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2015 NATIONAL SENIOR LIVING CFO WORKSHOP | THE PEABODY MEMPHIS | MEMPHIS, TN
APRIL 15-17, 2015

CONTINUING CARE AT HOME (CCaH): THE FINANCIAL AND ACTUARIAL DETAILS

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Section 3

MANAGING CCAH ACTUARIAL & FINANCIAL RISKS

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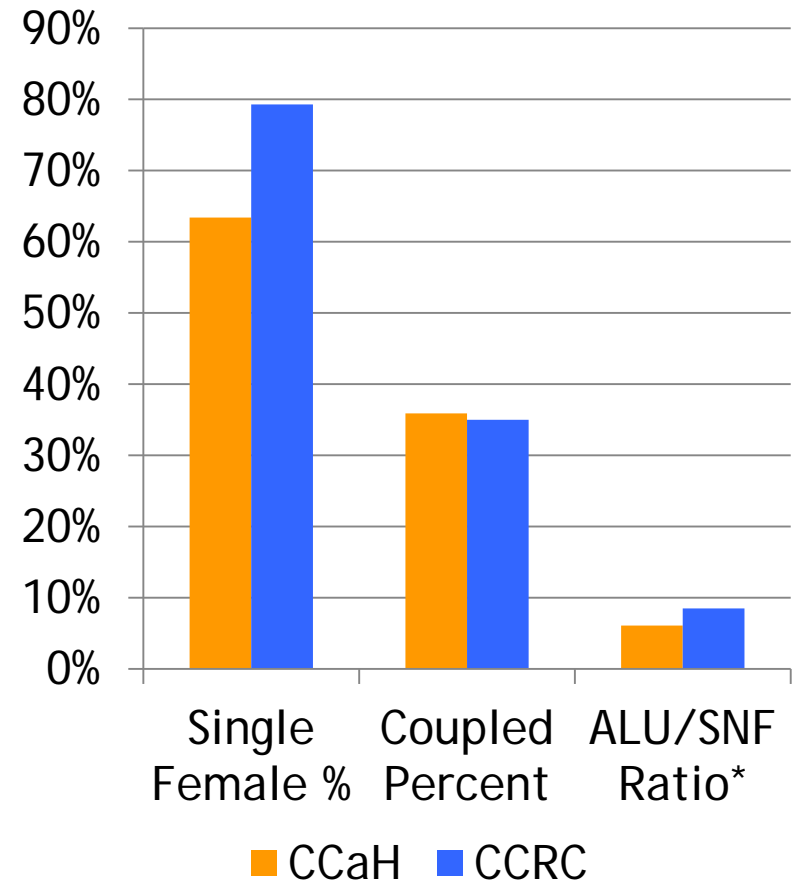
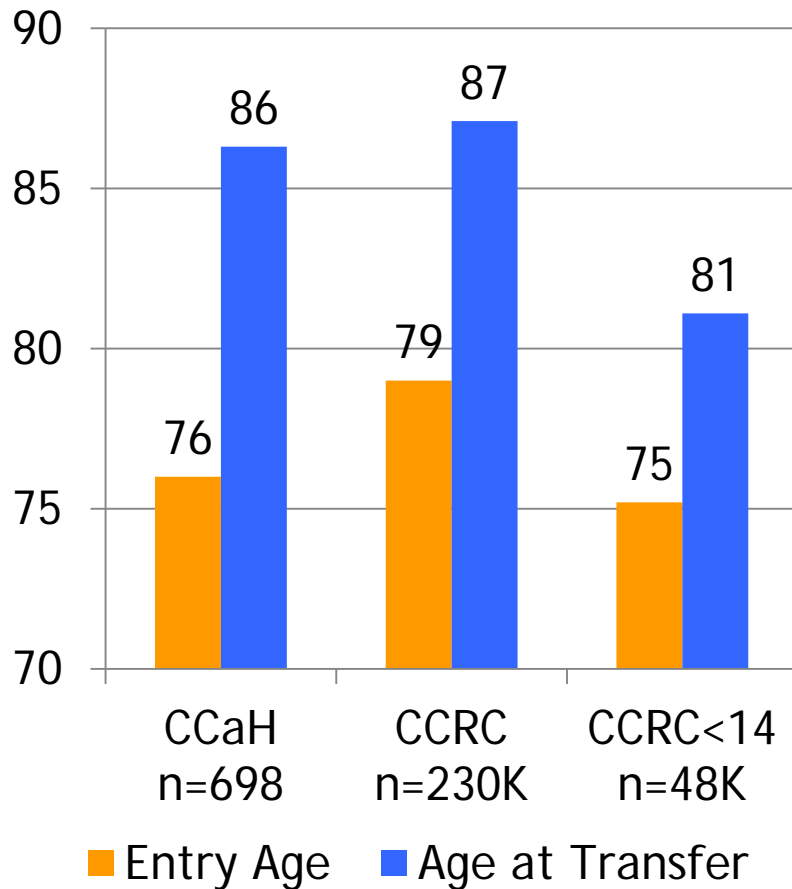
DISCUSSION OUTLINE

