

Bang for Benevolent Bucks: Using SEJ to Estimate Health Impact and ROI

Abby Colson

Recent and ongoing CDDEP projects

- RWJF: Evaluating the impact of a major public health foundation (2008-now)
- DCP3: Supplementing existing effectiveness literature in developing countries (2011-2012; may continue)
- CDC: Evaluating a public health surveillance network (2012)

RWJF Impact Evaluation

- Phase 1: Can SEJ be used for foundation impact evaluation?

2 of the foundation's programs in Pennsylvania

- Phase 2: Can SEJ be scaled up for retrospective evaluation?

A child health insurance program in 5 states

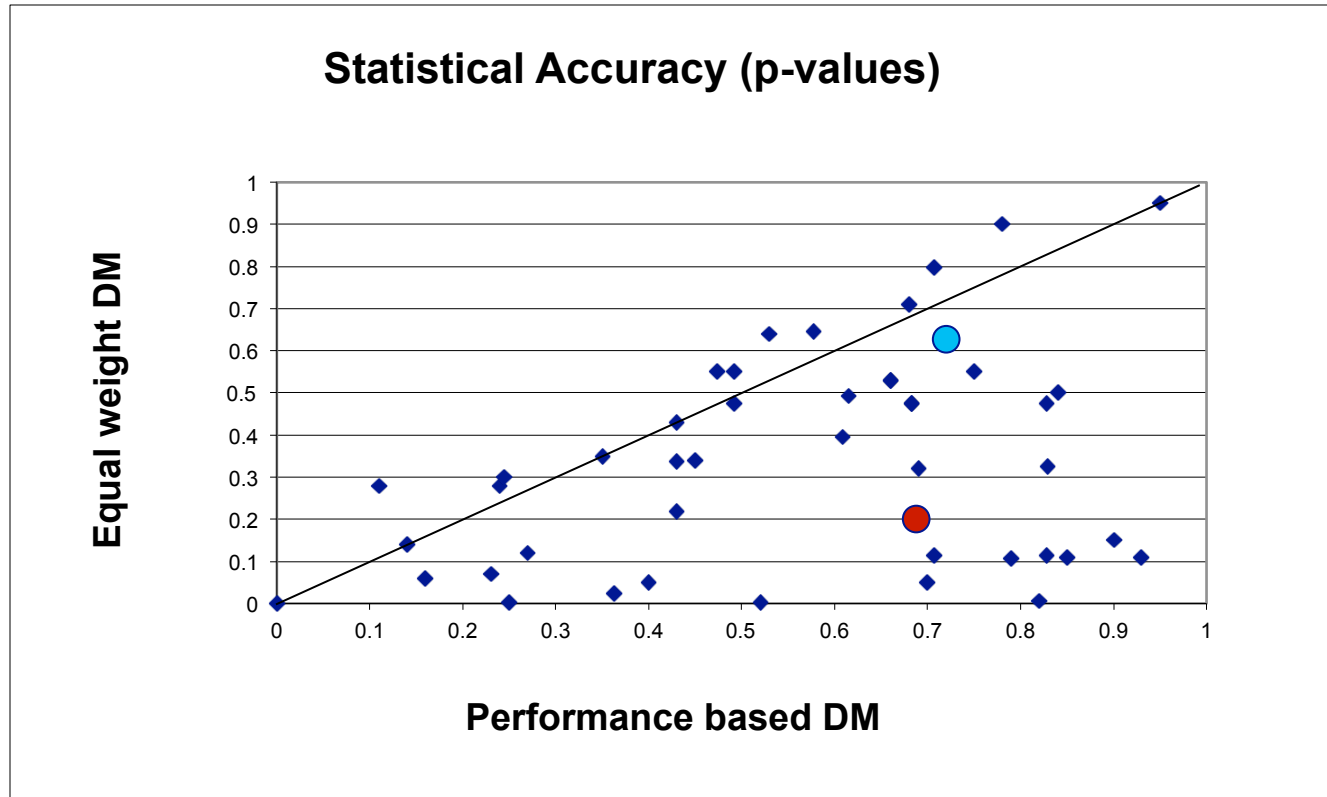
- Phase 3: Can SEJ be used for prospective evaluation?

