

Health Insurance Testing Changes to Benefits

Aug 2013

HEALTH INSURANCE PRODUCT UPDATES

Executive Summary

Health Insurers update their products (plans and benefits) periodically. Product updates may be in response to mandates, market needs or changes in the practice of medicine. Product changes can have wide ranging impacts to customers, members, employees and systems that are used to administer benefits. These changes have to be carefully tested. Since these types of changes are frequent and have a large impact, the testing process needs to be especially efficient and cost effective.

This white paper describes the Apsana approach to a comprehensive, focused, efficient and effective Test Approach for Benefit Changes.

- Satish Nagarajan

CHANGING BENEFITS

Most companies update their products on a regular cycle. For health insurance companies their products are the plans, products and benefit packages they offer their customers and members. The Affordable Care Act and advent of the Health Insurance Exchanges (HIX) are new drivers for changes to health plans and benefit packages.

- Qualified Health Plans that are being offered on the new Health Insurance Exchanges (HIX) require new benefit packages that meet certain regulatory standards and guidelines
- Healthcare Reform requires substantial changes to most existing plans, products and benefit packages
- Market requirements and competitive pressures cause companies to update their benefit packages
- Changes in medical practice – especially the increased emphasis on evidence based medicine – can provide reasons to update plans
- New Federal and State initiatives to focus on population health and wellness are drivers of change to health plans
- New drugs, therapies and patient care technologies need to be constantly evaluated for inclusion in to benefit packages
- Benefit packages have to be periodically adjusted to provide a rich mix of cost and benefits

Many health insurers evaluate and update each of their plans, products and benefit packages annually. Since 100% of all benefit administration is mediated via computer systems, health insurers spread the updates to their systems into monthly or quarterly releases.

This means sometimes as often as every month, but definitely every quarter, benefit configuration is changing in the benefit administration, claims and care management systems. This creates a steady demand for testing services to validate these changes.



TRADITIONAL TESTING APPROACHES

There are three common approaches to testing periodic benefit changes:

- ✓ REGRESSION
- ✓ "KITCHEN SINK"
- ✓ AD HOC

REGRESSION

This approach involves executing a pre-defined regression suite consisting of professional and facility claims for a set of test members and evaluating the paid claims behavior. In order to get a high pass rate with the regression suite the claims chosen are the ones most likely auto-adjudicate, i.e. have fewest/no clinical edits and pre-authorization requirements. Regression suites typically use high frequency "clean" claims from high volume submitters.

"KITCHEN SINK"

Throwing everything but the "kitchen sink" at the claims system basically means copying production membership (or a subset) to a test environment and running a recent production claims feed into the test environment -- the production claims feed can be several days to a week's worth of recent claims -- then evaluating the claims behavior of this sample to determine if there are any unexpected variances.

AD HOC

The "Ad Hoc" approach would be to review documentation associated with the change and then determine specific test cases that need to be executed to validate the change.

Health insurers typically use a combination of these approaches. The specific combination is determined by the size, scope and nature of the change, available budget, schedule, resources and capabilities and environment and system limitations.

EVALUATION OF TRADITIONAL TESTING APPROACHES

Any valid comprehensive efficient approach to testing benefit changes must satisfy these constraints:

1. Errors in the configuration of benefits can have a material financial impact on members and the health insurer. Defects can also have a substantial impact on customer service well after the release.
2. Benefit changes have impacts to multiple systems, business processes and stakeholders. So any comprehensive testing approach needs to take this into account.
3. Benefit testing must be performed on a very tight schedule. There are usually only a couple of weeks allotted to testing in each monthly and quarterly release.
4. Since benefit changes occur frequently any testing approach must be repeatable and cost effective.



Regression Approach

PROS

- 1 Schedule and budget are well defined
- 2 Executed only within system and environment limitations
- 3 If automated then, less reliant on resource skills / knowledge

CONS

- 1 Very limited coverage. To be cost effective, regression suites have to focus on high volume/high value transactions
- 2 Post execution analysis is still time consuming and very knowledge and resource intensive

Kitchen Sink Approach

PROS

- 1 If the environment is properly setup this can be very easy to execute
- 2 If there are big problems they can be easily detected
- 3 Very low cost to execute – however very high cost to analyze unless highly specialized tools are available

CONS

- 1 Significant environment and data preparation issues. Since this requires copies of production data there may be PHI protection issues and environment size issues
- 2 Coverage is unknown because a given day of production claims is unlikely to provide complete coverage
- 3 Very low signal-to-noise ratio. Very hard to detect the actual problems in the volume of transactions
- 4 Does not cover non-claims related functionality – e.g. UM, customer service, web etc.