1. What do we know about utilization and costs
2. How will you handle CCaH institutional needs
3. Key actuarial and financial risks
4. Contract design options that mitigate risks
5. Potential CCRC financial benefits
6. Recommendations and caveats

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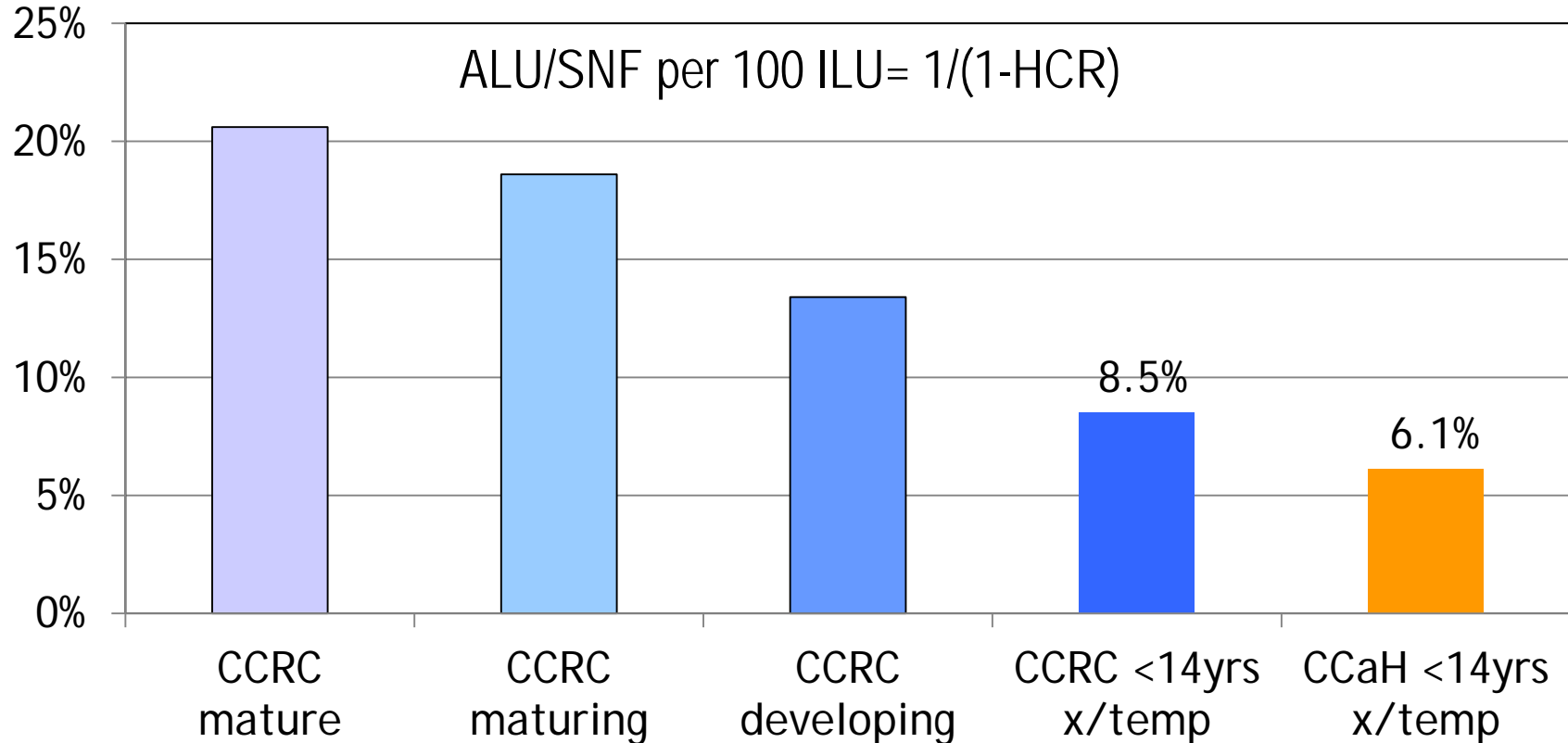
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ANECDOTAL OBSERVATIONS: LIES, DAMNED LIES, AND STATISTICS



