

Using Actuarial Science to Make Smarter Employee Benefit/Financial Decisions

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Overview

- Traditional Actuarial Services
- Non-Traditional Creative Solutions
- Actuarial Tools and Methods
- Association Health Plans – Pooling of Risk

Traditional Actuarial Services

- Estimating Reserves for Self Funded Plans
- Projecting Claim Costs and Budgets
- Determining the Relative Value of Different Plan Designs
- Determining COBRA and Funding Rates

Traditional Actuarial Services cont.

- ACA Minimum Value Calculations
- ACA Metal Value Calculations
- Retiree Drug Subsidy Rx Actuarial Attestations
- Rx Creditable Coverage Determinations

Traditional Actuarial Services cont.

- Reference Based Pricing Cost Analyses
- Self Insured Renewal Analyses
- Fully Insured Renewal Analyses
- Stop Loss Analyses

Stop Loss Analysis - BAN Consortium

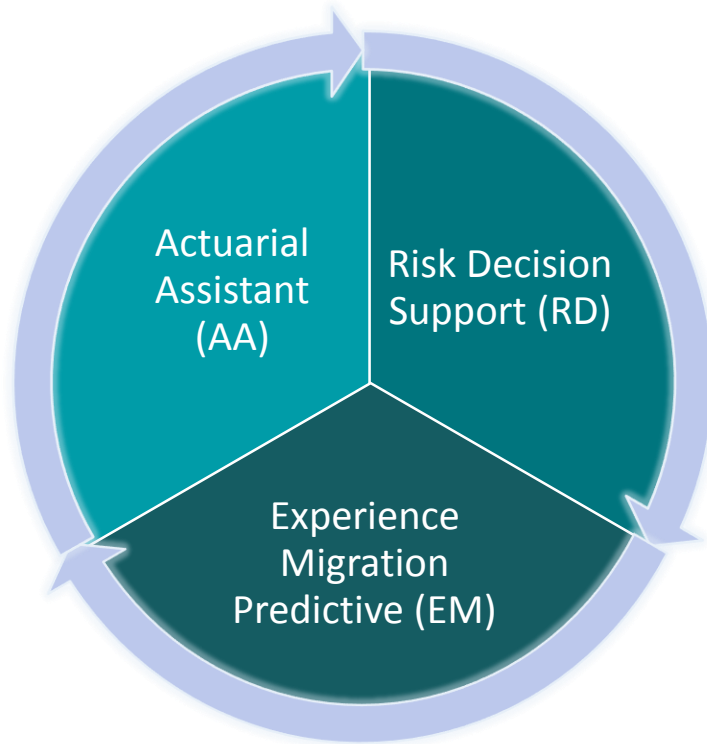
- For Self Funded Plans
- Aids in Achieving the Best Stop Loss Product for your Plan
- Up to 6 Stop Loss Quote from different Carriers
- Standardizes Quotes
- Eliminates Hidden Detrimental Provisions
- Pat Campola – Godfather of Stop Loss

Non-Traditional Actuarial Solutions

- Monte Carlo Simulations for Complex Problems
 1. History of Monte Carlo
 2. Los Alamos – Nuclear testing
 3. John Von Neumann
- Catastrophic Black Swan Risk Assessment
- Surplus Risk Assessment
- Self Funding Analyses

Actuarial Tools

Three Independent Applications



Based on more than 10 Million Lives and over \$100 Billion in Claims

Consulting Suite Capabilities

Enables you to model changes to:

- Medical & Rx plan designs
- Size and composition of group, e.g., Mergers & Acquisitions
- Network discounts and reference-based pricing

Evaluate:

- Risk-reward dynamics of stop loss structures
- Probability of self-funding outperforming fully insured

Projection:

- Consistent & actuarially sound projection of group claims based on the group's claims history
- Projected employee enrollment for the upcoming plan year
- Development of budget rates for the group

