COMPAS Risk & Need Assessment System

Selected Questions Posed by Inquiring Agencies

Ease of Use

Does your tool require an interview with the inmate? If so, what advantage does this offer?

Northpointe designed COMPAS to allow for test administration flexibility. There are several options data gathering options, any of which are valid. The offender may fill out the self-report section on his or her own. There may be a scripted interview, in which questions are asked verbatim. The interviewer may use a "guided discussion" format to simultaneously gather the assessment data and enhance rapport and buy-in for the intervention process, using a motivational interviewing style. The choice is the agency's to make, depending on the skill level of their staff, the time available to collect the data, and the resources available for COMPAS administration.

Does COMPAS rely on 'static factors (criminal history only)? How does this approach compare to the static plus dynamic measurement approach employees by other companies?

COMPAS relies on both static and dynamic data to generate its risk and needs results. The use of dynamic measures allows for measures to change over time as behavior changes. These changes are included in the measures of risk and need. The dynamic factors also allows for the "overlay" of previous assessments on the latest assessment to visual see any change in risk and need scores.

Is there a short-screen/pre-screen?

COMPAS is scalable to fit the needs of many different decision points, including pre-screening. In applying the risk principle, many agencies select the Violence and Recidivism risk scales for pre-screening or triaging the case. Individuals that score higher on risk may then have a more in-depth assessment using additional COMPAS scales. Information previously entered into a COMPAS assessment is automatically imported into the second tier assessment. This also allows for the distribution of the assessment workload over several offender processing points—e.g. pre-trial might turn just the scales needed to support a release decision then at post sentence, for example, additional scales would be added to their assessment in support of supervision and treatment decisions (case plan).

How long does it take to administer the tool?

This depends on the assessment information needs at a particular offender processing point and the scales that you have determined are necessary to inform a decision. COMPAS assessment can take anywhere from 10 minutes to an hour depending on the scale content and administration data collection style. When possible, we also encourage developing an interface between COMPAS and other MIS systems. These system interfaces are built quickly and are designed to eliminate redundant data entry.

What is the theoretical framework for this tool?

COMPAS incorporates a comprehensive theory-based assessment approach. It is designed to incorporate key scales from several of the most informative theoretical explanations of crime and delinquency including General Theory of Crime, Criminal Opportunity/Lifestyle Theories, Social Learning Theory, Subculture Theory, Social Control Theory, Criminal Opportunities/Routine Activities Theory and Strain Theory.

On what population was the risk tool 'normed'?

COMPAS offers several norm group options at system configuration including community corrections, jail populations, prison inmates, and a composite norming group representing all of the above. Each agency, with guidance from Northpointe, decides which norm group(s) they wish to score the assessment against. In addition, COMPAS is normed to male and female populations as well. As sufficient data become available, the Northpointe R&D team can work with the site to design samples that will generate locally relevant norms.

Has your tool been evaluated by an independent source?

COMPAS psychometric data has been peer-reviewed and published in a number of professional journals including Criminal Justice and Behavior January 2009 and Journal of Quantitative Criminology June 2008. COMPAS psychometric reports are available from Northpointe upon request.

Is COMPAS valid?

The General Recidivism Risk scale was developed in a sample of presentence investigation (PSI) and probation intake cases. The outcome was any arrest (misdemeanor or felony) within two years of the intake assessment. We recently validated the General Recidivism Risk scale in a sample of 2,328 PSI and probation intake cases. We fit survival models in which the Recidivism Risk scale predicted any offense, person offenses, and felony offenses. The AUCs ranged from .68 to .71 in the full sample. The follow-up time ranged from about one year to four years (Brennan, Dietrich, & Egret, 2009). These predictive results meet or exceed results for other similar assessments.

The Violent Recidivism Scale was developed using survival modeling in a sample of probation intake and PSI cases to predict person offenses. The follow-up times ranged from one year to four years. We have evidence of the predictive validity of the Violent Recidivism Risk scale for person offenses in New York Parole reentry pilot [2008] (n=800, AUC=.73, survival follow-up = 2 years) and New York Probation study [2009] (n=5,889, AUC= .72, survival follow-up=2 years). These predictive results meet or exceed results for other similar assessments.

We have evidence of predictive validity of the Violent Recidivism Risk scale for <u>return to prison</u> for felony person nontechnical violations [2007] (n=20,898, AUC=.67, survival follow-up time=1 year).

There is good evidence from these studies that the risk scales predict recidivism outcomes that occur between one and two years from assessment (probation intake, PSI, reentry).

How well does it predict violence?

In the most recent outcomes study conducted on the COMPAS Risk of Violence scale on a New York parole population 2009 – AUC's were .73. This is consistent with other outcomes studies we have conducted and meets or exceeds AUC's from other assessment tools.

Does the tool work well with all populations (female, mentally disordered, different races, etc.)?