DO CCAHS SIGNIFICANTLY REDUCE ALU/SNF USAGE

Health Care Ratio (HCR) incl. Temporary Transfers



IS CCAH COST EFFICIENT FOR FUNDING LTC

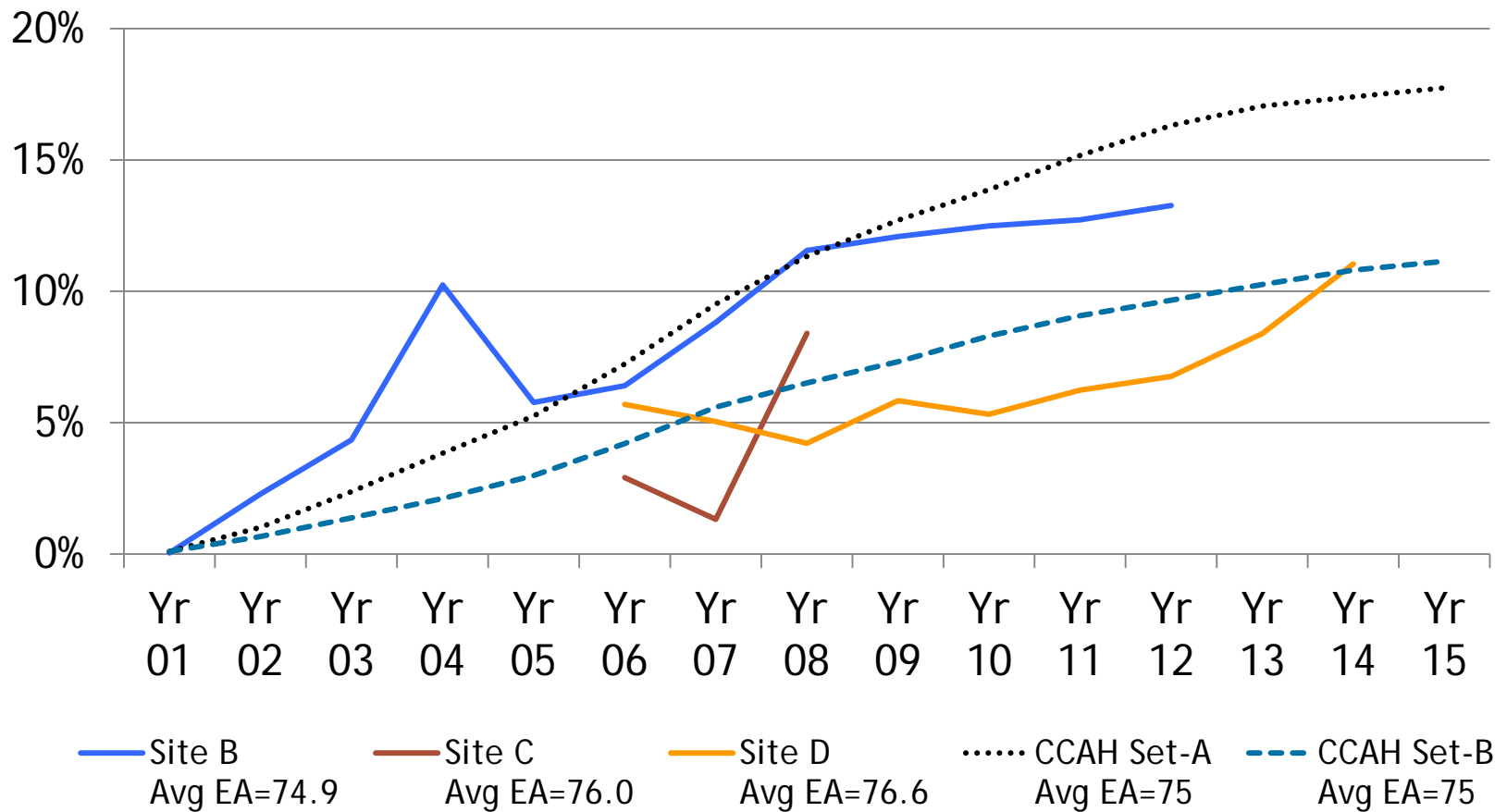
Statistic (sample size = 1)	CCRC	CCaH Low Usage	CCaH High Usage
1. Lifetime LTC costs (Unisex; 60%f/40%m)	\$306,765	\$176,255	\$219,053
2. PV Lifetime LTC costs (3% inflation/5% interest)	151,798	91,934	115,055
3. PV Lifetime LTC costs per SNF daily cost (\$283)	536 days	324 days	407 days
4. PV LTC benefit costs	131,322	65,480	88,302
5. Estimated overhead (incl. profit) margins {1-(5 ÷ 3)}	13.5%	28.8%	23.2%

