been a reflection of impact of co-pay cards, which contributes to ~4% sales 	
2013 planning	<ul style="list-style-type: none"> Due to the events in 2012, non-personal promotion impact has a range for 2013 : from 0% - 0.7 % Anchoring non-personal responsiveness to co-pay cards, after accounting for variation in redemption rate and response rate will help plan for future budget – we will settle on this when benchmarking for future scenarios 	

Notes: The current models also looked at non-personal promotion without accounting for copay cards and did not show any difference in the results

Source for Merkle analysis: Opana ER - 2011 Campaign 2 6months Lift Analysis short version (2) pdf provided by Endo

Raw data cuts do not show relationship of sales to non-personal promotion

Change in NRx in segments by various channels

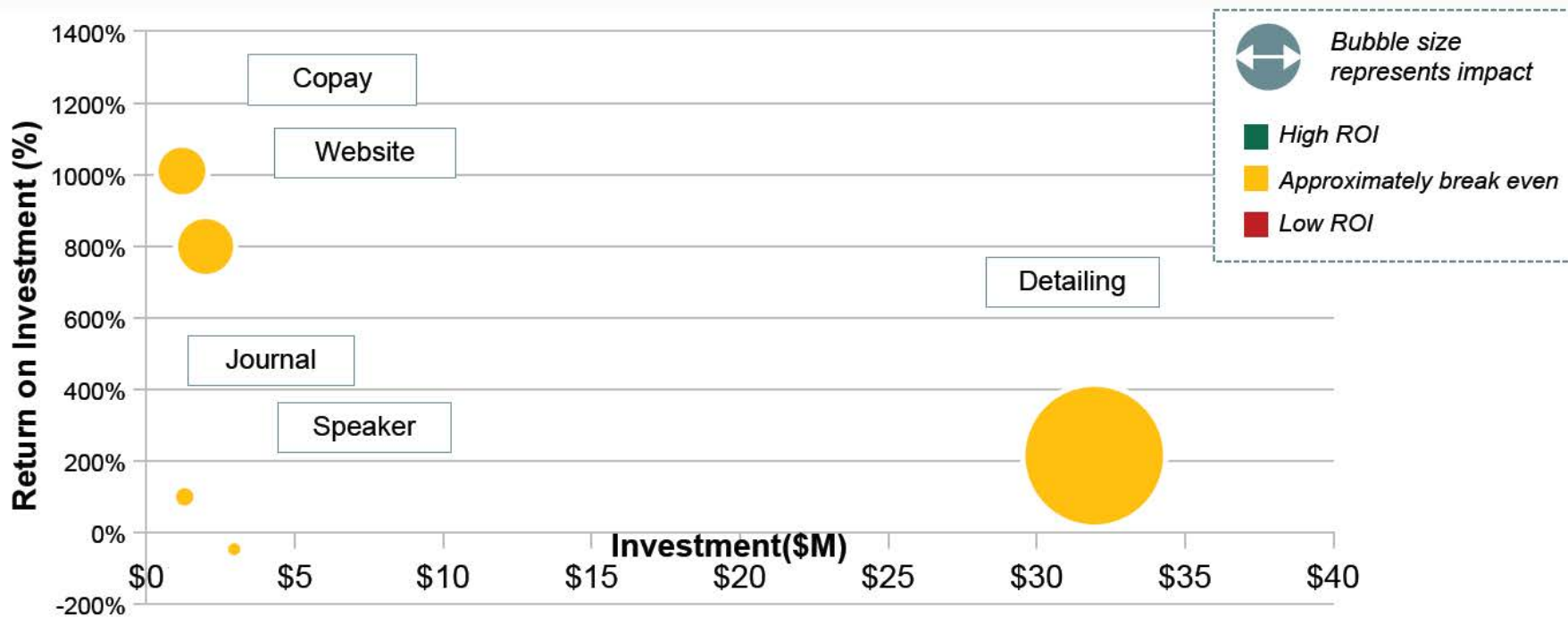


Note: Activity is based on recent 6 months of data (Oct'11-Mar'12) ; $\Delta NRx = (jul'11-Dec'11) NRx - (Jan'11 - jun'11) NRx$



Most of the promotional channels for OPANA ER have high ROI

Investment Level vs. Return on Investment



Sales Force Detailing and Copay have the highest impact on revenue

Note: Revenue, ROI includes long term factor based on carryover except Copay
 ROI calculations account for COGS; \$/Rx = \$284.69; Refill Ratio = 1.01; Margin = 79.2%;
 Modeling timeframe: Jan'11 – Dec'11; OPANA ER non-personal promotion did not show any impact on sales

Detailing and Copay are highly profitable for OPANA ER in the Q5 and Q4 segments

Annual mROI, Reach and Frequency by Segment

Quintile	Detailing	Copay	Speaker	NPP
5	538% (35,93%)	1161% (20,8,65%)	104% (1.4,18%)	- (* ,87%)
4	87% (25.2,88%)	1210% (9.8,41%)	-28% (1.4,13%)	- (* ,78%)
3	-23% (15.3,71%)	994% (5.0,14%)	35% (1.3,5%)	- (* ,54%)
2	0% (8.8,42%)	2357% (3.3,4%)	-53% (1.4,2%)	- (* ,30%)
1	40% (5.2,7%)	4213% (2.4,0%)	-77% (1.3,0%)	- (* ,4%)

Specialty	Detailing	Copay	Speaker	NPP
PCP	140% (9.5,14.2%)	2183% (6.6,2%)	-26% (1.4,1%)	- (* ,10%)
SPEC	117% (16.3,28.3%)	1791% (10.0,8%)	-27% (1.4,3%)	- (* ,20%)

Non-personal promotion did not show any impact on OPANA ER sales

Key
mROI
(Freq, Reach %)

- > 0% mROI
- 25%-0% mROI
- < -25% mROI

Note: All mROI values include long term factor applied for carryover except Copay

*NPP tactics had a similar number of touches per reached HCP and were analyzed as a binary variable; Non-personal promotion (NPP) captures Email, Direct Mail and Tele-detailing

Annual reach and frequency are based on Jan'11 – Dec'11

Voltaren® Gel

(diclofenac sodium topical gel) 1%

Direct route to relief®

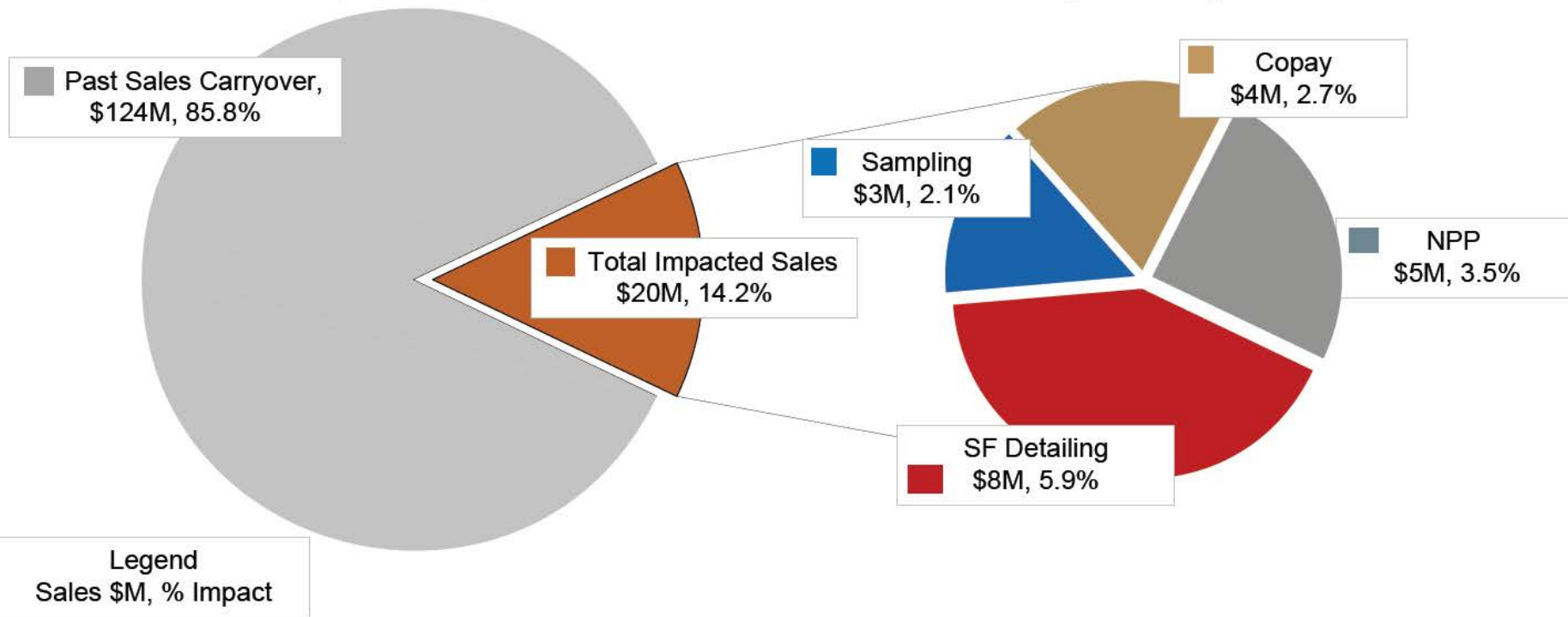




Voltaren Gel marketing tactics measured in this analysis drive 14% of the total sales

**\$144 M Sales
(Net sales)**

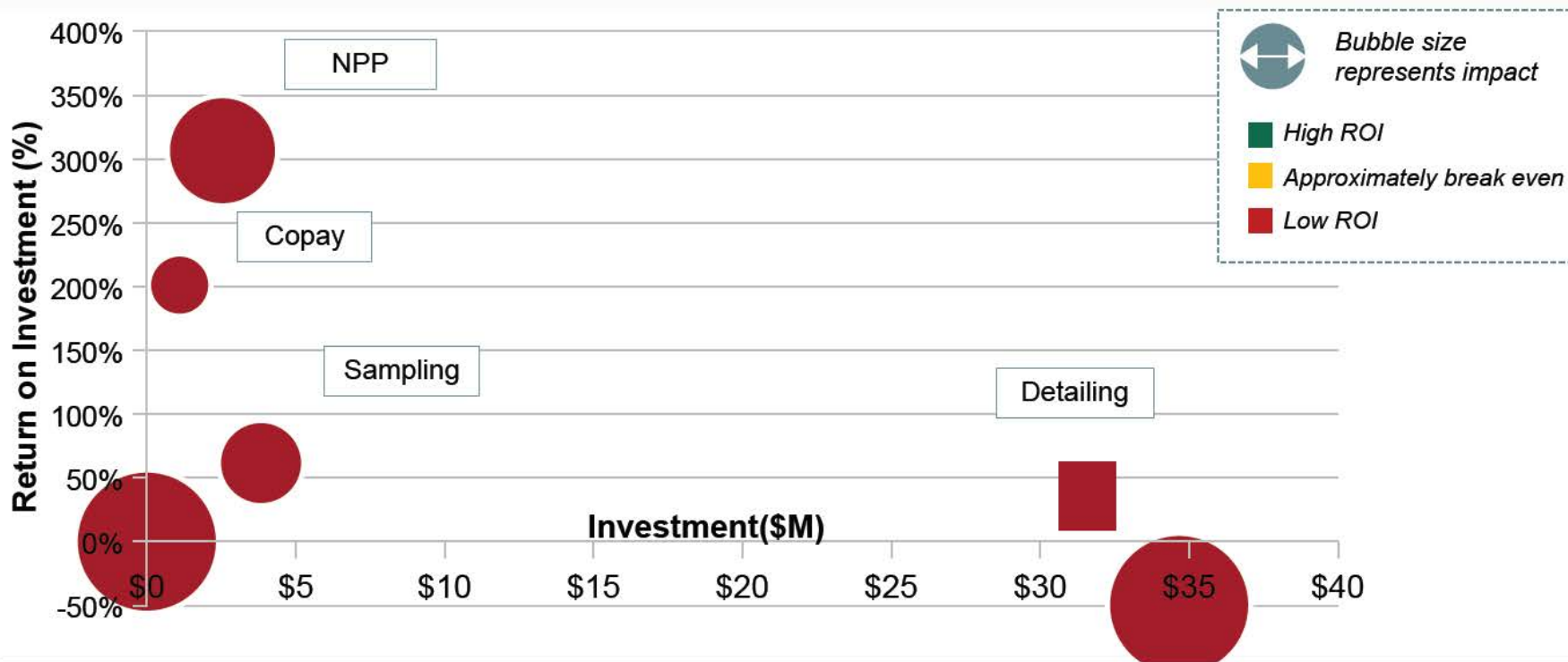
**\$20 M Sales driven by Sales and Marketing
(Net sales)**



Note: \$/Rx = \$60.77; Refill Ratio = 1.46; Modeling timeframe: Jan'11 – Dec'11
 VOLTAREN GEL sales were not found to be responsive to web activity