Reference-Based Pricing

CLAROS ANALYTICS

Actuarial Assistant

Version 5.2.0.0

General Info Trend Provider Network Medical Plan Age/Gender Geographic Area Utilization Rx Plan Adjustments

Tools: Stop Loss Reimb Account Participant Cost LogOff Sim Trials 1000

Rate Tier	Employees	Rates
EE	76	433.06
EE+SP	37	952.74
EE+CH(s)	20	779.52
EE+Fam	67	1,299.19
Total - All Tiers	200	854.00
Expected annual cost		2,049,604.78
Rx Percent of Total Claim Cost		18.2%
Plan Cost Share*		82.4%
Participant Cost Share*		17.6%
Annualized Participant Cost Share		\$932.08
* % of allowed claim cost		

Base Case	Scenario	Diff. to SC
Composite PMPY	Composite PMPY	% Change Dollar Change
Final Plan Cost (w/ expenses & enrollment)	\$2,049,605	\$1,717,514 -16.2% (332,023)
Final Plan Benefit Change	\$4,360.86	\$3,654.44 -16.2% (332,023)
Adjust for Area	2.4%	2.4% 0.0%
Adjust for Age/Gender	-11.5%	-11.5% 0.0%
Adjust for Industry	-1.9%	-1.9% 0.0%
Adjust for Network Discounts	-42.6%	-50.7% -14.1% <<<<<
Adjust for User Util	0.0%	0.0% 0.0%
Ad Hoc Adjustment to Charges	0.0%	0.0% 0.0%
Adjust for Induced Demand Util	0.2%	0.1% -0.1% <
Total Allowed Charges	\$5,292.94	\$4,544.23 -14.1% -14.1%

Base Case	Scenario
Se: aaa-Demo 2018-01	Se: aaa-Demo 2018-01
Sc: AA Demo - Dewey	Sc: AA Demo - Dewey
Network Discount (medical only)	
Network Discounts	
Inpatient (IP)	49.0%
Outpatient (OP)	51.0%
ER (OP)	51.0%
Urgent Care (OP)	51.0%
Radiology - Complex (RAD)	55.0%
Radiology - Routine (RAD)	55.0%
Lab/Pathology (LP)	65.0%
Primary Physician (PH)	50.0%
Specialty Physician (PH)	50.0%
Physician Other	50.0%
Other (O)	55.0%
RX Retail Speciality	0.0%
RX Retail Generic	0.0%
RX Retail Brand Formulary	0.0%
RX Retail Brand Non Formulary	0.0%

Base Case	Scenario
Se: aaa-Demo 2018-01	Se: aaa-Demo 2018-01
Sc: AA Demo - Dewey	Sc: AA Demo - Dewey
Network Discount (medical only)	
Network Discounts	
Inpatient (IP)	140.0%
Outpatient (OP)	140.0%
ER (OP)	51.0%
Urgent Care (OP)	51.0%
Radiology - Complex (RAD)	55.0%
Radiology - Routine (RAD)	55.0%
Lab/Pathology (LP)	65.0%
Primary Physician (PH)	50.0%
Specialty Physician (PH)	50.0%
Physician Other	50.0%
Other (O)	55.0%
RX Retail Speciality	0.0%
RX Retail Generic	0.0%
RX Retail Brand Formulary	0.0%
RX Retail Brand Non Formulary	0.0%

Total impact of scenario changes

Provider network discounts

Scenario design: Inpatient & Outpatient services priced at 140% of Medicare

Increase Medical Plan Deductible

CLAROS ANALYTICS

Actuarial Assistant

Normalize

Run Sim

SC 1

Clear BC

Clear SC

SC 2

Archive

Export

Copy BC to SC

Copy SC to BC

SC 3

Version 5.2.0.0

General Info

Trend

Provider Network

Medical Plan

Age/Gender

Geographic Area

Utilization

Rx Plan

Adjustments

Cost Impact Detail

Tools

Stop Loss

Reimb Account

Participant Cost

LogOff

Sim Trials

1000

Rate Tier	Employees	Rates
EE	76	431.54
EE+SP	37	949.38
EE+CH(s)	20	776.77
EE+Fam	67	1,294.61
Total - All Tiers	200	850.99
Expected annual cost		2,042,379.04
Rx Percent of Total Claim Cost		18.3%
Plan Cost Share*		82.4%
Participant Cost Share*		17.6%
Annualized Participant Cost Share		\$930.80
* % of allowed claim cost		