CAVEAT: these projections are based on assumptions derived from limited data; no statistically valid inferences can be made about relationships

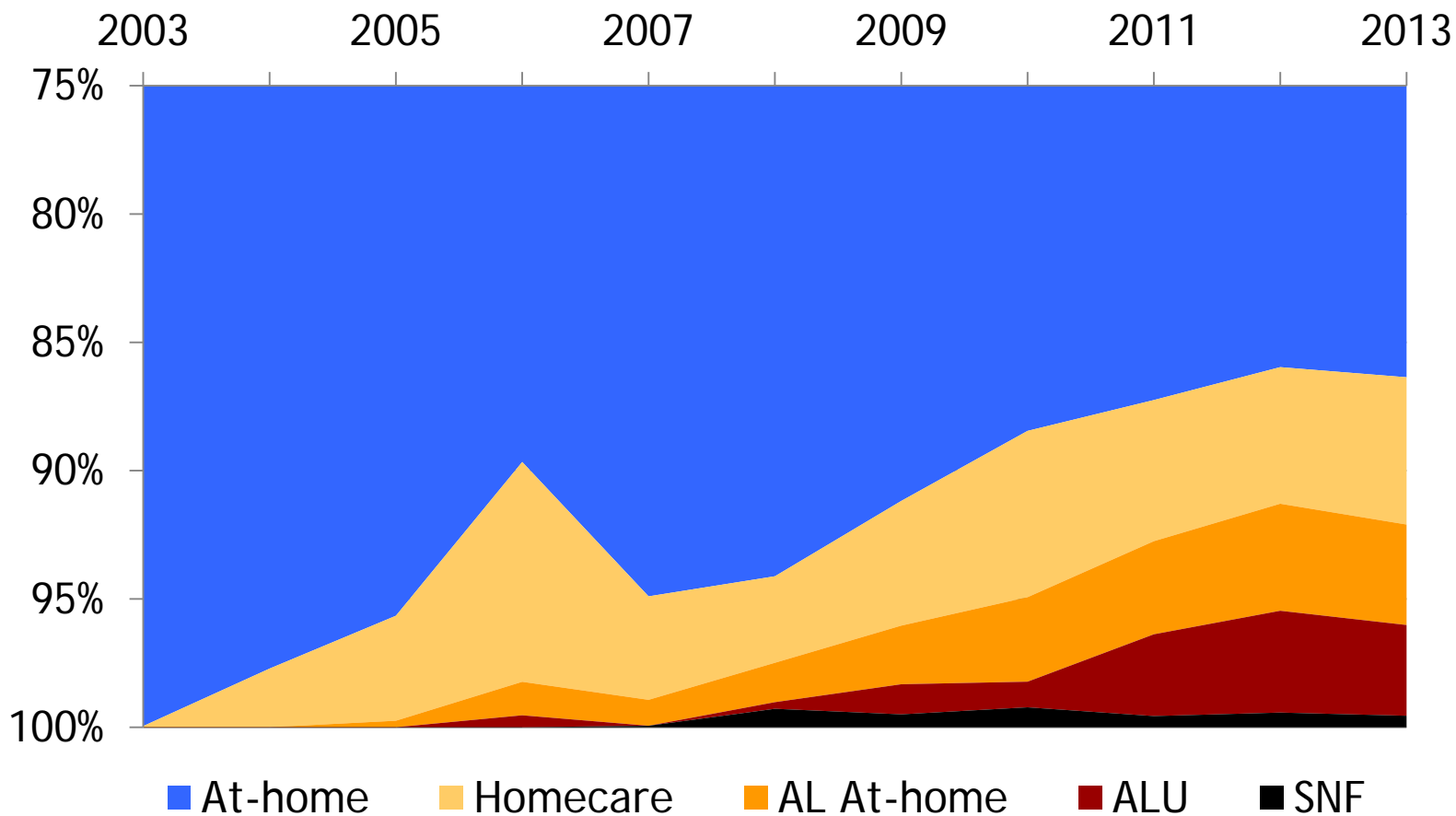
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DOES CCAH UTILIZATION STABILIZE