Most of the promotional channels except sales force detailing have high ROI for Voltaren Gel

Investment Level vs. Return on Investment



Sales Force Detailing and Non-personal promotion have the highest impact on revenue, though detailing investment appears to be somewhat excessive

Note: Revenue, ROI includes long term factor based on carryover except Copay
 ROI calculations account for COGS; \$/Rx = \$60.77; Refill Ratio = 1.46; Margin = 85.6%;
 Modeling timeframe: Jan'11 – Dec'11

Sampling, Copay and NPP are all profitable for Voltaren Gel across most segments




Annual mROI, Reach and Frequency by Segment

Detailing is less profitable than the other channels and should be scaled back

Quintile	Detailing	Sampling	Copay	NPP
5	-84% (13.4,79%)	-39% (143.0,73%)	97% (4.6,31%)	160% (* ,48%)
4	-81% (8.6,62%)	23% (73.8,54%)	121% (2.9,18%)	502% (* ,29%)
3	-76% (6.6,46%)	26% (50.4,37%)	101% (2.3,10%)	406% (* ,18%)
2	-70% (5.2,29%)	24% (39.2,22%)	202% (2.0,5%)	256% (* ,11%)
1	-57% (3.6,8%)	63% (28.7,5%)	350% (1.6,1%)	256% (* ,2%)

Specialty	Detailing	Sampling	Copay	NPP
SPEC	-72% (7.4,33%)	-5% (76.5,26%)	123% (3.0,10%)	312% (* ,12%)
PCP	-75% (5.9,16%)	44% (49.4,12%)	225% (2.3,3%)	320% (* ,6%)

Key

	> 0% mROI
	-25%-0% mROI
	< -25% mROI

mROI
(Freq, Reach %)

Note: All mROI values include long term factor applied for carryover except Copay

*NPP tactics had a similar number of touches per reached HCP and were analyzed as a binary variable; Non-personal promotion (NPP) captures Email, Direct Mail and Tele-detailing

Annual reach and frequency are based on Jan'11 – Dec'11

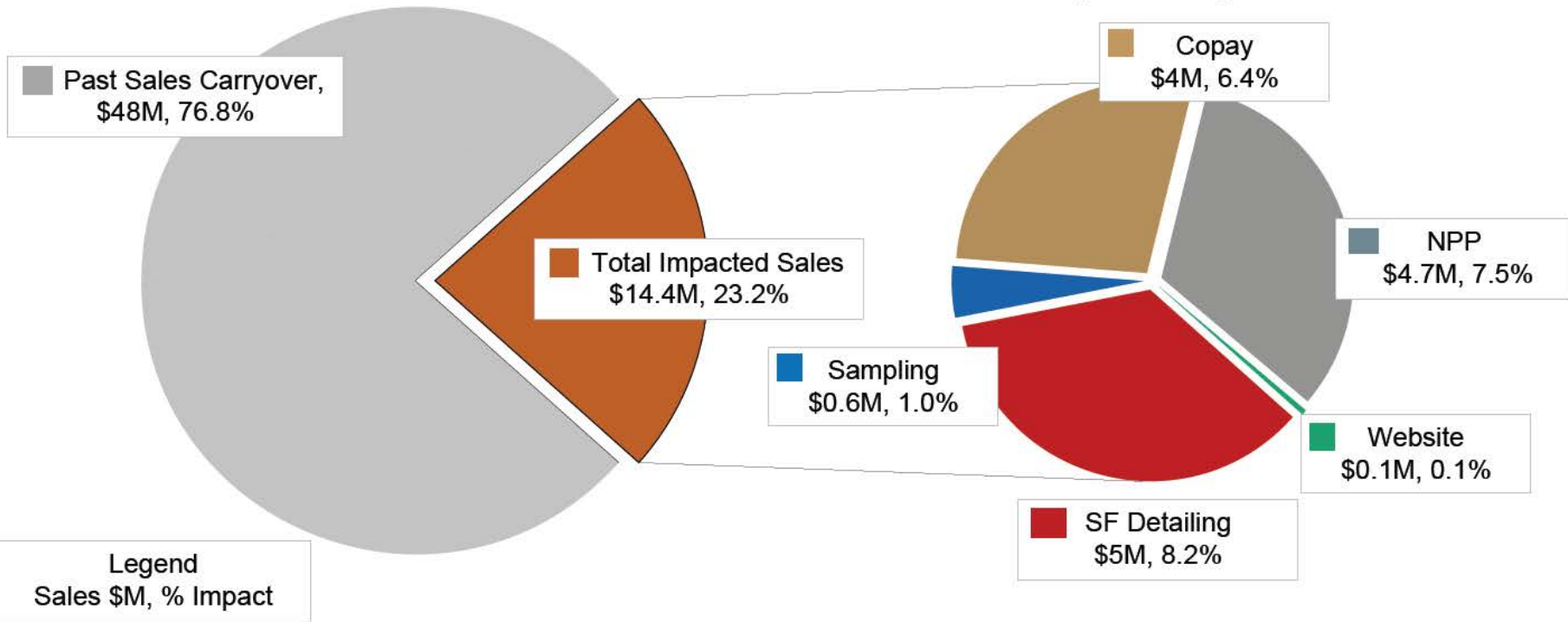




Frova marketing tactics measured in this analysis drive 23% of the total sales

**\$62 M Sales
(Net sales)**

**\$14 M Sales driven by Sales and Marketing
(Net sales)**



Note: \$/Rx = \$227.52; Refill Ratio = 2.17; Modeling timeframe: Apr'11 – Mar'12



Most of the promotional channels except websites have a high ROI for Frova

Investment Level vs. Return on Investment



Sales Force Detailing, NPP and Copay have the highest impact on revenue

Note: Revenue, ROI includes long term factor based on carryover except Copay
 ROI calculations account for COGS; \$/Rx = \$227.52; Refill Ratio = 2.17; Margin = 98%;
 Modeling timeframe: Apr'11 – Mar'12



Copay and NPP are profitable for FROVA with Detailing and Sampling nearing optimal spend in the higher quintiles

Annual mROI, Reach and Frequency by Segment

Detailing effort just about optimal in higher quintiles

Quintile	Detailing	Sampling	Copay	NPP
5	-2% (8.0,50%)	-20% (46.9,40%)	564% (6.1,29%)	263% (* ,54%)
4	-28% (4.0,27%)	-19% (18.3,19%)	413% (3.5,8%)	881% (* ,30%)
3	-56% (3.2,17%)	-8% (14.3,11%)	449% (3.1,4%)	905% (* ,19%)
2	-37% (2.6,11%)	-22% (12.2,6%)	513% (3,2%)	875% (* ,12%)
1	-35% (2.2,2%)	133% (11.2,1%)	529% (2.5,0%)	469% (* ,3%)

Specialty	Detailing	Sampling	Copay	NPP
PCP	-32% (2.8,5%)	35% (13.4,3%)	548% (3.2,1%)	609% (* ,6%)
SPEC	-30% (5.8,17%)	-8.0% (34.7,12%)	437% (5.1,7%)	733% (* ,19%)

Key

mROI

(Freq, Reach %)

- > 0% mROI
- 25%-0% mROI
- <-25% mROI

Note: All mROI values include long term factor applied for carryover except Copay

*NPP tactics had a similar number of touches per reached HCP and were analyzed as a binary variable; Non-personal promotion (NPP) captures Email and Direct Mail

Annual reach and frequency are based on Apr'11 – Mar'12

2012 – 2013 Planning



Development of benchmarks for upcoming tactics and adjustments to historical responses require input from the team

Retail Brands – Expected Tactics for Optimizer Tool

Product	Details	Samples	Copay	Journal	Speaker	Direct Mail	Rep Triggered Letters	Branded Website	SEO/ SEM	Email	Tele-detailing	Banner Ads	Conferences	Webcast/ Smartphone Apps
Lidoderm	Measured via Regression	Measured via Regression	Measured via Regression	Measured via Regression	Historically executed; not measureable via Regression	Measured via Regression	Measured via Regression	Measured via Regression	Future activity	Measured via Regression	Historically executed; not measureable via Regression	Measured via Regression	Future activity	Future activity
OPANA ER	Measured via Regression	Not a part of future brand plans	Measured via Regression	Measured via Regression	Measured via Regression	Measured via Regression	Measured via Regression	Measured via Regression	Future activity	Measured via Regression	Not a part of future brand plans	Measured via Regression	Not a part of future brand plans	Not a part of future brand plans
Frova	Measured via Regression	Measured via Regression	Measured via Regression	Not a part of future brand plans	Not a part of future brand plans	Measured via Regression	Measured via Regression	Measured via Regression	Future activity	Measured via Regression	Not a part of future brand plans	Not a part of future brand plans	Not a part of future brand plans	Not a part of future brand plans
Voltaren Gel	Measured via Regression	Measured via Regression	Measured via Regression	Not a part of future brand plans	Not a part of future brand plans	Measured via Regression	Measured via Regression	Measured via Regression	Future activity	Measured via Regression	Not a part of future brand plans	Not a part of future brand plans	Not a part of future brand plans	Not a part of future brand plans

Measured via Regression
Historically executed; not measureable via Regression
Future activity
Not a part of future brand plans

- Any key events for the product/market in 2012-13?
- For channels used in the past :
 - Which ones will continue in a similar way vs changing their effectiveness / message significantly?
 - Which ones will need benchmarks for the future because past measurement was not possible?
- Are there any new channels under consideration for 2013 planning?

Agenda

- Project Objectives and Executive Summary
- UEO Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Pain Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Next Steps
- Appendix

Understanding brand plans is critical for benchmark development and scenario optimization in the coming weeks

Today's Meeting/ This week

Understand brand plans for 2013

Activities

- Understand forward looking plan for new promotional tactics and changes to existing tactics
- Finalize input assumptions

Meetings and Deliverables

- Follow up meetings with brand teams to finalize the assumptions for benchmarking

This week

Preliminary scenario for 2013

Activities

- Finalize benchmarks for future promotional channels
- Make adjustments to historical response models
- Run optimal scenario with these future assumptions

Meetings and Deliverables

- Benchmarks
- Optimal scenario results

July 31th

Tool configuration and Training

Activities

- Configure tool
- Develop training materials
- Conduct training session for potential users

Meetings and Deliverables

- Training session
- Optimizer tool

August 14th

Review final decisions

Activities

- Endo to review final decisions with management
- Endo to communicate final decisions to Finance

Final submission due to Finance on August 27th

Next Steps

- Set up meetings with brand leads to understand vision and plans for 2013
- Incorporate feedback from brand teams to set up optimization scenarios
- Identify areas where benchmarks and prospective decisions are needed
- Begin configuration of software tools

Agenda

- Project Objectives and Executive Summary
- UEO Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Pain Brands
 - Historical ROI and Marginal ROI Analysis
 - Forward looking tactics review
- Next Steps
- Appendix

Financials and spends (1 of 3)

2011 Fixed, Variable and Total Cost by Product

Product	Tactic	2011 Fixed Cost	2011 Variable Cost	2011 Total Cost
LIDODERM	Detailing	\$513,136	\$33,193,352	\$33,706,488
	NPP (Email, Direct mail)	\$0	\$2,221,537	\$2,221,537
	Sampling	\$0	\$2,483,502	\$2,483,502
	Website	\$233,500	\$380,101	\$613,601
	Journal	\$68,200	\$1,108,968	\$1,177,168
	Copay	\$87,821	\$457,860	\$545,681
OPANA ER	Detailing	\$1,580,000	\$30,363,615	\$31,943,615
	Copay	\$334,617	\$868,200	\$1,202,817
	Speaker	\$1,042,777	\$1,920,000	\$2,962,777
	NPP (Email, Direct mail, Tele-detail)	\$25,175	\$722,662	\$747,837
	Website	\$0	\$2,000,000	\$2,000,000
	Journal	\$0	\$1,295,000	\$1,295,000
VOLTAREN GEL	Detailing	\$743,358	\$33,925,868	\$34,669,226
	Sampling	\$0	\$3,839,800	\$3,839,800
	Copay	\$126,000	\$978,000	\$1,104,000
	NPP (Email, Direct mail, Tele-detail)	\$300,545	\$2,243,660	\$2,544,205

Product	Cost per Copay Redemption	Total Redemptions	Cost per PDE	Total PDEs
LIDODERM	\$30.00	15,262	\$80.57	411,966
OPANA ER	\$25.00	34,728	\$82.26	369,104
VOLTAREN GEL	\$30.00	32,600	\$87.63	387,147

Financials and spends (2 of 3)