Base Case	Composite PMPY	Diff BC to SC	Dollar Change
Final Plan Cost (w/ expenses & enrollment)	\$2,042,379	\$1,908,017	-6.6%
Final Plan Benefit Change	\$4,345.49	\$4,059.61	-6.6%
Adjust for Area	2.4%	2.4%	0.0%
Adjust for Age/Gender	-11.5%	-11.5%	0.0%
Adjust for Industry	-1.9%	-1.9%	0.0%
Adjust for Network Discounts	-42.8%	-42.7%	0.2%
Adjust for User Util	0.0%	0.0%	0.0%
Ad Hoc Adjustment to Charges	0.0%	0.0%	0.0%
Adjust for Induced Demand Util	0.2%	-3.1%	-3.3%
Total Allowed Charges	\$5,276.29	\$5,112.23	-3.1%

Rate Tier	Employees	Rates
EE	76	403.15
EE+SP	37	886.92
EE+CH(s)	20	725.67
EE+Fam	67	1,209.44
Total - All Tiers	200	795.01
Expected annual cost		1,908,017.15
Rx Percent of Total Claim Cost		19.7%
Plan Cost Share*		79.4%
Participant Cost Share*		20.6%
Annualized Participant Cost Share		\$1,052.62
* % of allowed claim cost		

Base Case

Se: aaa-Demo 2018-01

Sc: AA Demo - Dewey

Medical Plan Design

Tier: 1

Percent of services in Tier

Individual Deductible

Family Deductible

Coinurance (plan persp i.e. 80%)

Individual MOOP

Individual MOOP - in Dep Cov'g

Family MOOP

Copays do not accrue to the MOOP

Non Embedded Deductible

Individual Coinsurance Maximum

Family Coinsurance Maximum

Individual Copay Maximum

Family Copay Maximum

Tier: 1

Inpatient (IP)

Outpatient (OP)

ER (OP)

Urgent Care (OP)

Radiology - Complex (RAD)

Radiology - Routine (RAD)

Lab/Pathology (LP)

Primary Physician (PH)

Specialty Physician (PH)

Scenario

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Specialty Physician (PH)

Input of plan design

Total impact of scenario changes

Increase deductibles: in network to \$2,000 & \$6,000; out of network to \$4,000 & \$12,000

Risk Decision Support

- Sophisticated analysis of the risk/reward tradeoffs in stop loss structures.
- Detailed comparison of stop loss structures.
- Innovative analysis to properly evaluate the opportunity for a group to move from fully insured to self-funded.
- Monte Carlo analysis enables credible evaluation of the likelihood of key events and risk measures
 - Likelihood of outperforming fully insured
 - Likelihood of incurring an aggregate claim
 - Capital at Risk