A childhood obesity program in Mississippi

What is the attributable impact of Covering Kids and Families (CKF)?

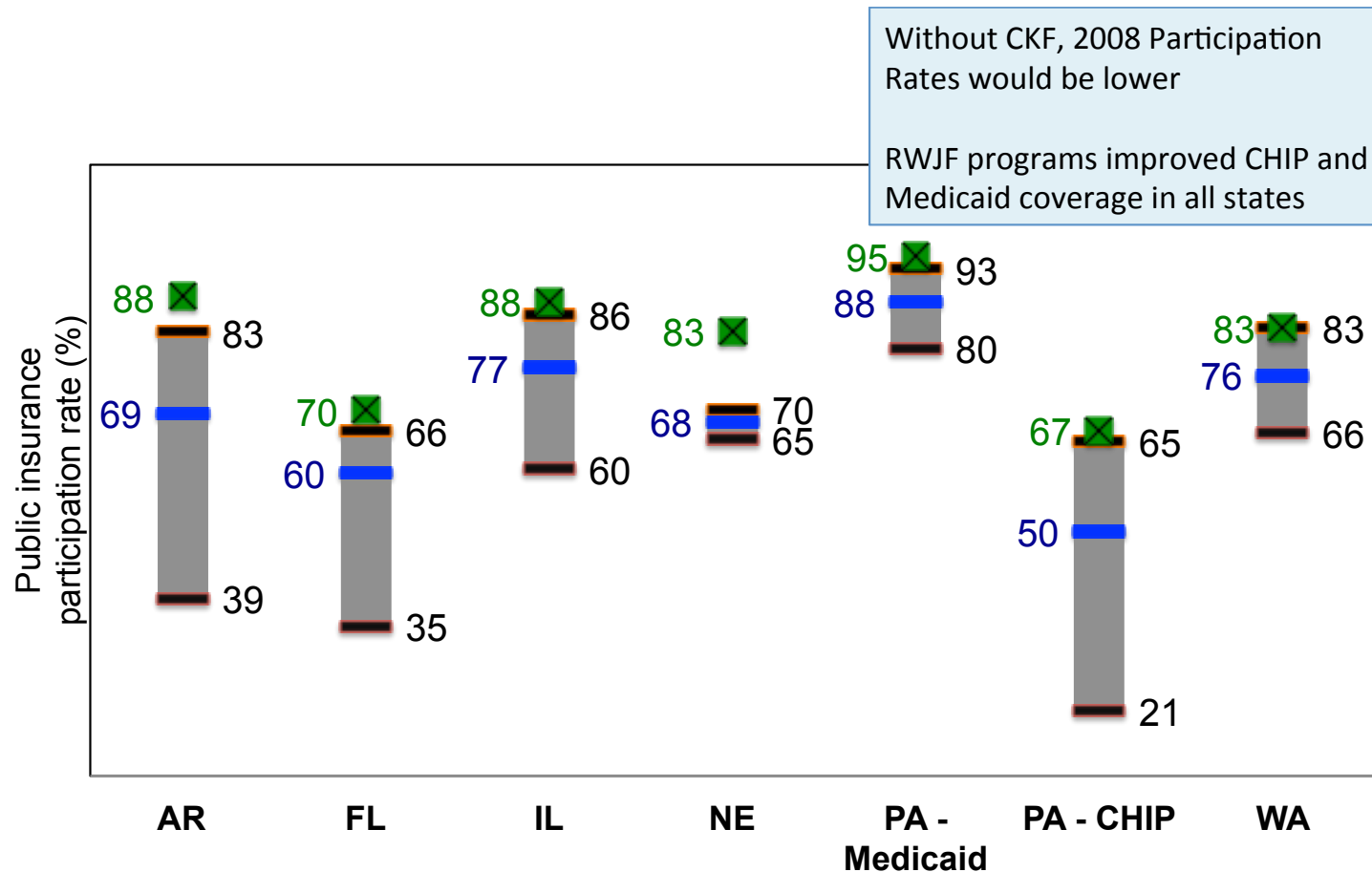
1. What is the economic value of increasing enrollment in Child Health Insurance Programs?
2. How successful would efforts to change enrollment have been without CKF?
3. What is the short- and long-term attributable impact of CKF on enrollment?
4. What specific kinds of investments made by CKF were the most useful in improving enrollment?