2011 Fixed, Variable and Total Cost by Product

Product	Tactic	2011 Fixed Cost	2011 Variable Cost	2011 Total Cost
FROVA	Detailing	\$382,497	\$6,604,463	\$6,986,960
	Sampling	\$0	\$455,748	\$455,748
	Copay	\$42,560	\$663,250	\$705,810
	NPP (Email, Direct mail)	\$213,960	\$781,215	\$995,175
	Website	\$99,100	\$278,000	\$377,100
FORTESTA GEL	Detailing	\$1,637,726	\$28,835,566	\$30,473,293
	Copay	\$213,305	\$704,850	\$918,155
	Speaker	\$0	\$407,608	\$407,608
	NPP (Email, Direct mail, Tele-detail)	\$0	\$2,775,263	\$2,775,263
	Journal	\$0	\$415,392	\$415,392

Product	Cost per Copay Redemption	2011 Redemptions	Cost per PDE	2011 PDEs
FROVA	\$35.00	18,950	\$91.23	72,398
FORTESTA GEL	\$25.00	28,194	\$82.51	349,483

Financials and spends (3 of 3)

2011 Fixed, Variable and Total Cost by Product

Product	Tactic	2011 Fixed Cost	2011 Variable Cost	2011 Total Cost
SUPPRELIN LA	Detailing	\$7,905,000	N/A	\$7,905,000
	Branded Website	\$164,750	N/A	\$164,750
	Speaker Programs	\$178,226	\$272,307	\$450,534
	CoPay Cards	\$504,068	\$23,231	\$527,299
VANTAS	Detailing	\$3,159,049	N/A	\$3,159,049
	Branded Website	\$399,636	N/A	\$399,636
	Speaker Program	\$45,668	\$45,024	\$90,692
VALSTAR	Detailing	\$4,650,437	N/A	\$4,650,437
	Branded Website	\$173,915	N/A	\$173,915
	Journal Advertising	\$94,926	\$9,074	\$104,000
	Speaker Program	\$609,847	\$97,012	\$706,859
	Webcast	\$227,816	\$35,040	\$262,856

Product	Cost per Copay Redemption (avg)	Total Redemptions	Cost per Detail	Total Details
SUPPRELIN LA	\$2,389	114	\$760.68	10,392
VANTAS	N/A	N/A	\$47.46	66,559
VALSTAR	N/A	N/A	\$64.08	72,576

Regression Methodology

Product Sales

Modeling is performed and recommendations are developed using physician level data

Prior Sales	Detailing	Sampling	Copay	NPP*	Websites	Journals	Speaker
The model includes carryover to capture MD behavior, patient carryover	The model explicitly accounts for the impact of detailing (using primary detail equivalents); a diminishing returns function has been used	Model accounts for both diminishing returns and cannibalization of sampling efforts	Effect of Copay redemption has been included in the models	The model accounts for the impact of direct mailers, emails and Tele calls to the physicians	Effects of geography level activity have been mapped to physicians	Effects of geography level activity have been mapped to physicians	Effects have been included for participation in individual programs (e.g. office-based and venue/panel-based speaker programs)

Model Time Frame

- October 2011 – March 2012 (6 Months)**

Segmentation

- PHN Value Decile: Deciles for PHN eligible physicians***
- Market Quintile: Quintiles based on recent 6 months of market sales
- Specialty: Physician specialties bucketed into PCP s and Specialists
- NPPA flag: Flag equal to 1 for nurse practitioners and physician assistants
- Share Segment (Spreaders/Leaners): Leaners have more than 2x avg. national share ****

*NPP refers to Non personal promotions, which includes Email, Direct mail and Tele Detailing

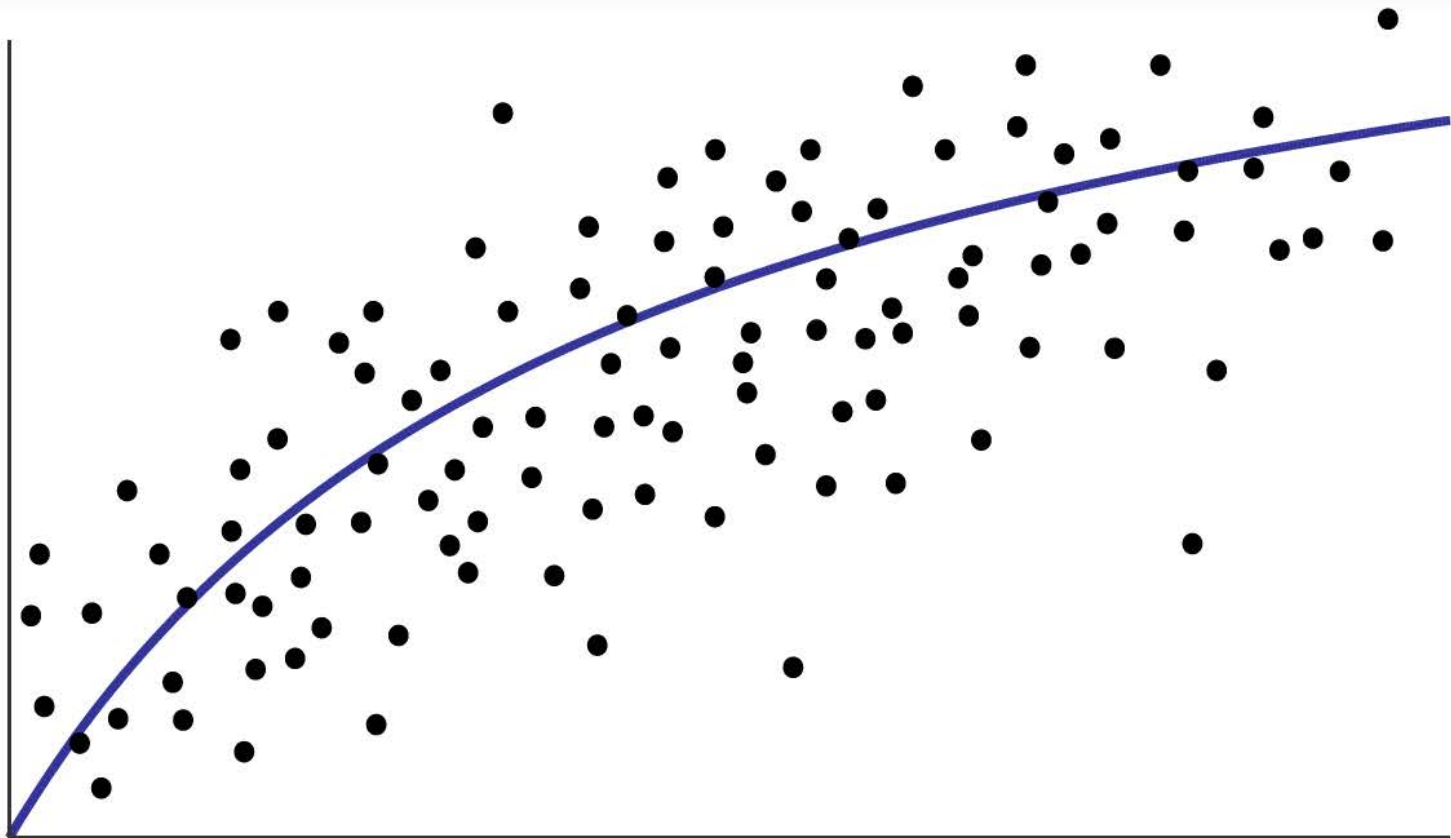
**Model Timeframe for OPANA ER and VOLTAREN GEL is from Jul'11 – Dec'11

***PHN Deciles are for LIDODERM

****Share Segment is for OPANA ER and FROVA

Measuring Sales Response

Sales Response vs. Promotional Effort



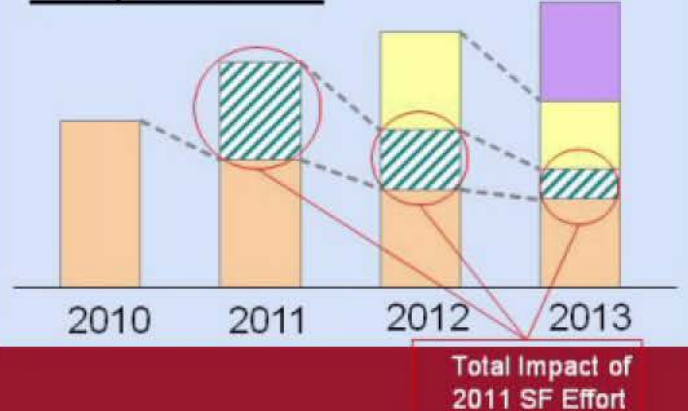
Statistical methods are used to estimate the relationship between prior activity and incremental sales

Promotional effort in the current time period has a long term impact

Affectable Sales



Carryover Sales



- **Affectable sales represents the sales that the sales force drives in a given year.**
 - Not all sales driven by SF.
 - Other promotion (e.g., marketing programs, etc.) also drives sales.
- **(Marginal) Carryover sales represents the sales that occur due to SF promotion in previous years.**
 - Prescribing/usage persistency.
 - Patient persistency.
- *Note: When evaluating detailing, it is common to look at the long-term (3-yr) impact, given the common observation of “high” prescriber persistency, i.e., carryover.*

Calculating mROI

Profitability of Promotion Effort

Illustration



5 mROI (Incremental return at a given activity level)

\$ 50 Profit

\$ 100 Unit activity cost

$mROI = 50/100 = 50\%$

Marginal Return on Investment (mROI) should be calculated in a consistent manner to avoid confusion; we show mROI as a %

ROI of 0% means breakeven on the entire investment

$$\text{ROI} := \frac{(\text{Program Revenue} - \text{COGs} - \text{Program Cost})}{\text{Program Cost}}$$

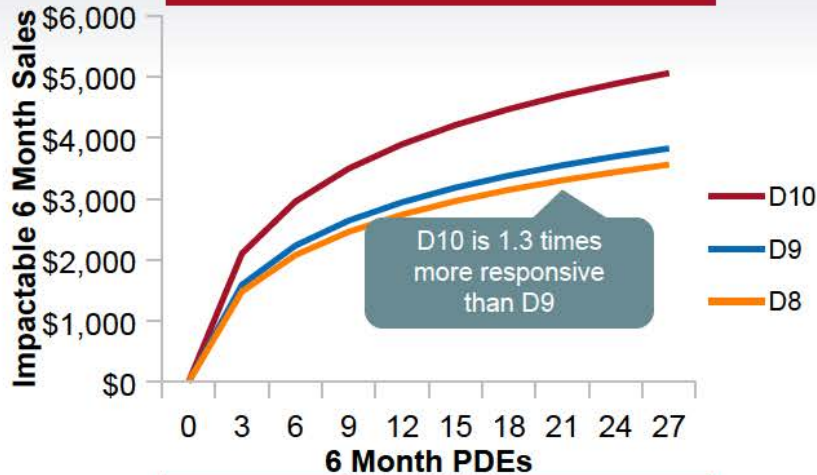
$$\text{mROI} := \frac{(\text{Inc. Program Revenue} - \text{COGs} - \text{Inc. Program Cost})}{\text{Inc. Program Cost}}$$

mROI of 0% means breakeven on the last investment

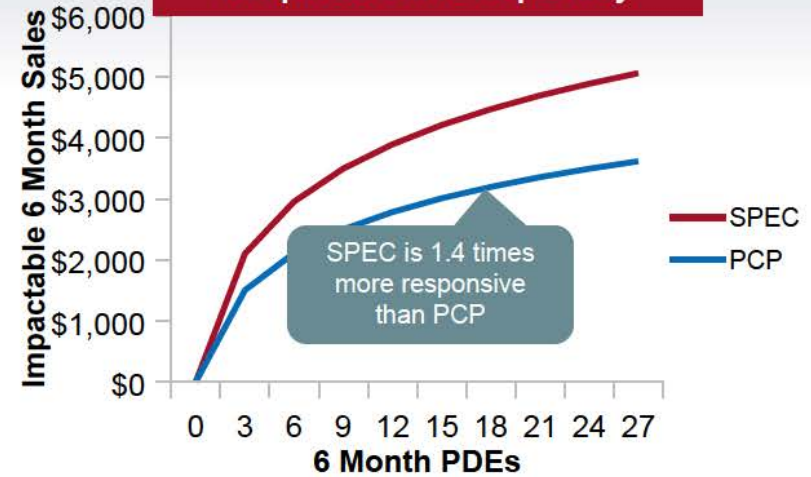
By definition, mROI is a future looking concept. We cannot easily determine what the “incremental” activity was among multiple activities