Self Funded vs. Fully Insured

<div> <div>RD</div> <div> <div>CLAROS</div> <div>ANALYTICS</div> </div> <div> <div>Risk Decision Support</div> <div>Version 5.2.0.0</div> </div> <div> <div> <div>Clear BC</div> <div>Clear SC</div> <div>Copy BC to SC</div> <div>Export</div> <div>Archive</div> </div> <div> <div> <div>User Rates</div> <div>Claros Rates</div> </div> <div> <div>Setup / Ass</div> <div>Group Det</div> <div>Incrementa</div> </div> </div> </div> </div>					
Risk structure		Base Case	Scenario		
Effective Date		7/1/2018	7/1/2018	Base Case	
Specific deductible		50,000	75,000	Se: aaa-Demo 2018-06	
Incurred-In Period - Specific		12	12	Sc: DS Demo Dewey 50k	
Paid-In Period - Specific		18	18	Risk tolerance of the gro	
Aggregate margin		25.0%	25.0%	Target Capital @ Risk (T C	
Aggregating spec corridor				Confidence Level	
Reward for self-funding		7/1/2018	7/1/2018	Risk of self-funding	
Fully Insured vs Self Funded	w/o Stop Loss	Base Case	Scenario	Does the risk structure meet the risk tole	
User - Fully Insured (FI) cost - (annual)		2,700,000	2,700,000	Expected plan cost	
Estimated Fully Insured (FI) cost	2,681,312	2,681,312	2,681,312	Required Cap@Risk for confidence level	
Fully Insured (FI) cost - Sol'n using	2,700,000	2,700,000	2,700,000	Expected plan cost + Required Cap@Risk	
Expected plan cost (SF)	2,369,595	2,578,707	2,530,015	Confidence level < Required Cap@Risk	
Expected Return for self-funding		121,293	169,985	Expected plan cost	
Likelihood of beating FI		72.3%	75.3%	Target Capital @ Risk (T C@R)	
98% Cap @ Risk (98% C@R)		397,215	444,628	Expected plan cost + Target Cap@Risk	
Exp return on 98% C@R		30.5%	38.2%	Confidence level < Target Cap@Risk	

Experience & Migration Predictive

- Projected claims developed based on a robust historical claims experience analysis using a consistent and actuarially sound methodology.
- Simulation of employee enrollment in plans for the upcoming period based on the group's experience.
- Calculate budget rates based on the experience analysis and predictive modelling of employee enrollment.

Association Health Plans

DOL Final Regulations – June 2018

AHP = MEWA

MEWA not necessarily = AHP

Definition of a MEWA

Multiple Employer Welfare Arrangement

The definition of a MEWA found in ERISA Section 3 (40), 29 U.S.C. 1002(40). Section 3 (40) (A) provides as follows:

- (A) The term “multiple employer welfare arrangement” means an employee welfare benefit plan, or any other arrangement (other than an employee welfare benefit plan) which is established or maintained for the purpose of offering or providing any welfare plan benefits to the employees of two or more employers (including one or more self-employed individuals), or to their beneficiaries...(emphasis added)
- A “MEWA” is the vehicle that allows Small employers and Mid Sized employers to join together as one large group to offer self-insured and/or fully insured health, life, pension, disability, accident, dental, vision and supplemental plans to the collective group.

Definition of Association

Prior Rule: in the business of something more than providing Benefits

New Rule: Relaxes the standard. Must have “one substantial purpose unrelated to the provision of benefits”. Substantial purpose is not really defined.

Who Can Form an AHP?

- **Related employers** (same trade, industry or profession), regardless of geographic location

OR

- **Unrelated employers** within the same state or common metropolitan area

Who Can Participate in an AHP?

Working Owners

Allows self-employed individual to be an employer.

Genuine Employment

Retains rule that the covered entity must be a legitimate trade or business. Minimum 20 hours per week or 80 hours per month.

Non-Discrimination

AHP's are prohibited from restricting membership or charging different premiums based on health factors.

Health factors include: health status, medical condition, claims experience, medical history, genetic information, evidence of insurability, and disability for similarly situated individuals.

Essential Health Benefits & ERISA

AHP's are classified as large employers and will NOT have to include all essential benefits as defined in ACA.

AHP's are subject to ALL the ERISA requirements and filings as a large employer group.