Phase 1: How were the experts?



Phase 2: CKF

What would the public insurance participation rate for children have been in 2008 without CKF?



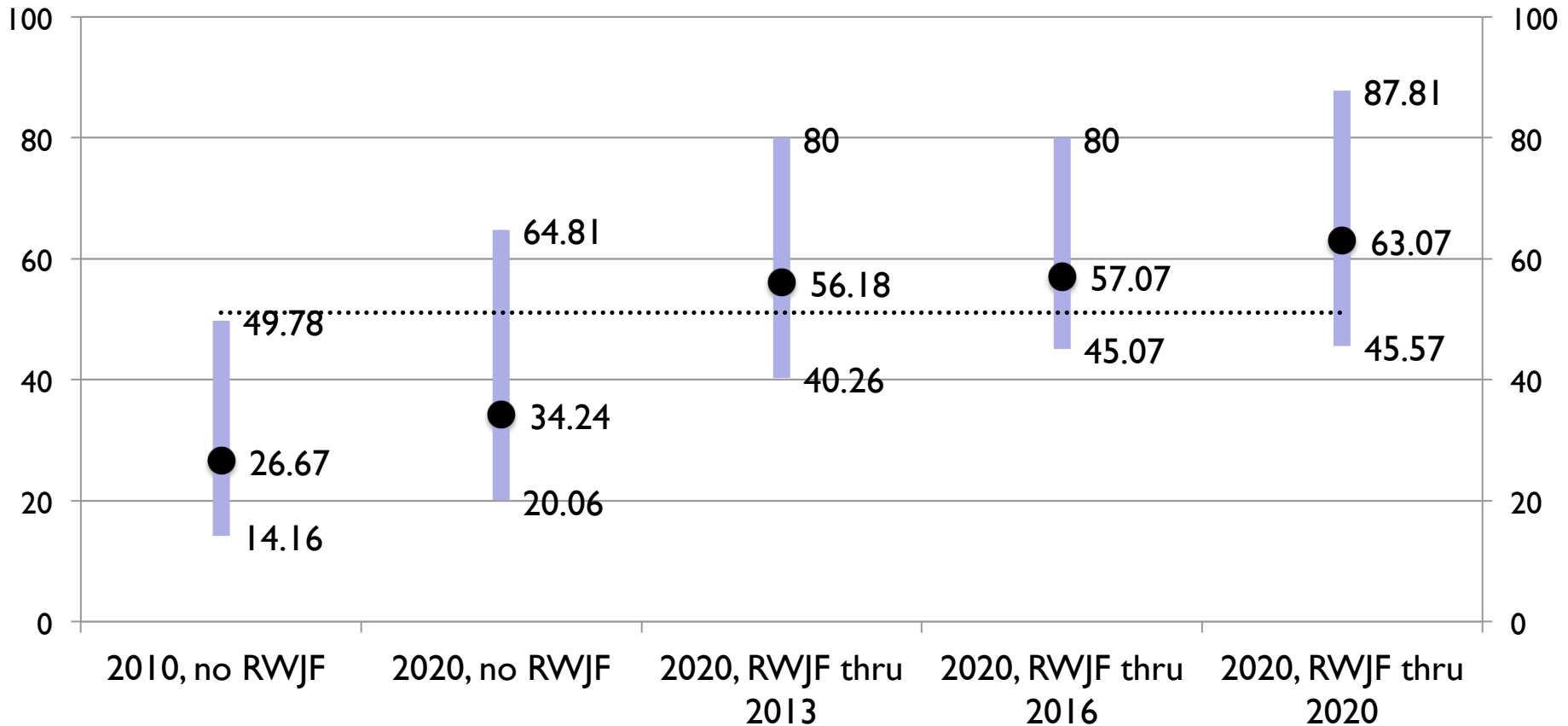
Phase 2: Covering Kids & Families

Impact of increased children's participation in public insurance in 2008

	3% Discount Rate			7% Discount Rate		
	Benefits	Costs	BCA Ratio	Benefits	Costs	BCA Ratio
AR	\$1,806 (475 – 4,657)	\$2.1	844 (222 – 2177)	\$1,799 (473 – 4,639)	\$3.4	572 (151 – 1476)
FL	\$4,853 (1,941 – 16,988)	\$2.7	1802 (721 – 6309)	\$4,834 (1,933 – 16,922)	\$4.0	1215 (486 – 4254)
IL	\$7,457 (829 – 11,600)	\$2.9	2539 (282 – 3950)	\$7,428 (825 – 11,555)	\$4.3	1722 (191 – 2678)
NE	\$596 (516 – 715)	\$1.8	323 (280 – 387)	\$594 (514 – 712)	\$2.7	219 (190 – 262)
WA	\$1,200 (0 – 2,915)	\$2.3	520 (0 – 1,264)	\$1,195 (0 – 2,904)	\$3.4	354 (0 – 859)

Phase 3: Childhood Obesity

Percentage of schools NOT selling unhealthy foods and beverages



..... 2010 Rate (51.1)

Phase 3: Childhood Obesity

Impact of decreased access to competitive foods and beverages in Mississippi secondary schools in 2020