Detailing responsiveness varies by physician segments

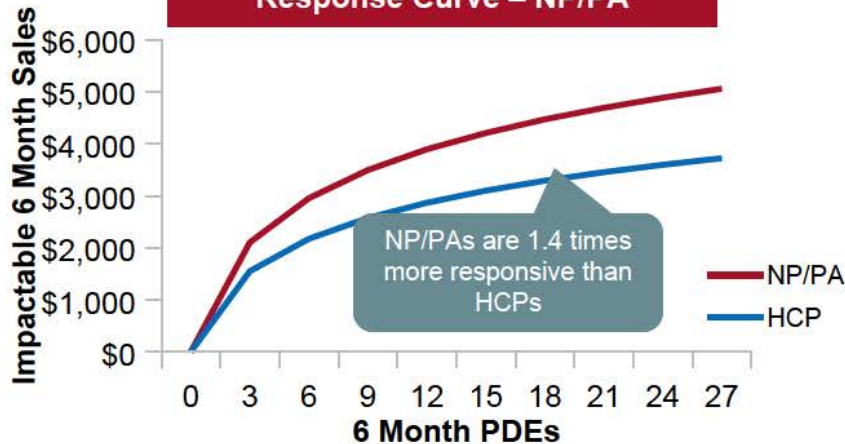
Response Curve - Deciles



Response Curve - Specialty



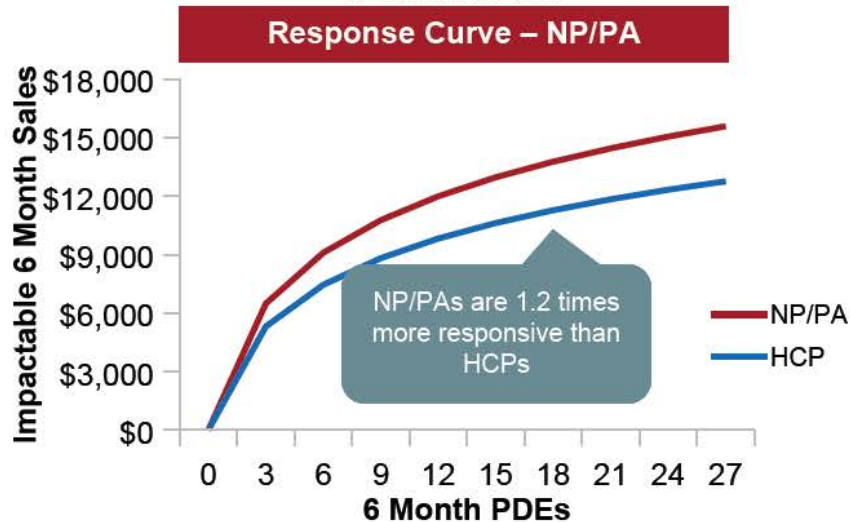
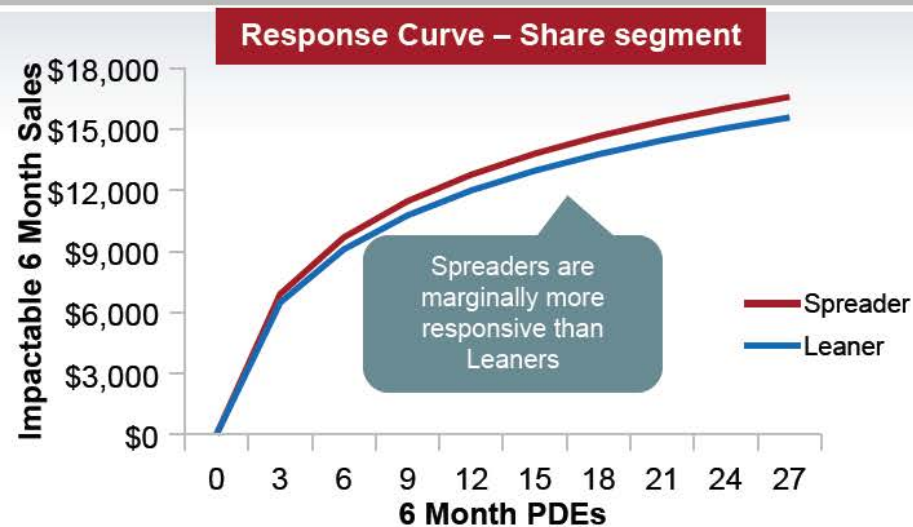
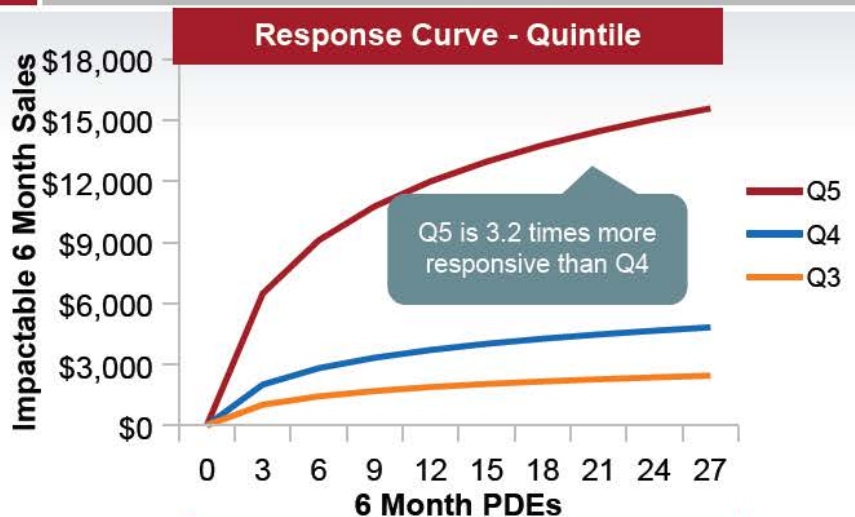
Response Curve - NP/PA



- ✓ Detailing response is ordinal by PHN Deciles
- ✓ Specialists are more responsive than PCPs
- ✓ NP/PAs are more responsive than HCPs

Note: 1. Response curves by decile are based on NP/PA specialists
 2. Response curves by specialty highlight decile 10 NP/PAs
 3. Response curves for NP/PA are based on decile 10 specialists

Detailing responsiveness varies by physician segments



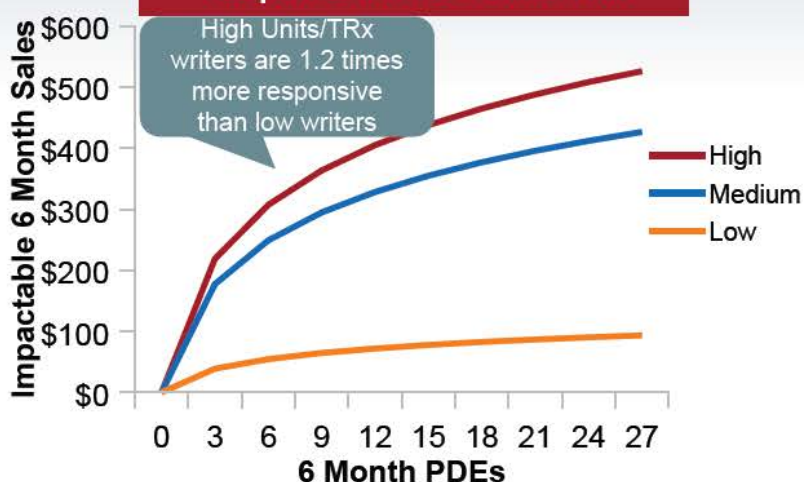
- ✓ Detailing response is ordinal by quintile
- ✓ Spreaders are marginally more responsive than Leanners
- ✓ NP/PAs are more responsive than HCPs

Note: 1. Response curves by quintile are based on NP/PA specialists
 2. Response curves by specialty highlight quintile 5 NP/PAs
 3. Response curves for NP/PA are based on quintile 5 specialists

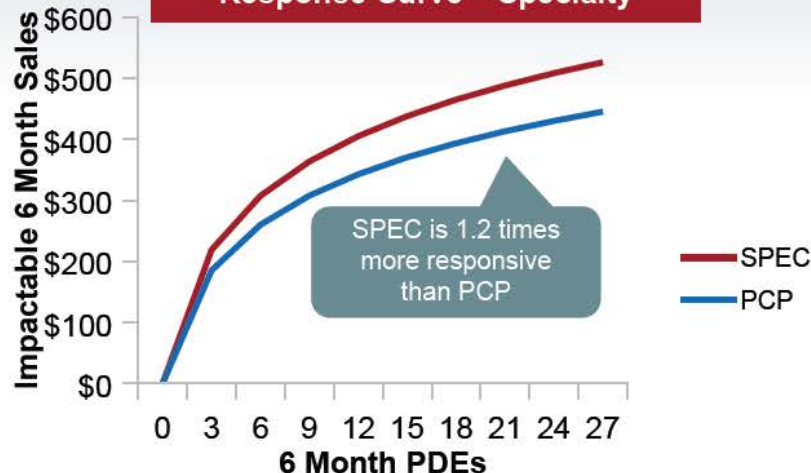


Detailing responsiveness varies by physician segments

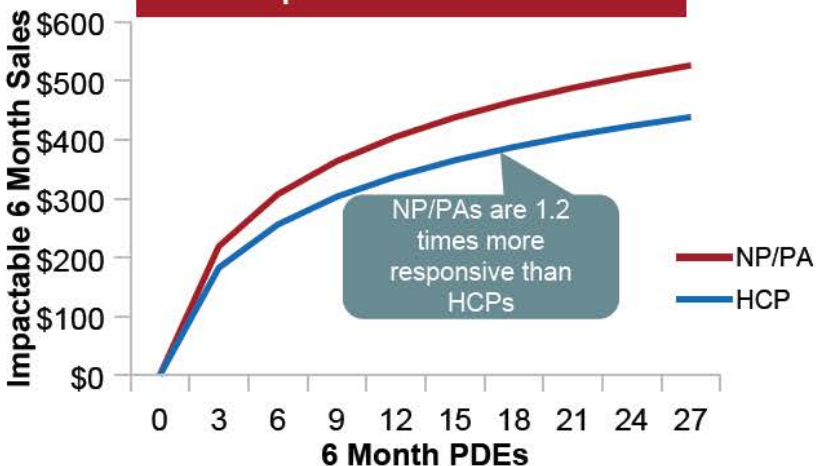
Response Curve – Units/TRx



Response Curve – Specialty



Response Curve – NP/PA

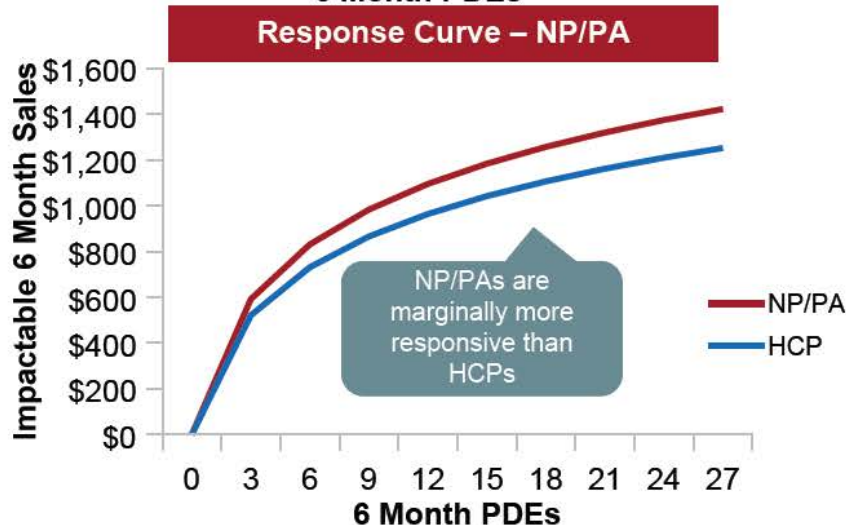
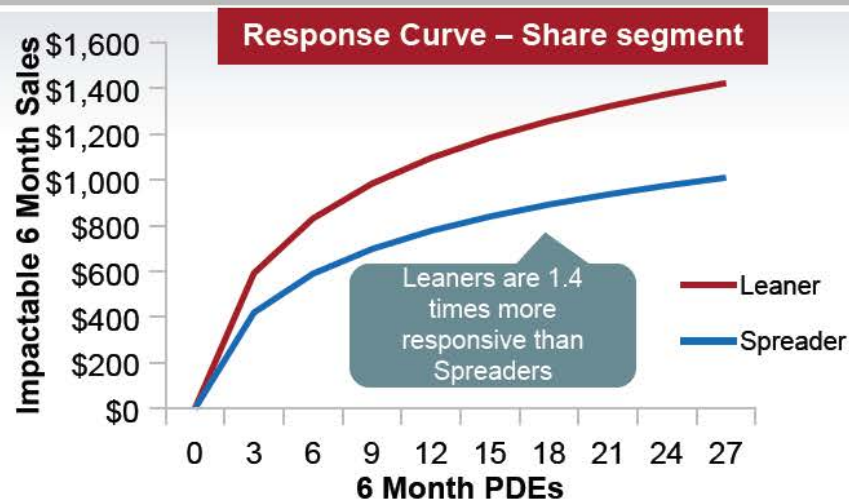
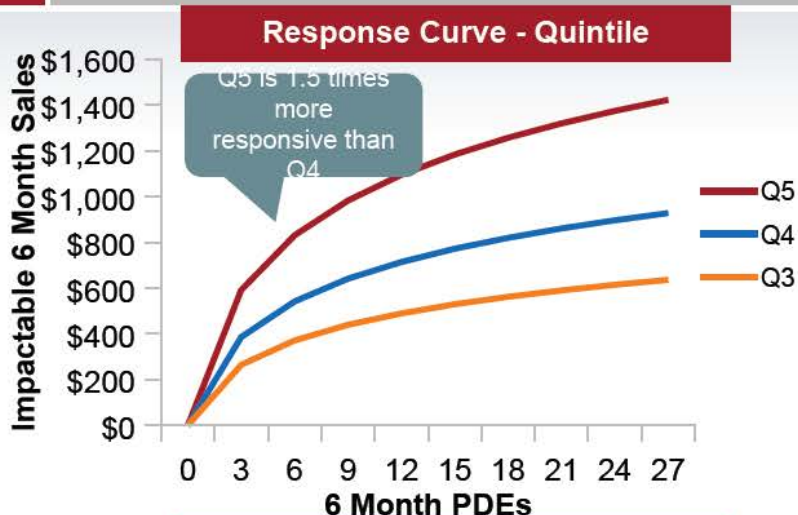