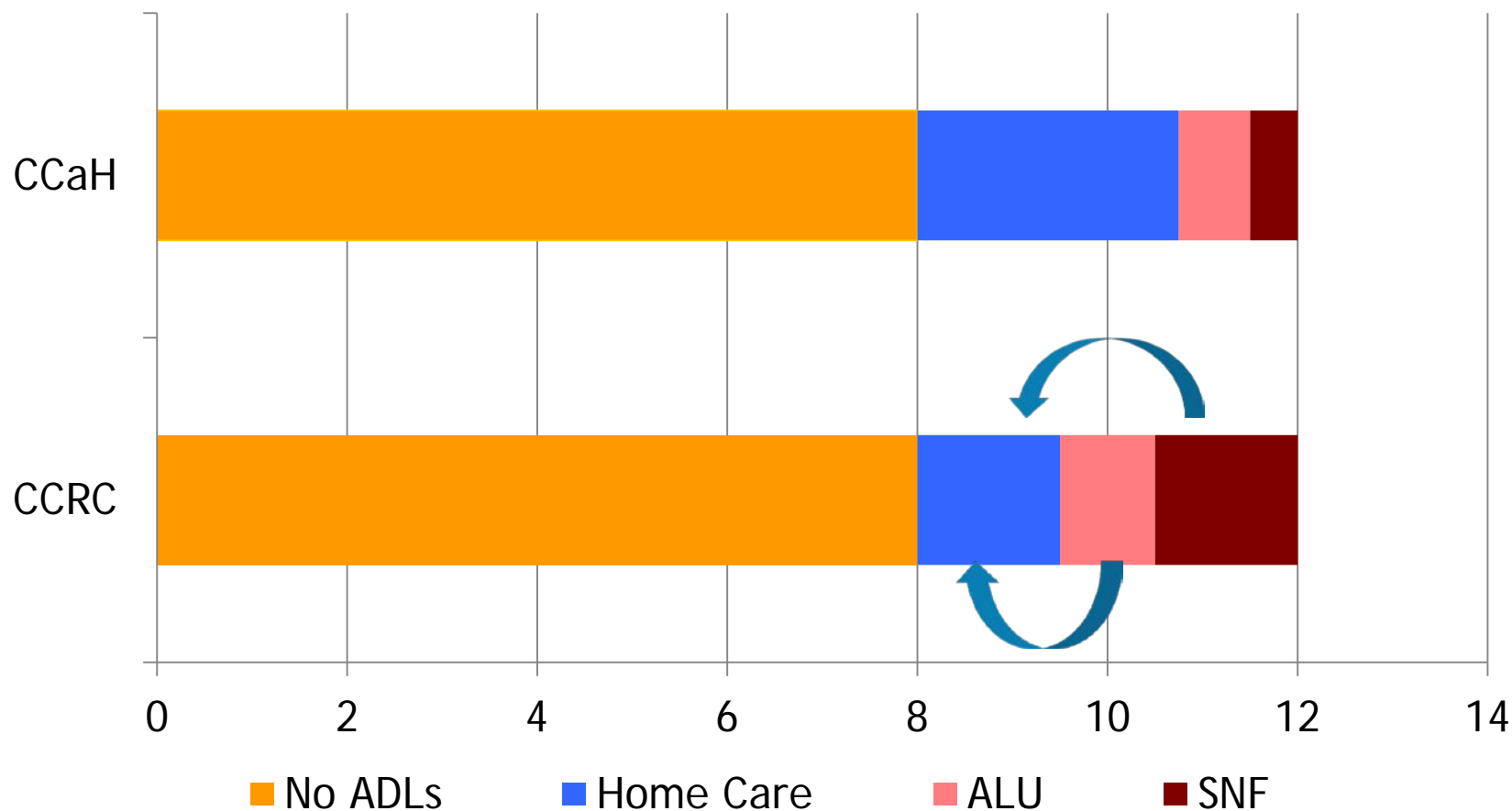
IS EXPERIENCE SUFFICIENT TO SET ASSUMPTIONS