	Number of children with decreased access	Resulting number of fewer obese children
RWJF funding through 2013	28,588 (-137,580 – 268,106)	1,172 (-5,641 – 10,992)
RWJF funding through 2016	65,222 (-77,556 – 298,386)	2,674 (-3,180 – 12,234)
RWJF funding through 2020	123,925 (-60,766 – 374,498)	5,081 (-2,491 – 15,354)

Phase 3: Childhood Obesity

Impact of decreased access to competitive foods and beverages in Mississippi secondary schools in 2020

	3% Discount Rate			7% Discount Rate		
	Benefits	Costs	BCA Ratio	Benefits	Costs	BCA Ratio
RWJF funding through 2013	\$13.59 (-65.39 - \$127.43)	\$4.37	3.11 (-14.95 - 29.14)	\$10.02 (-48.21 - 93.95)	\$4.81	2.08 (-10.02 - 19.53)
RWJF funding through 2016	\$40.00 (-36.86 - 141.82)	\$5.87	5.28 (-6.28 - 24.17)	\$22.85 (-27.17 - 104.56)	\$6.14	3.72 (-4.42 - 17.02)
RWJF funding through 2020	\$58.90 (-28.88 - 177.99)	\$7.65	7.68 (-3.77 - 23.22)	\$43.43 (-21.29 - 131.23)	\$7.55	5.75 (-2.82 - 17.38)

RWJF: Next Steps

- Begin elicitations related to new program areas RWJF wants to get involved with
- Ongoing discussions with RWJF staff about implementing BCA, using SEJ, on a wider scale