- ✓ Detailing response is higher for physician writing higher units/Trx
- ✓ Specialists are more responsive than PCPs
- ✓ NP/PAs are more responsive than HCPs

Note: 1. Response curves by quintile are based on NP/PA specialists
 2. Response curves by specialty highlight quintile 5 NP/PAs
 3. Response curves for NP/PA are based on quintile 5 specialists



Detailing responsiveness varies by physician segment

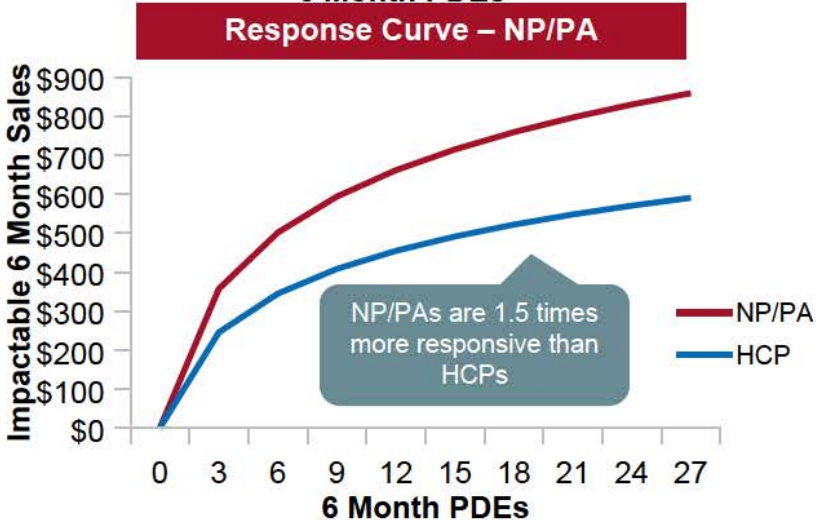
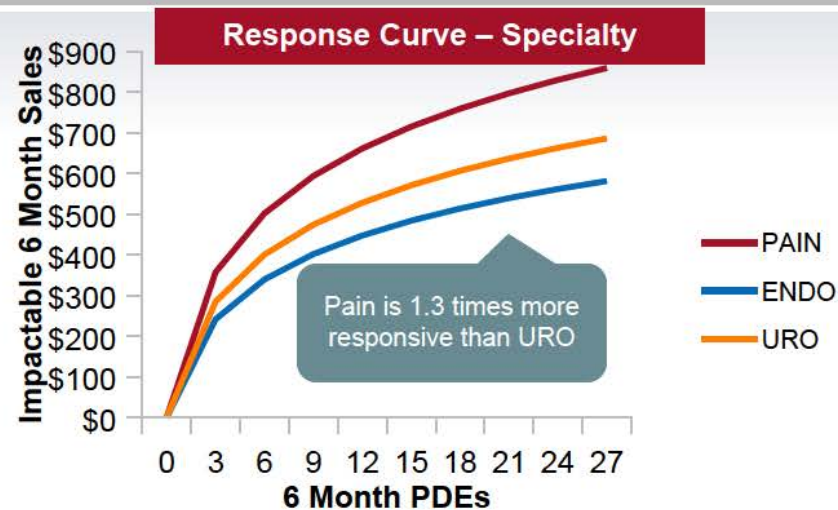
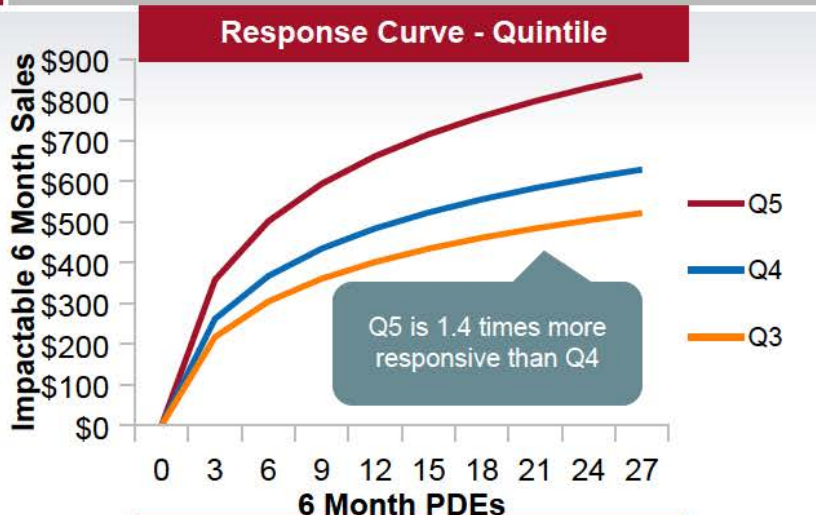


- ✓ Detailing response is ordinal by quintile
- ✓ Leaners are more responsive than Spreaders
- ✓ NP/PAs are marginally more responsive than HCPs

Note: 1. Response curves by quintile are based on NP/PA specialists
 2. Response curves by specialty highlight quintile 5 NP/PAs
 3. Response curves for NP/PA are based on quintile 5 specialists



Detailing responsiveness varies by physician segments



- ✓ Detailing response is ordinal by quintiles
- ✓ Specialists are more responsive than PCPs
- ✓ NP/PAs are more responsive than HCPs

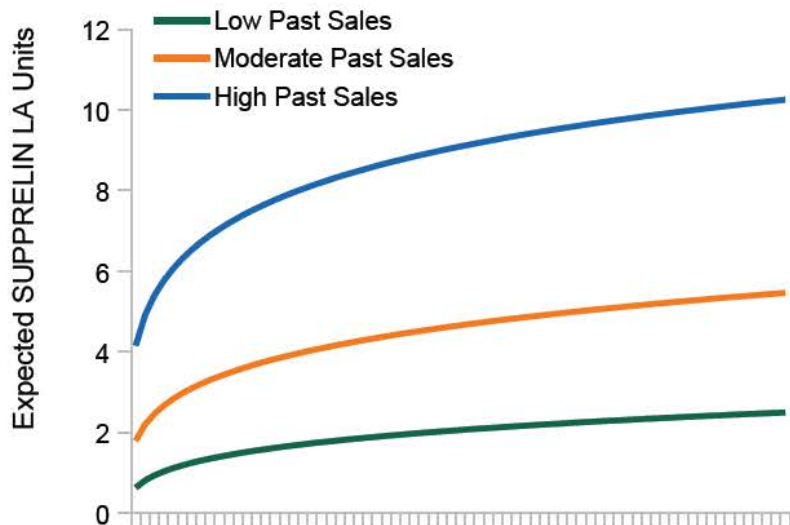
Note: 1. Response curves by quintile are based on NP/PA specialists
 2. Response curves by specialty highlight quintile 5 NP/PAs
 3. Response curves for NP/PA are based on quintile 5 specialists



The impact of SUPPRELIN LA detailing is strongest for initial details

Pediatric Endo Detailing Impact for SUPPRELIN LA Historical Writers (Absent other modeled promotional tactics)

Impact of Details on Expected Current Units (Units / Acct)

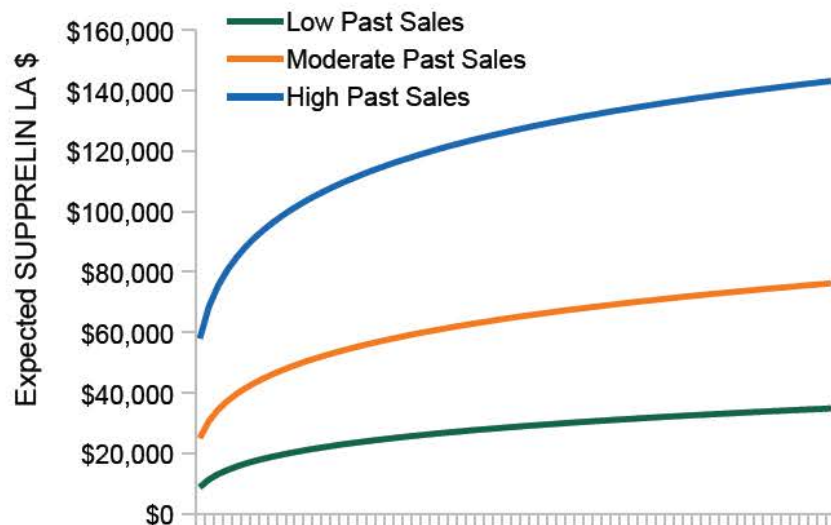


Calls in Current 6 Months

Expected Current Units =

$$\begin{aligned}
 & [P(\text{Sales} = \text{"Low"}) \times \text{Avg "Low" Sales}] + \\
 & [P(\text{Sales} = \text{"Moderate"}) \times \text{Avg "Moderate" Sales}] + \\
 & [P(\text{Sales} = \text{"High"}) \times \text{Avg "High" Sales}]
 \end{aligned}$$

Impact of Details on Expected Current Net Sales / Account (\$ / Acct)



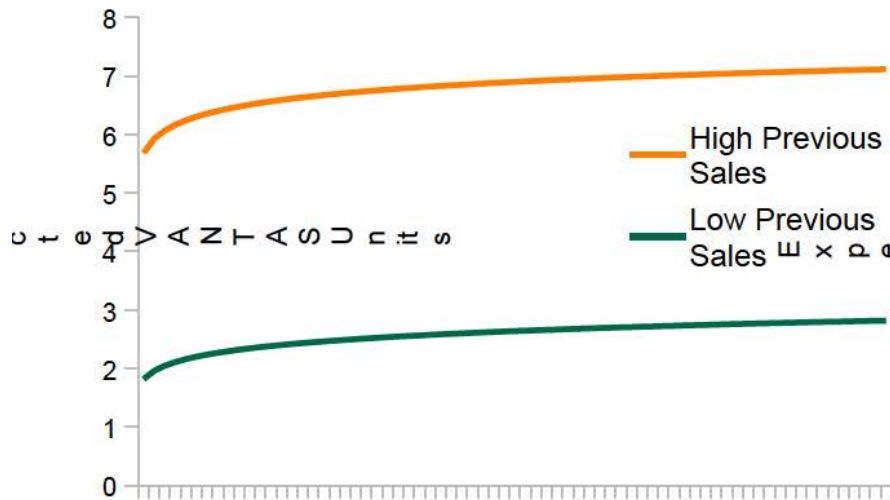
Calls in Current 6 Months



The response curve for VANTAS detailing is relatively flat

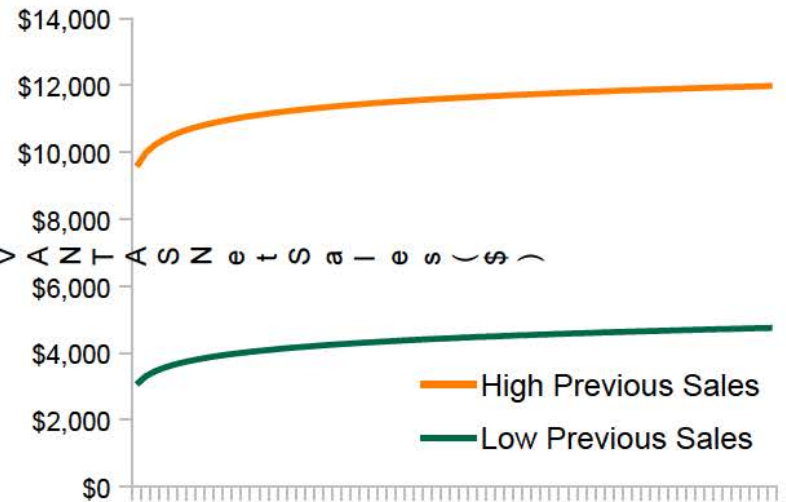
Detailing Impact for VANTAS Historical Writers (Absent other modeled promotional tactics)