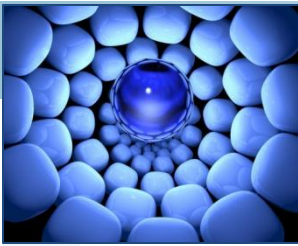
AD HOC Approach

PROS

- 1 Best control in terms of determining test coverage

CONS

- 1 Highest cost / schedule required
- 2 Often not possible to provide the required coverage because of schedule constraints and lack of documentation



APSANA TESTING APPROACH

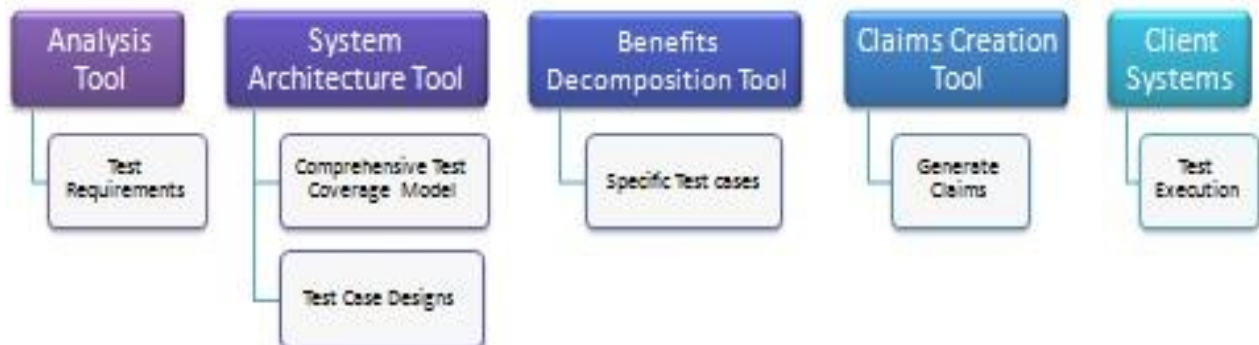
Apsana consulting has focused on Health Insurance industry and for over a decade we have assisted our clients with all aspects of software testing. After repeatedly encountering difficulties with traditional testing approaches, we have developed and implemented a unique testing approach, one that is:

- ✓ Business Process Oriented
- ✓ End to End Architecture
- ✓ Intelligently Managed Test Data

The Apsana Testing Approach has been designed to address all the constraints of effective and efficient testing of benefit changes:

- We have developed an analysis tool that can assist in quickly determining the scope and nature of benefit configuration changes. This provides test requirements.
- The test requirements are then mapped into our multi-process and multi-system test architecture to determine specific test case designs. This allows us to create a defined comprehensive test coverage model.
- The test case designs are then elaborated and decomposed to specific test cases using a benefit decomposition model that takes into account benefit tiers, deductibles, co-pays, coinsurances, limits, pre-auth requirements etc.
- We then use proprietary tools and vendor supplied tools to generate claims and pre-authorizations to execute comprehensive benefits testing.

Apsana Benefits Testing Model (using Apsana Proprietary Testing Toolkit)



BENEFITS OF THE APSANA TESTING APPROACH



The Apsana Testing Approach has the following benefits over the traditional approaches:

- ❑ The analysis tools and benefit decomposition model reduces our reliance on benefit change requirements documents which are often unavailable or late.
- ❑ The testing is comprehensive and we develop a client and project specific coverage model that is verifiable and auditable.
- ❑ There is no need to use production PHI.
- ❑ Tools and automation is leveraged to make the process repeatable, fast and cost effective. We can plug into many existing test automation tools.

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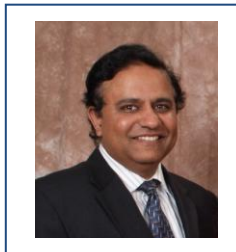
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If you would like to learn more about the Apsana's Approach to Testing Benefit Changes, please contact us.

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