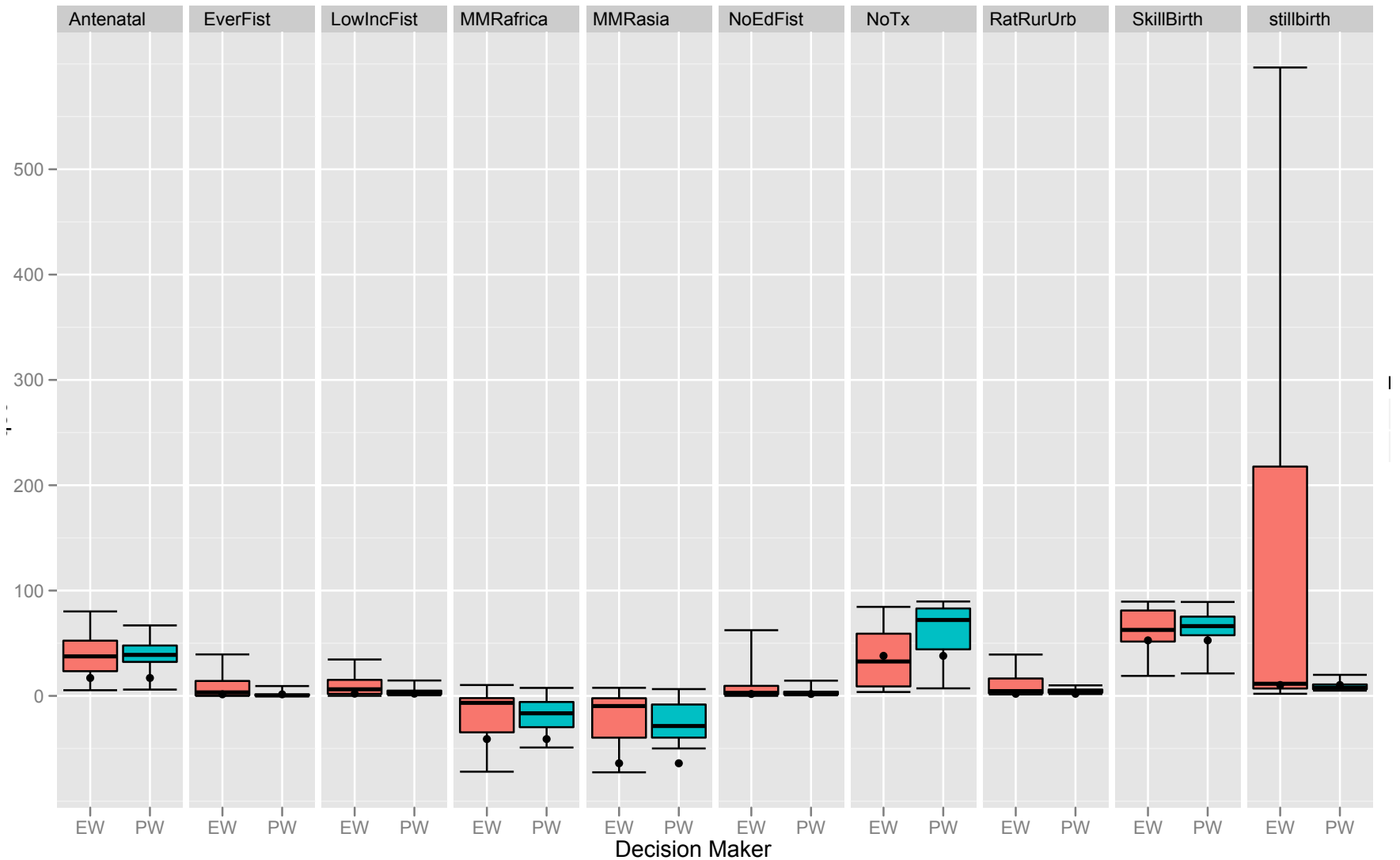
DCP3: Work So Far

- Pilot study on orthopedics and general surgery in Nov 2011
- Treatment for obstetric fistula in low- and mid-income countries

Fistula: Expert Scores

Expert	P-value	Information	Weight
Expert1	0.0002059	1.331	0
Expert2	0.0001328	2.017	0
Expert3	6.23E-06	3.126	0
Expert4	0.005928	2.662	0.356194057
Expert5	0.007621	1.267	0.597130829
Expert6	2.40E-05	1.558	0
Expert7	0.0005007	4.181	0.046675113
Expert8	5.25E-05	2.658	0
PWDM	0.2659	1.776	-
EWDM	0.05891	0.7006	-