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CAN "SUBSTITUTION EFFECT" COSTS BE MANAGED



HOW DO YOU ACCESS RISKS: CCAH VS. CCRC

Program→ Risk Factor↓	CCaH	CCRC
Overhead Expenses	+	—
Database Size for Mortality & Morbidity	—	+
Utilization	—	+
Benefit Unit Costs	≈	≈
Σ of all Factors In {PV of Liability}	Touted as + Really?	

WHICH CONTRACT IS RISKIER—CCAH OR CCRC

1. Lower cost does not imply lower risk
2. Timing of costs may vary, but...
3. Pricing = actuarial present value has same $\Pr\{\text{ruin}\}$
4. Adding a risk premium lowers that probability

ACTUARIAL RISK DECREASES WITH SIZE

Number of participants	90% conf. int. \pm variation in EX[net costs]	Pricing +5% risk premium Prob[ruin]	Pricing +10% risk premium Prob[ruin]
8 members	(66.8%) to 96.2%	44%	39%
100 members	(17.6%) to 18.4%	34%	17%
300 members	(9.9%) to 11.4%	25%	6%
500 members	(8.9%) to 8.8%	18%	2%
1,000 members	(6.5%) to 6.4%	8%	<0.5%

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PRICING CAN MEET VIRTUALLY ANY PREMIUM TARGETS

Actuarial→ Plan Design↓	5% Margin Lower Usage \$400/month	15% Margin Lower Usage \$400/month	5% Margin Higher Usage \$400/month
No Co-Pay	\$43,465	\$52,465	\$66,250
7-yr Limit	\$36,129	\$44,559	\$58,222
25% Co-Pay	\$31,561	\$40,754	\$48,631
50% Co-Pay	\$14,350	\$23,543	\$25,555
Homecare Only	\$735	\$9,928	\$11,082
1-yr Elimination	\$8,190	\$11,253	\$19,237

CONTRACT DESIGN EFFICACY TO REDUCE COST/RISKS

Technique	Scale = 1-Low to 5-High	
	Costs	Risks
1. Initial underwriting	5	5
2. Care coordinator gatekeeper	4	3
3. Subsidize/transfer overhead	5	3
4. Age and gender pricing	1	2
5. Contract copayments	4	2
6. Benefit daily limits	3	2/3
7. Benefit lifetime limits	3	3
8. Elimination periods	4	4