State Regulations

States retain authority over plans

Self-Insured Plans - States retain oversight of their solvency

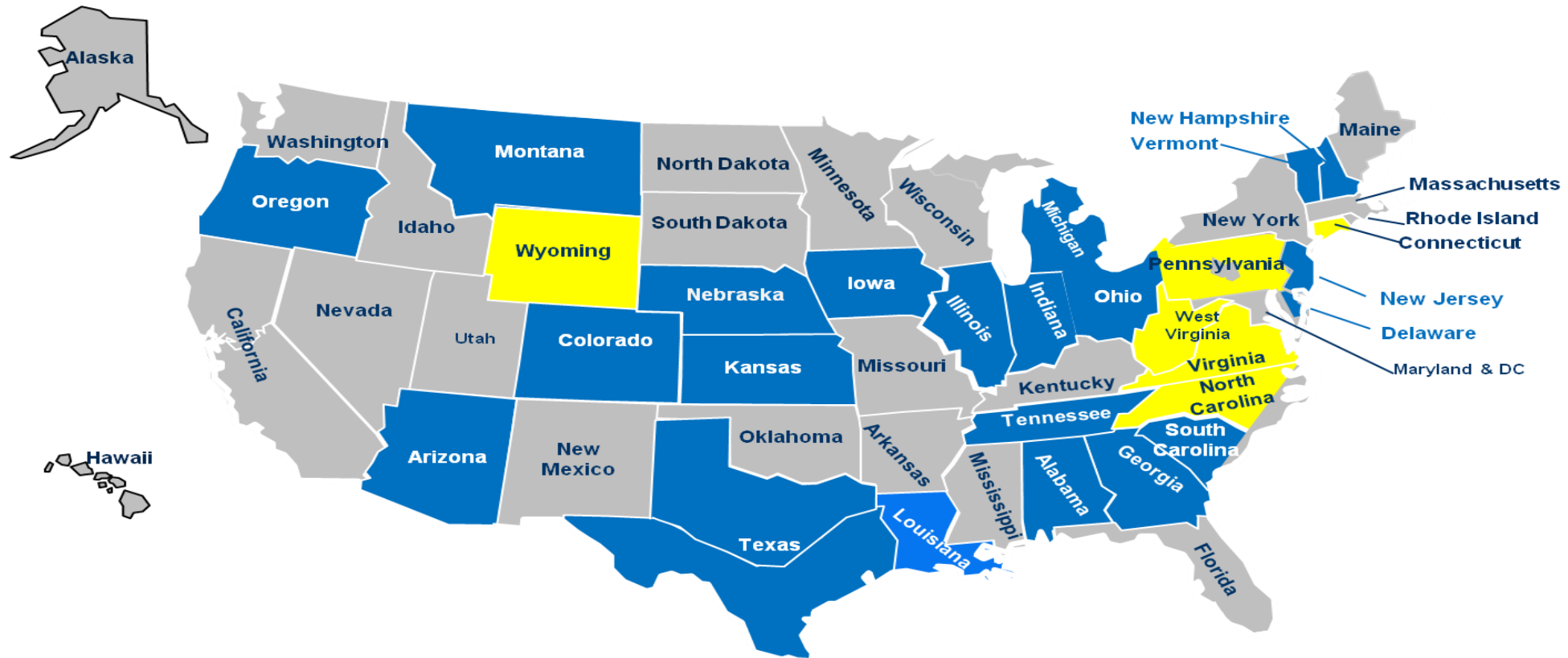
Fully Insured Plans – Must meet state mandates

New AHP's

Fully insured plans can begin operating September 1, 2018

Self-insured plans can begin operating April 1, 2019

MEWA Friendly States



MEWA Friendly States



MEWA "Neutral" States (where there is no legislation for or against, or we feel we can impact with lobbying efforts.)

Data Source: Summary of information gathered through multiple public websites such as NAIC, State Specific Departments of Insurance. Information is subject to change based on each states regulatory statutes. Data summary created 1/2017.