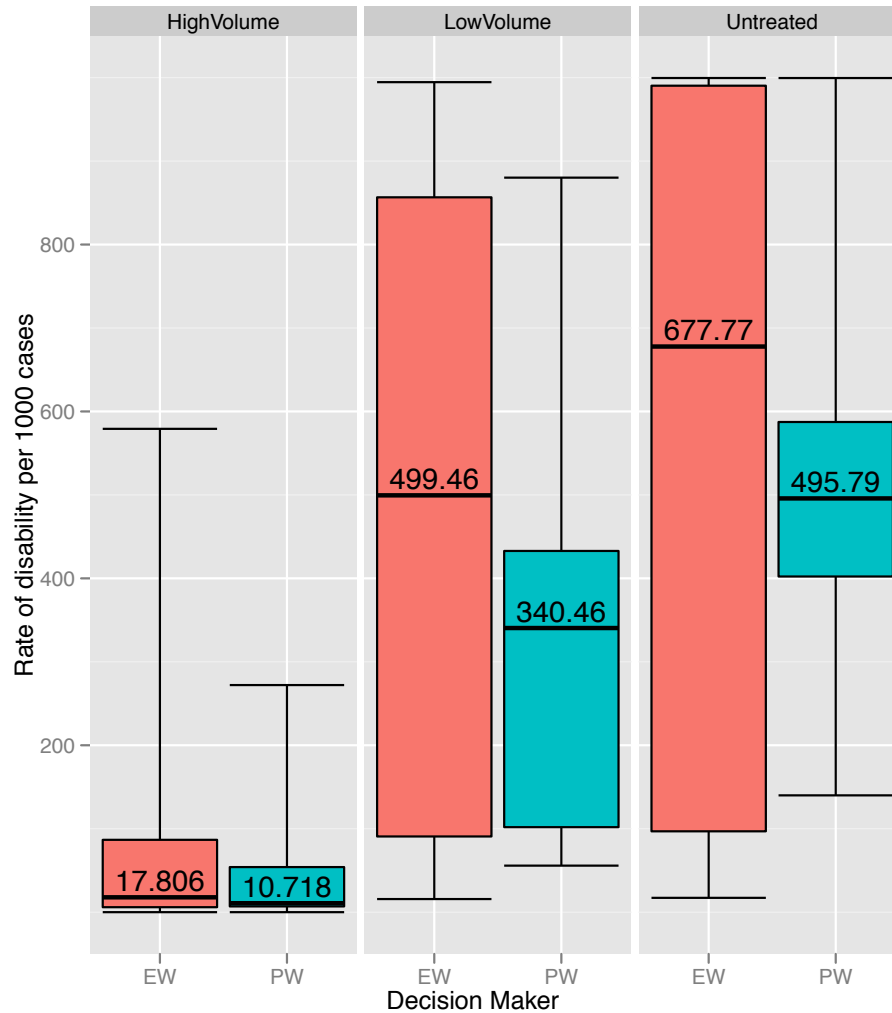
Fistula: Calibration Variables



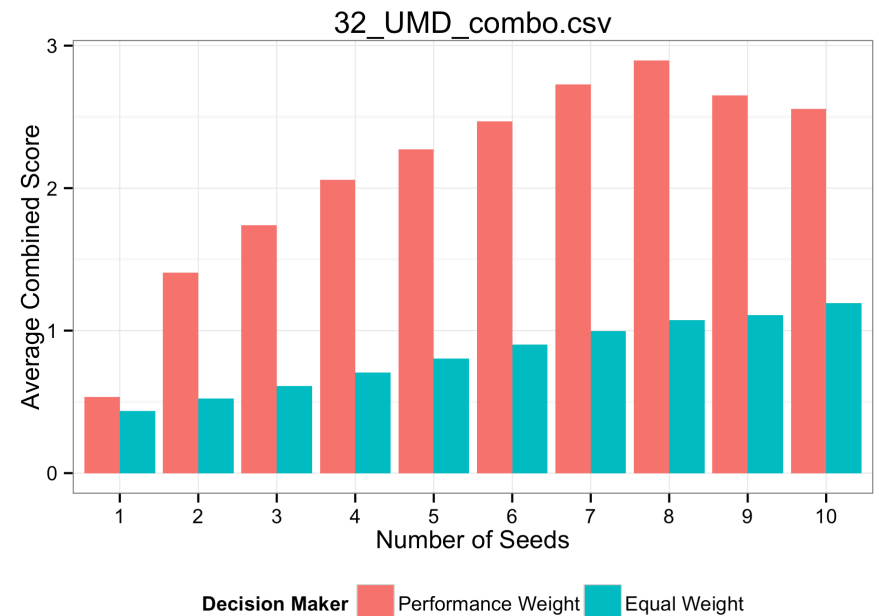
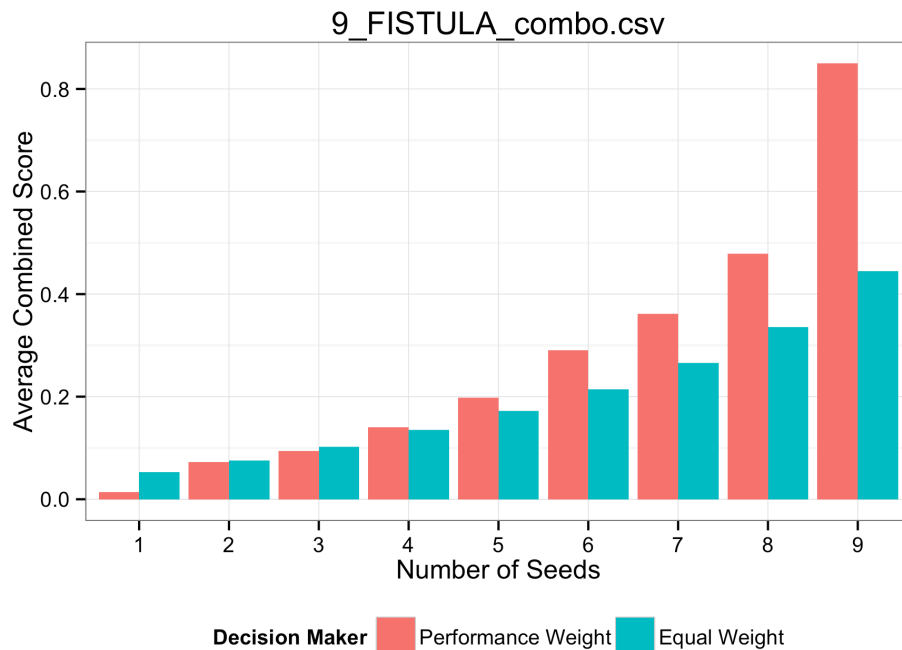
Fistula: Scenario 1

An 18 year-old woman had obstructed labor and delivery of a stillbirth one month ago. She has a large vesicovaginal fistula that obliterated the anterior vaginal wall, resulting in total loss of the urethra. Upon examination, she has involvement of both ureters, with partial obstruction of one. The main long-term complications are constant leakage of urine (urinary incontinence) and functional loss of a kidney.