**Impact of Detailing on Expected Current Units
(Units / Account)**



Calls in Current 6 Months

**Impact of Detailing on Expected Current 6
Month Total Net Sales (\$/Account)**



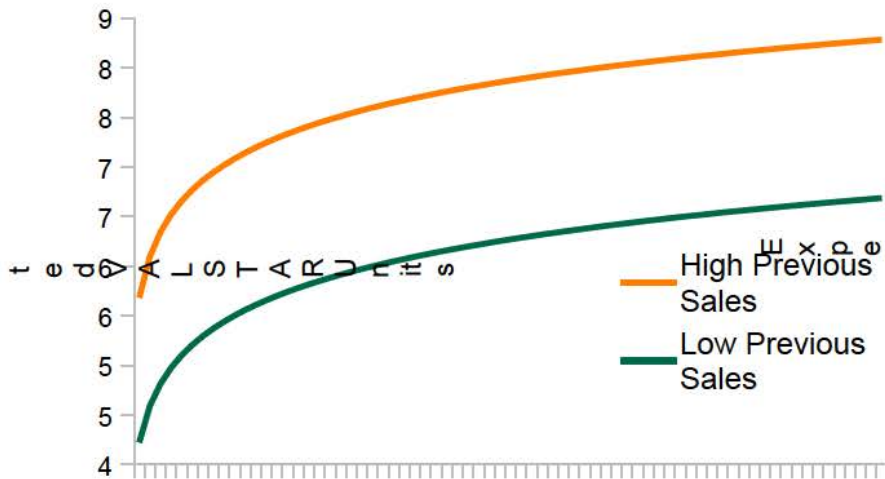
Calls in Current 6 Months

Note: Dollarized response curves apply net sales / unit and number of accounts of each type

VALSTAR is relatively responsive to detailing

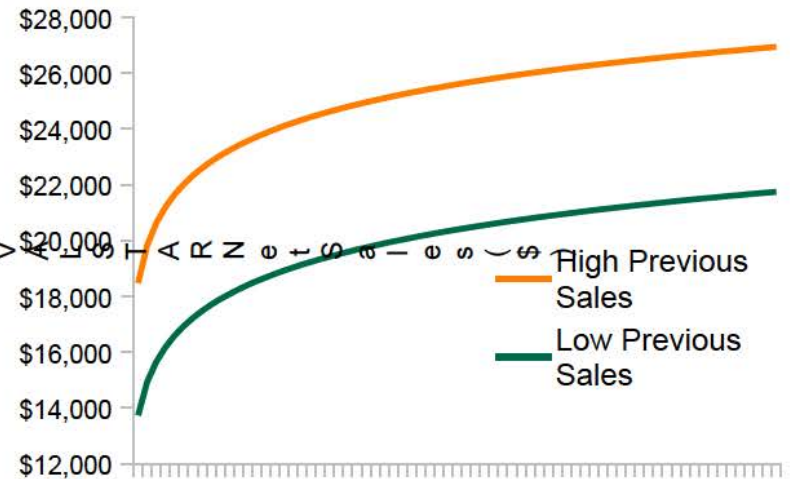
Detailing Impact for VALSTAR Historical Writers (Absent other modeled promotional tactics)

**Impact of Detailing on Expected Current Units
 (Units / Account)**



Calls in Current 6 Months

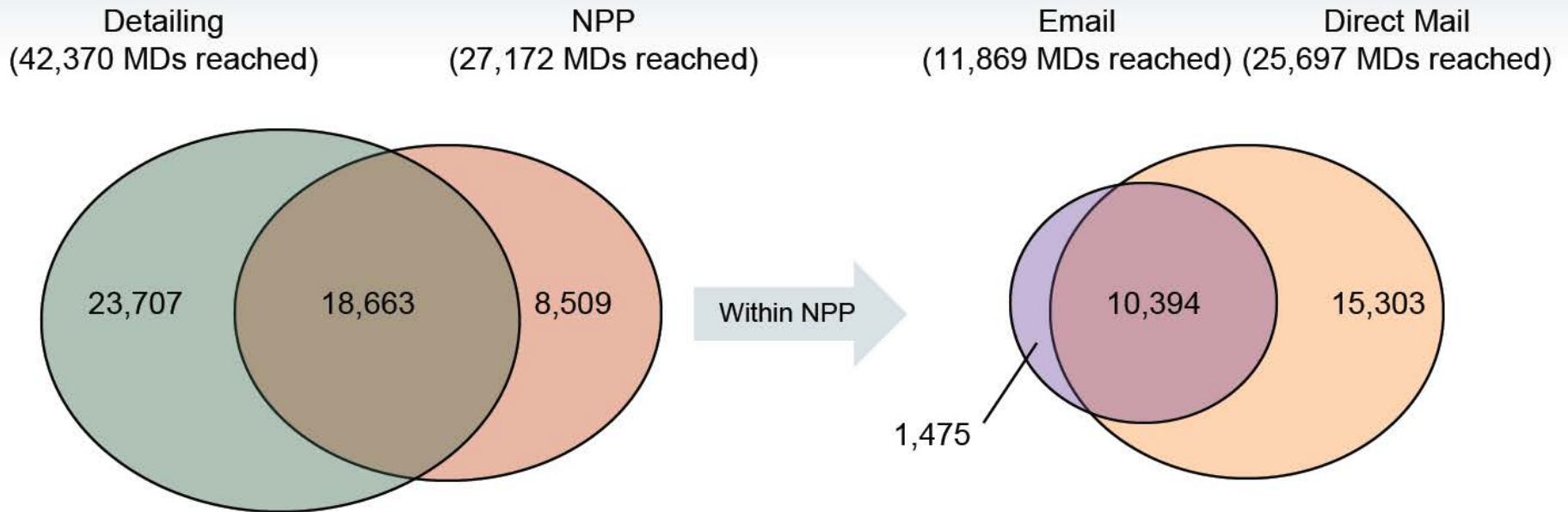
**Impact of Detailing on Expected Current 6
 Month Net Sales (\$/account)**



Calls in Current 6 Months to Each Account

Note: Dollarized response curves apply net sales / unit and number of accounts of each type

All NPP tactics have high degree of overlap among themselves and with detailing



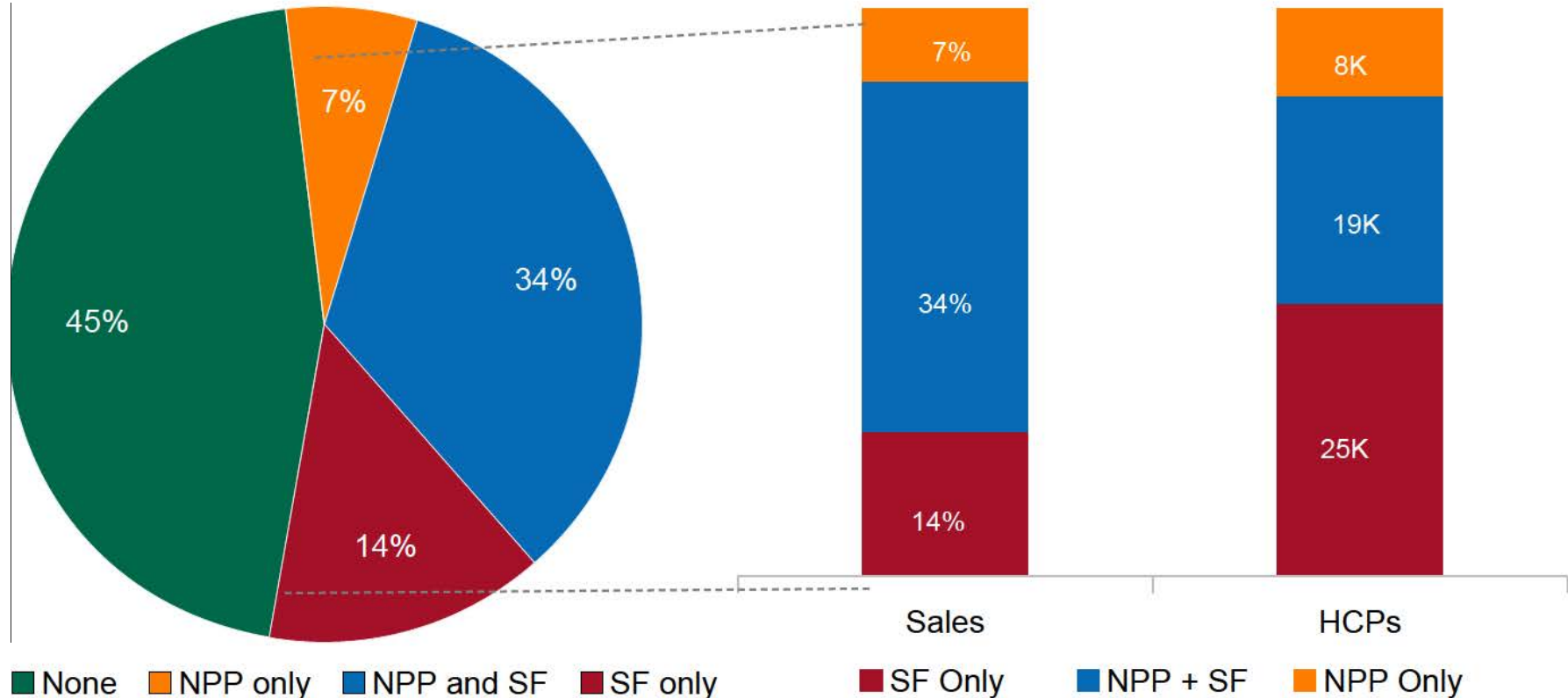
- ✓ Approximately 88% of physicians receiving emails also received direct mail
- ✓ Approximately 44% of physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics had a high degree of overlap and little variation in frequency; the most effective models considered NPP participation as a single flag

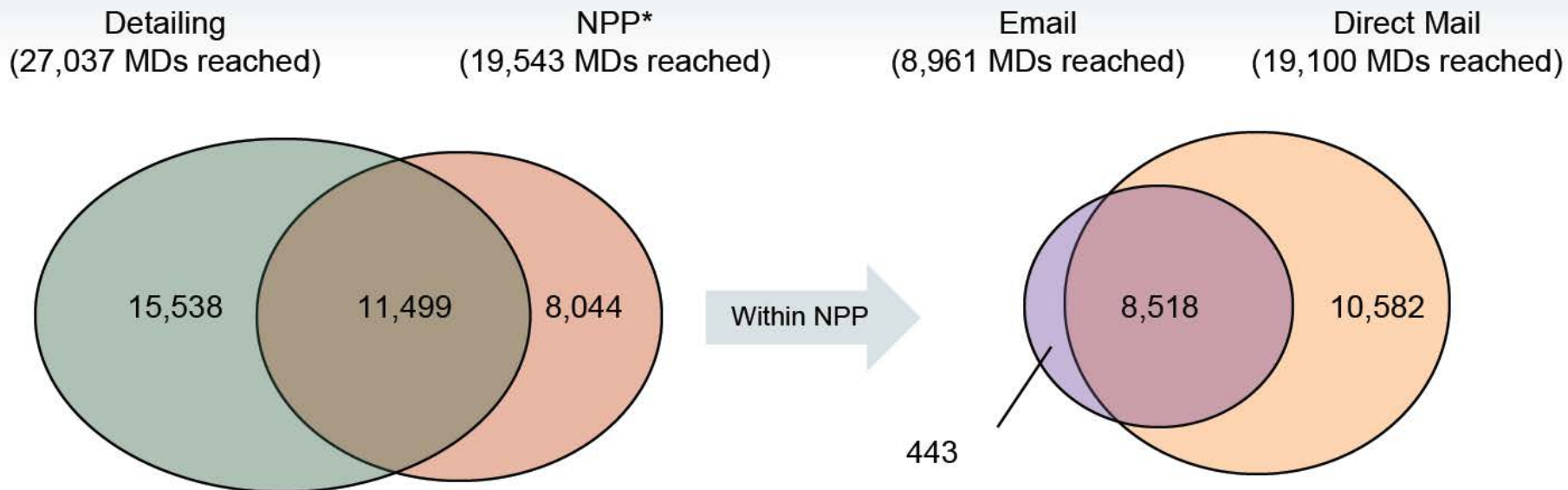
Of the LIDODERM sales from MDs receiving promotion, most were from MDs that received both detailing and NPP

(A) Distribution of sales by SF and NPP reach

(B) Distribution of sales and HCPs by SF and NPP reach



All NPP tactics have a high degree of overlap among themselves and with detailing



- ✓ Approximately 95% of physicians receiving emails also received direct mail
- ✓ Approximately 43% physicians targeted using non-personal promotions (email, direct mail) also received a detail.