Services a MEWA Needs

Services Type	Function
Plan Management	Program development (feasibility and vendor selection and vendor management) and day to day management of the plan. This includes coordination of all DOI filings, trustee meetings, accounting services, competitive analysis and all other services not outsourced to vendors.
Third Party Administrator & Network	Selection of an Experienced TPA with Flexible System Environments and Access to Competitive Networks is Critical to the Success of the MEWA in a Defined Geographic Region
Actuarial Services/ Underwriting Services	Actuarial and underwriting services for product pricing (first dollar healthcare specifically), model building, data analysis, underwriting, financial management (including liability analysis and actuarial opinions), capital planning and business strategy.
Legal Services	Formation, ongoing legal management, review of contracts, HIPAA and other compliance issues.

Risk and Risk Mitigation

- **MEWAs are important in the current environment because members of the MEWA can realize the benefits and savings that only larger employers are typically afforded:**
 - Larger risk pool – safety with numbers
 - Less regulations on plan designs
 - Many state benefit mandates do not apply
 - Excess revenues go back into the plan assets to offset future renewals, or potentially issue member refunds.
 - Lower administrative fees due to economies of scale
 - No premium taxes in many states
- **Typical characteristics of a MEWA include:**
 - Non compensated Board of Trustees
 - Governed by ERISA, and varying levels of state regulations
 - Quicker “go to market” advantages

Risk and Risk Mitigation

Regulatory Environment for MEWAs – Safety Net #1

New Jersey MEWA LAW Passed in 2002 (and amended in 2015) – provides significant safeguards to ensure financial stability and protect members and providers

- Current New Jersey Regulatory Framework
 - Annual registration and financial deposit of cash/securities not less than \$300,000 – **Updated from \$200k in 2015**
 - Offer coverage to all MEWA members regardless of health status – **Guaranteed Issue**
 - MEWA will develop a surplus/build a cash reserve as established by a qualified actuary – **Must meet Risk Based Capital**
 - Benefit plan shall contain written statement of contingent liability – **Transparency to members**
 - File an annual & quarterly report of financial statements to DOBI & Department of Labor
 - Subject to DOL and DOBI Audit
 - Benefits must be greater than that of the lowest benefit level of the Standard Small Employer Health Program
 - Required aggregate stop loss of no greater than 125%
- Certain ACA regulations apply to self-insured MEWAs – not all

Risk and Risk Mitigation

Actuarial Rate Development– Safety Net #2

- **Stop Loss Coverage:**
 - Aggregate stop loss of expected claims and specific stop loss including runout– States vary on required stop loss levels but generally require a recommendation based on an actuary's analysis
 - Aggregate attachment percentages can vary by State
 - Specific Stop Loss deductibles are much lower than for comparable single employer populations
- **Actuarial Rate Development, Oversight & Participation in Plan ongoing management**
 - Monthly analysis of developing experience, liabilities, enrollment and loss ratios
 - Development of an annual budget and forecast
 - Variance reporting
- **Quarterly or More Frequent Renewal Rate Periods**
 - Allows for rate increases more frequently than annual if needed although rarely enforced if ever
 - (A group will only renew 1x in the year)
- **Age Banded Rating Schedule (within regulatory framework) (States have variations)**
 - ACA forces a maximum 3 to 1 demographic rating range versus the reality of something closer to 11 to 1
 - MEWAs get to determine their own age/gender subsidy strategy
- **Risk Based Capital Requirements (States have variations)**
 - Required to meet DOI RBC requirements
 - Some states only require liabilities to be fully funded as well as the aggregate corridor
- **Group Experience Evaluation – Large Group Only in NJ. Other states allow you to medically evaluate any size group.**
- **Membership size – larger is more stable**

Risk and Risk Mitigation

E&O Insurance— Safety Net #3

- **Biggest Risk to a Broker / Consultant is being underinsured or not properly insured:**
 - Many policies purchased by smaller brokerage firms have not been updated to realize the regulatory oversight on MEWA health plans
 - Some include exclusions for alternative health coverage
- **Important to know your policy and Insurer**
 - If MEWA's are excluded, many insurers are open to evaluating a specific opportunity.
 - By offering the MEWA financials along with the regulatory framework, we have seen insurers extend coverage for specific opportunities

Contact Information

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Questions ?