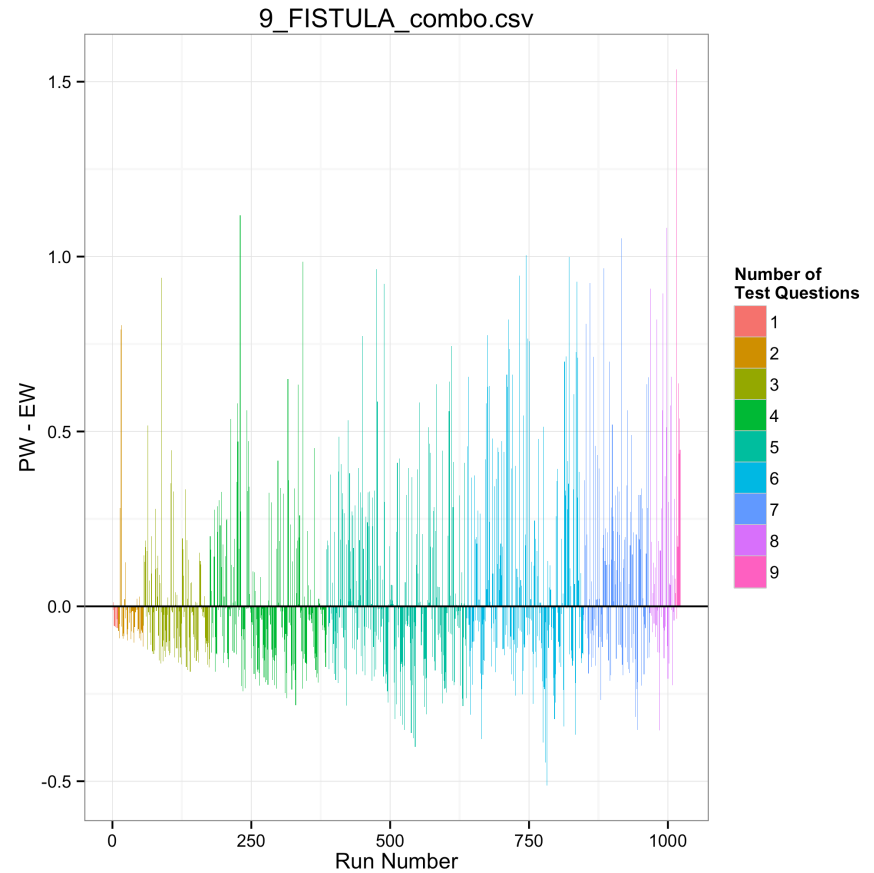
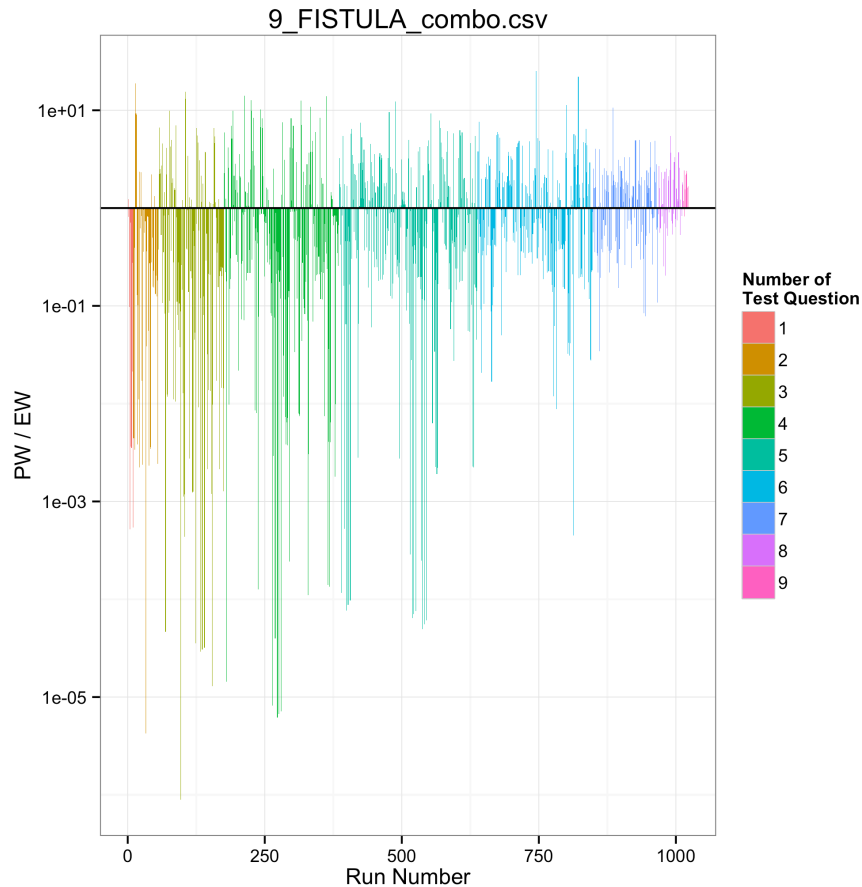
Fistula: Scenario 1



A bit more on out-of-sample validation



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