NPP tactics had a high degree of overlap and little variation in frequency; the most effective models considered NPP participation as a single flag

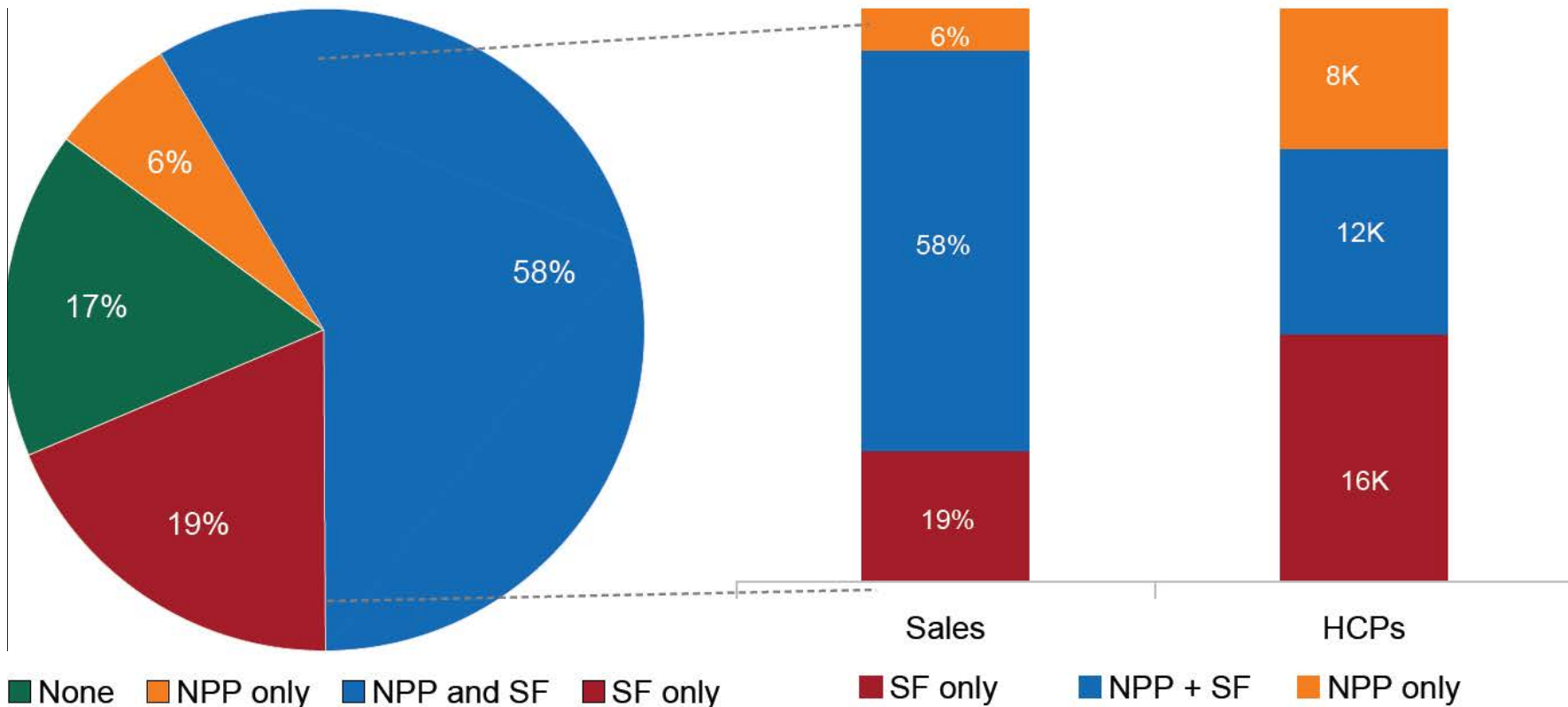
* Tele details reached ~3K physicians and have been excluded from Venn diagram. See appendix for details



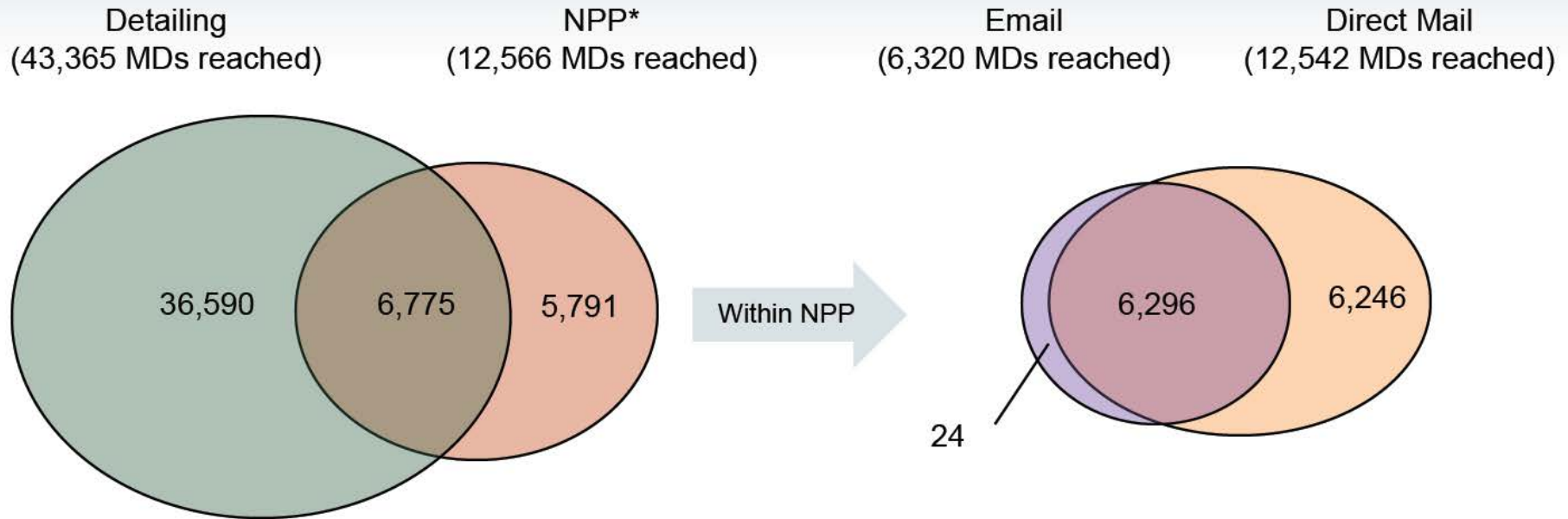
Most OPANA ER sales came from sales force targets

(A) Distribution of sales by SF and NPP reach

(B) Distribution of sales and HCPs by SF and NPP reach



NPP tactics reached relatively few MDs compared with detailing, and included significant overlaps



- ✓ Almost all physicians receiving emails also receive direct mail
- ✓ Approximately 16% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics had a high degree of overlap and little variation in frequency; the most effective models considered NPP participation as a single flag

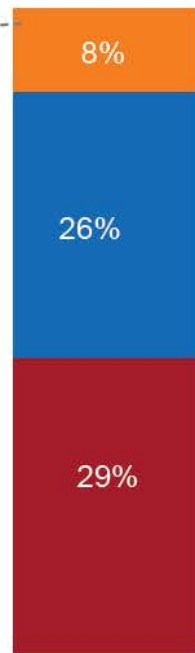
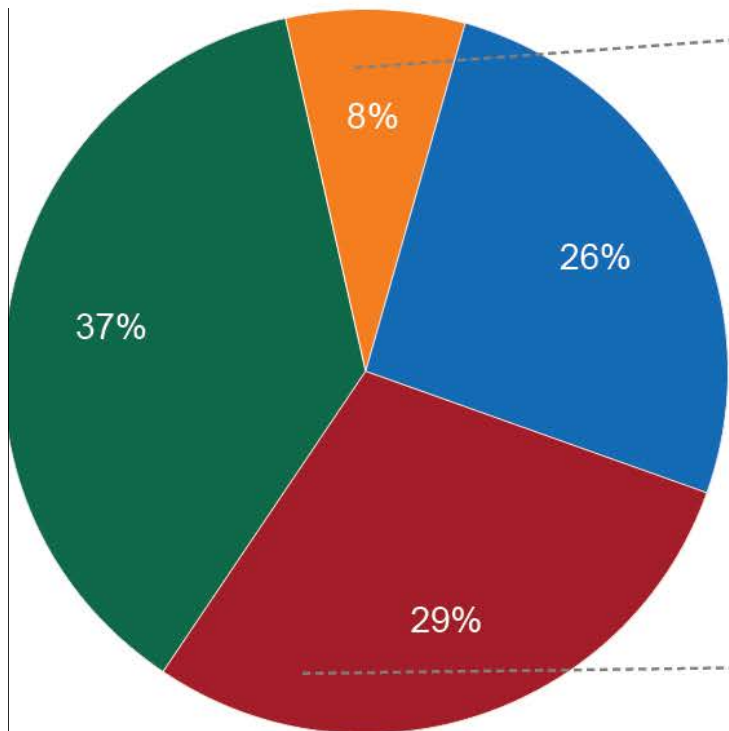
* Tele details reached ~3K physicians and have been excluded from Venn diagram. See appendix for details