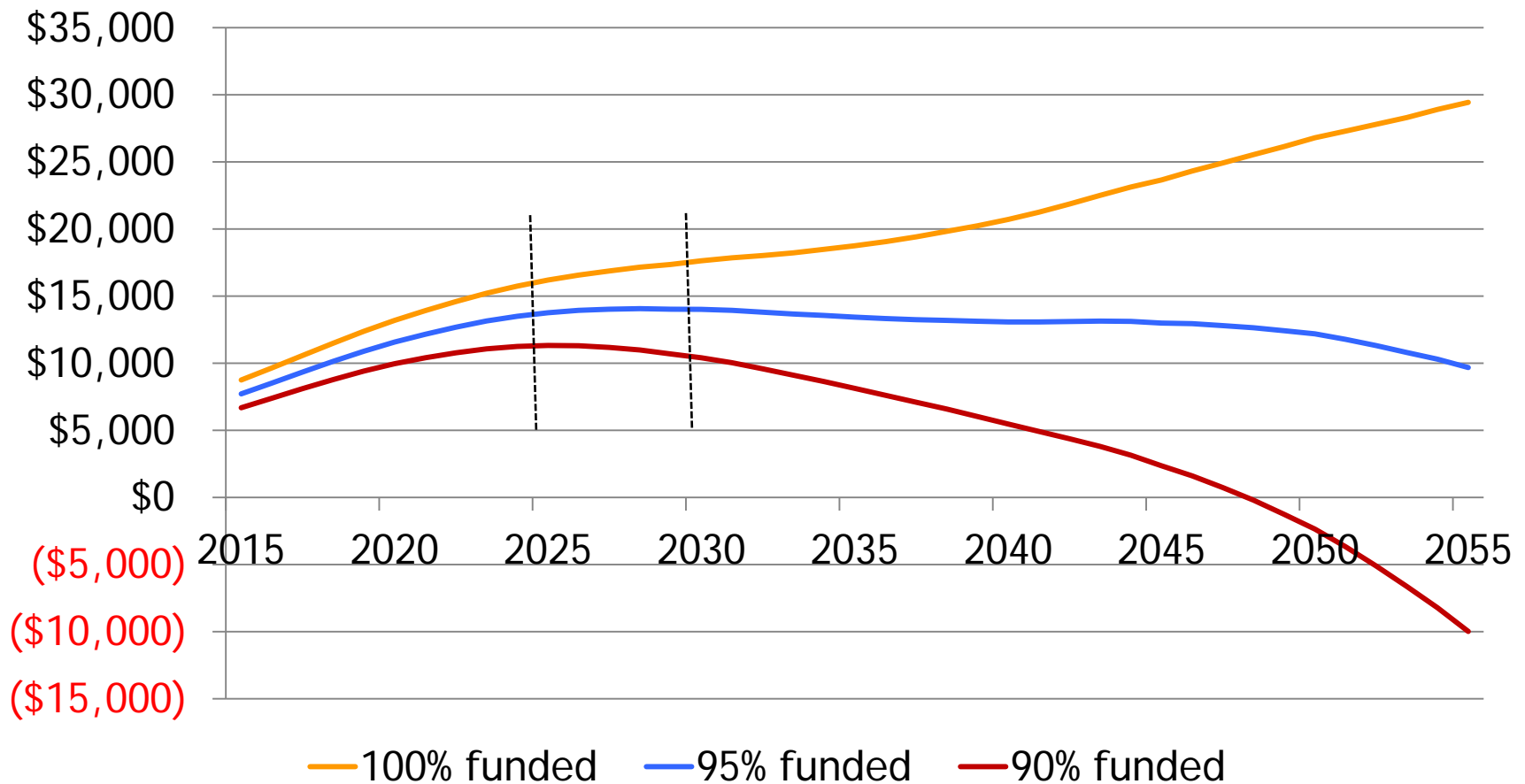
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ACTUARIAL RESERVES \neq EXCESS “PROFIT” MARGINS

1. Similar to other advance fee contracts
 - a. Cash flows should be positive
 - b. Favorable ratios for consolidated GAAP, but
 - c. Performance obligation accounting may change net income presentation
2. Annually generate 30-year cash flows, or
3. Modify income statement to include an expense line item “change in actuarial FSO” to reflect liability management

5-YR GAAP PROJECTIONS CAN BE MISLEADING



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RECOMMENDATIONS AND CAVEATS

1. Price with highest market-sensitive actuarial margins
2. Setup benefit utilization and cost monitoring systems
3. Vital benchmark statistic:
At-Home Costs/Member/Day
4. Given limited experience, promote plans with lower net cost to organization