Only a small portion of sales came from MDs receiving any NPP effort

(A) Distribution of sales by SF and NPP reach

(B) Distribution of sales and HCPs by SF and NPP reach

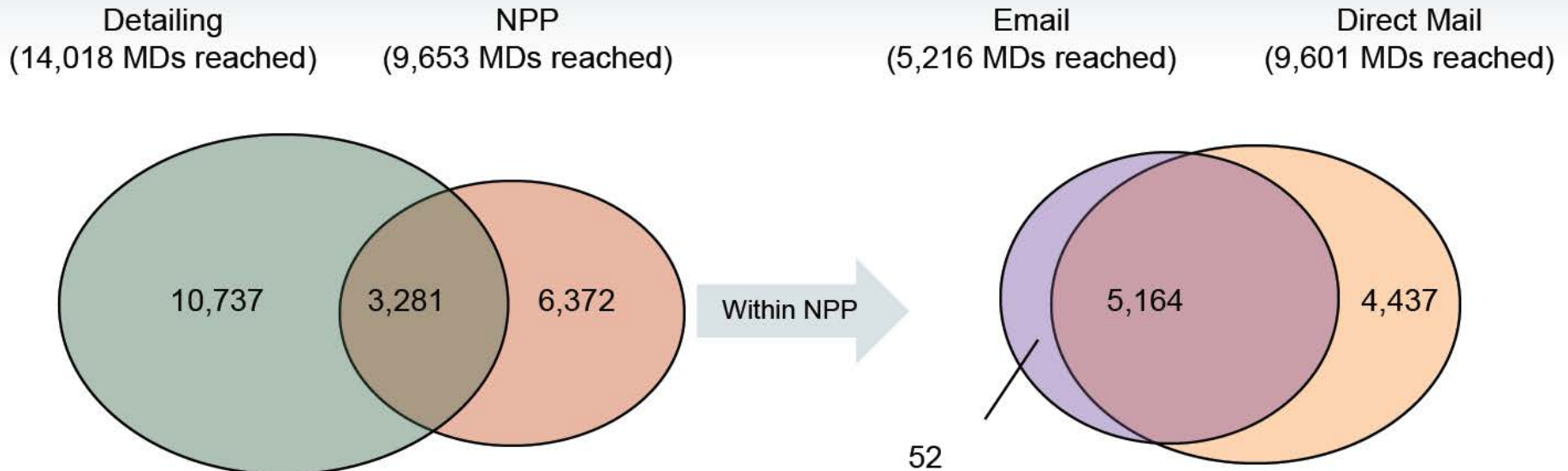


None NPP only NPP and SF SF only

SF only NPP + SF NPP only



All NPP tactics have high degree of overlap among themselves and with detailing



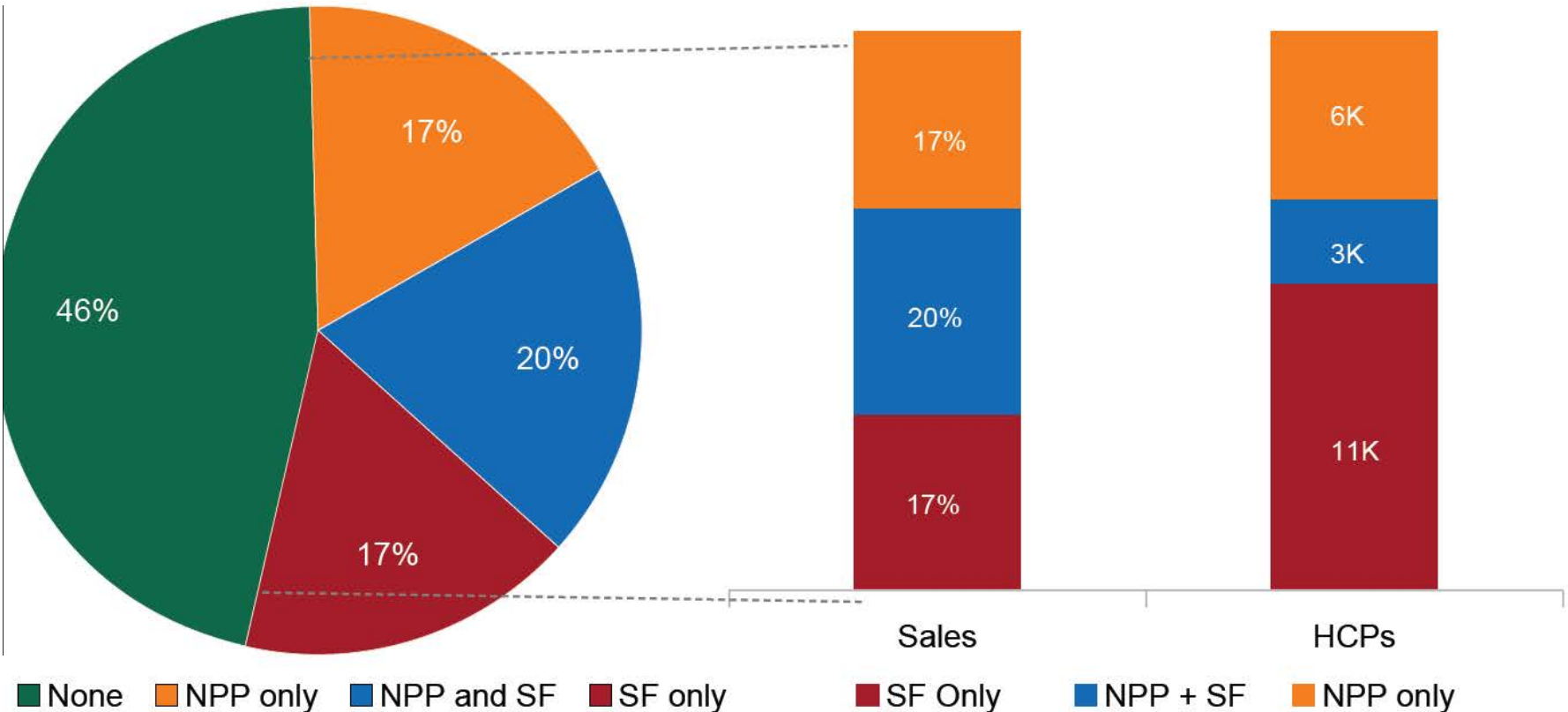
- ✓ Almost all physicians receiving emails also receive direct mail
- ✓ Approximately 23% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics had a high degree of overlap and little variation in frequency; the most effective models considered NPP participation as a single flag



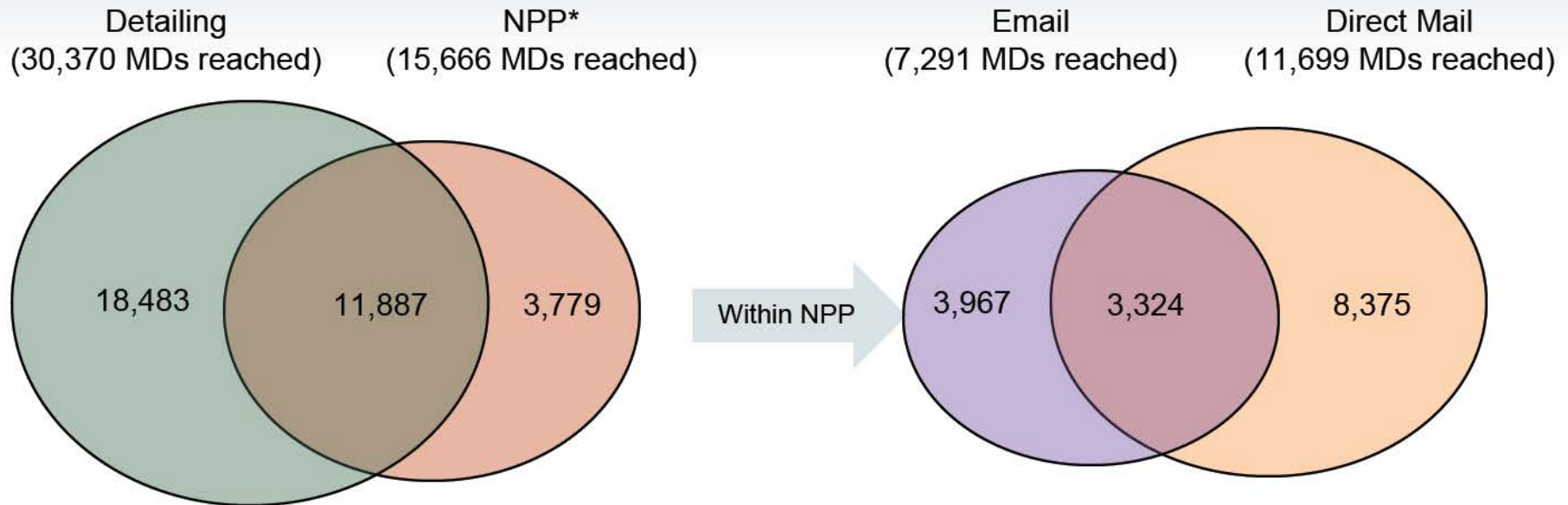
For FROVA, a set of ~6,000 NPP-only MDs accounted for a significant portion of sales

(A) Distribution of sales by SF and NPP reach (B) Distribution of sales and HCPs by SF and NPP reach





All NPP tactics have high degree of overlap among themselves and with detailing



- ✓ Approximately 46% of all physicians receiving emails also receive direct mail.
- ✓ Approximately 39% targeted physicians using non-personal promotions (email, direct mail) also received a detail

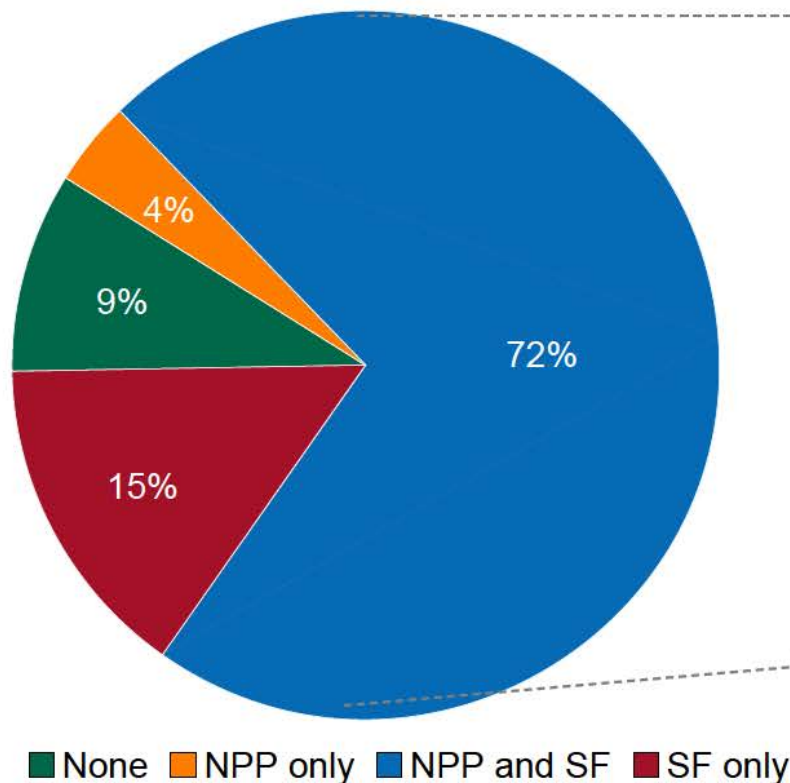
NPP tactics had a high degree of overlap and little variation in frequency; the most effective models considered NPP participation as a single flag

* Tele details reached ~2K physicians and have been excluded from Venn diagram. See appendix for details

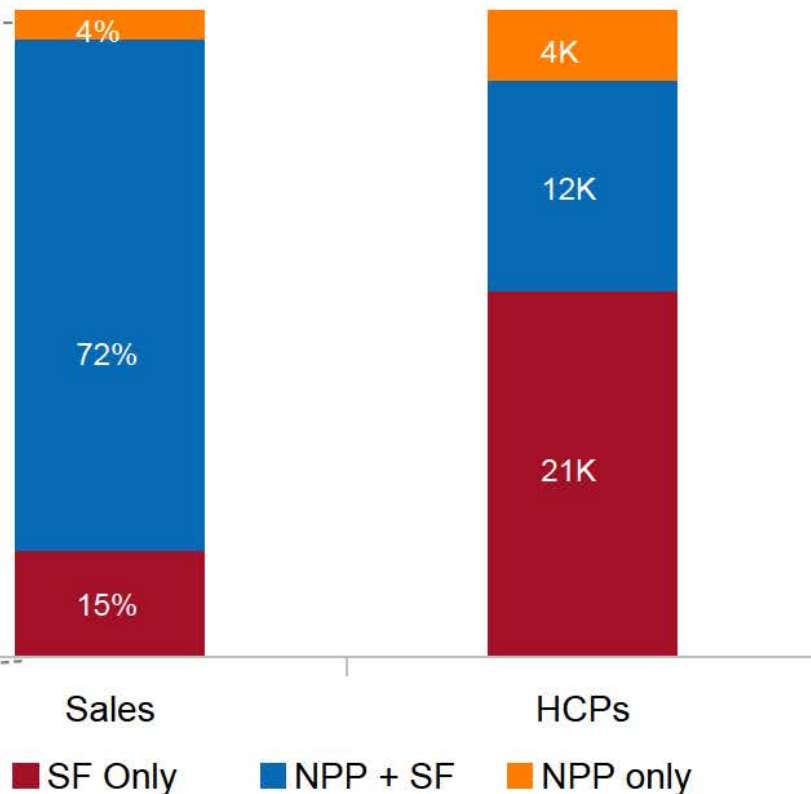


Sales force detailing and non-personal promotional tactics reach the HCPs responsible for nearly all FORTESTA sales

(A) Distribution of sales by SF and NPP reach



(B) Distribution of sales and HCPs by SF and NPP reach



All NPP tactics have high degree of overlap among themselves and with detailing

Tactic	# MDs	Email	Direct Mail	NPP
Email	11,869		10,394 (88%)	11,869
Direct Mail	25,697	10,394 (40%)		25,697
NPP	27,172	11,869	25,697	
Detailing	42,370	7,862	17,849	18,663 (44%)

- ✓ Approximately 88% physicians receiving emails also receive direct mail
- ✓ Approximately 44% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics have high degree of overlap and should be analyzed as a single term in regression



All NPP tactics have high degree of overlap among themselves and with detailing

Tactic	# MDs	Email	Direct Mail	Tele Detailing	NPP
Email	8,961		8,518 (95%)	720	8,961
Direct Mail	19,100	8,518 (45%)		1,355	19,100
Tele Detailing	2,764	720	1,355		1,434
NPP	19,543	8,961	19,100	1,434	
Detailing	27,037	5,206	11,160	1,792	11,499 (43%)

- ✓ Approximately 95% physicians receiving email also receive direct mails
- ✓ Approximately 43% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics have high degree of overlap and should be analyzed as a single term in regression

All NPP tactics have high degree of overlap among themselves and with detailing

Tactic	# MDs	Email	Direct Mail	Tele Detailing	NPP
Email	6,320		6,296 (99%)	1,084	6,320
Direct Mail	12,542	6,296 (50%)		2,372	12,542
Tele Detailing	3,232	1,084	2,372 (73%)		2,374
NPP	12,566	6,320	12,542	2,374	
Detailing	43,365	3,713	6,766	1,336	6,775 (16%)

- ✓ Almost all physicians receiving email also receive direct mails
- ✓ Approximately 16% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics have high degree of overlap and should be analyzed as a single term in regression



All NPP tactics have high degree of overlap among themselves and with detailing

Tactic	# MDs	Email	Direct Mail	NPP
Email	5,216		5,164 (99%)	5,216
Direct Mail	9,601	5,164 (54%)		9,601
NPP	9,653	5,216	9,601	
Detailing	14,018	2,060	3,264	3,281 (23%)

- ✓ Approximately 99% physicians receiving email also receive direct mails
- ✓ Approximately 23% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics have high degree of overlap and should be analyzed as a single term in regression



All NPP tactics have high degree of overlap among themselves and with detailing

Tactic	# MDs	Email	Direct Mail	Tele Detailing	NPP
Email	7,291		3,324 (46%)	1,336	7,291
Direct Mail	11,699	3,324		1,035	11,699
Tele Detailing	2,174	1,336	1,035		1,686
NPP	15,666	7,291	11,699	1,686	
Detailing	30,370	4,974	9,914	1,485	11,887 (39%)

- ✓ Approximately 46% of all physicians receiving emails also receive direct mail.
- ✓ Approximately 39% physicians targeted using non-personal promotions (email, direct mail) also received a detail

NPP tactics have high degree of overlap and should be analyzed as a single term in regression