The tool works well between genders and ethnicities. As with any assessment tool, there are some limitations regarding appropriateness for mentally ill offenders. While COMPAS is widely used across several state Department of Corrections systems which include offenders with varying degrees of mental disorders it is advised in training that discretion may need to be used as to the appropriateness or accuracy of any assessment on a chronically mentally ill person. In some cases no standard assessments may be applicable and may need to rely on the clinical community.

Northpointe has developed an automated risk and needs assessment specifically for women offenders. Comprehensive in its coverage of risk and needs factors it is designed to take advantage of the most recent research on characteristics most strongly linked to behavior in women. These factors include economic marginalization, trauma, victimization and abuse, mental health, dysfunctional intimate relationships, self-efficacy and parental stress.

To what extent can the tool be used to make treatment assignment decisions (for substance abuse or mental health services, for example?

COMPAS is designed to support treatment, programming and case management decisions. The various COMPAS reports describe the offender's risk and criminogenic needs. The fundamental task is to "connect the dots" among the various factors and develop a more integrated and coherent interpretation of each person's support needs. The meaning of any "risk factor" will clearly depend on what other risk factors are present, as well as the broad pattern of criminal history of the respondent. This may involve different levels of complexity in the patterns that are being examined. Several considerations in terms of selecting risk factors as treatment goals may apply:

- Which risk factors are easily alterable?
- Which risk factors are most strongly linked to the person's criminal behavior?
- What should be the sequence of tackling the risk factors, i.e., must certain factors be logically developmentally addressed first?
- How stable and "long-term" is each risk factor?

☐ How does each factor relate to other factors?

The assessment results auto-populate the COMPAS case plan template to facilitate the "connecting of the dots" and to assist in the development of more consistent and appropriate treatment interventions in the plan for each offender. Types of interventions, e.g. outpatient versus residential, are sometimes determined by using secondary narrow band assessments (ASI, etc.) and the availability of programming in the community.

If the information source is the offender, can we rely on the responses?

Many factors may distort the data and introduce errors in either the self-report data or the official criminal records. COMPAS will produce alerts regarding the possibility of such responding by including a lie test and a random responding and inconsistency test.

The Defensiveness Test

This includes several bizarre and very unlikely items, which collectively aim to identify offenders who are being defensive, or attempting to avoid being self-revealing.

Random Responding Test

This is a second validity test that should be evaluated prior to accepting the offender results at face value. This aims to assess careless, inconsistent responding that may verge on sabotage.

The Inconsistency Test

The inconsistency test is examines a person's predicted risk levels with his general social history and the profile of risk factors. In general there should be reasonable coherence between the actual criminal history (of both involvement   and violence) and the seriousness and number of high risk factors. If there is extreme inconsistency between these, there may be a danger of false reporting, missing data, and either over-classification errors or under-classification errors. This test will identify such anomalies,   and generally recommend that such cases be given some more specific interviews and data collection to uncover more facts. Thus these cases would clearly require some additional scrutiny.

These validity tests are presented as alerts, and not on any percentile levels. They will simply "flag" the person as potentially having a validity problem. These tests are calibrated to "flag" the top 5% to 10% of the population whose answers are suspect. Details of these tests are given in the Statistical Report for COMPAS.

How can a county be confident that the tool is accurately scoring its population? What would trigger questions of accuracy or alert it to a potential problem?

We use a quality assurance protocol in which the software calculations are compared with calculations in an external statistical package. The testing takes place between our IT Division and R&D Division. The test compares raw scale scores and deciles scores calculations to identify and report anomalies. In addition, the IT division has extensive quality assurance protocols for testing other aspects of the software. We also conduct norm studies in which the scale distributions in the agency data are compared to the scale distributions in the normative data in the software. Some of these distributions can be monitored over time with ad hoc report generation in the software by the agency. For example, if in the norm study we find that the (low, med, high) split on the recidivism risk scale is 40-30-30, this split can be monitored over time. We may also conduct redundancy testing of the software calculations if that level of assurance is required. Finally, we are working on an internal diagnostic procedure that routinely compares software calculations with stored calculations in a test dataset.

How are cut-off scores for risk levels decided?

The COMPAS scale scores are transformed into deciles. Decile scores rank the scale scores of a normative group in ascending order and then dividing these scores into ten equal sized groups obtains deciles. Deciles range from 1 (lowest) to 10 (highest). These scores thus proceed in roughly 10% steps from lowest to highest (1 through 10).

A decile rank of 1 indicates that the scale score is in the lowest 10% of all scores in the normative group. A decile rank of 2 places the scale score above 10% and below 20% of the scores, and so on, up to a decile of 10, which places the scale score in the top 10% of all scores in the normative group. The decile rank is used to locate a particular offender's scale score in relation to the scale scores of offenders in the normative group. In the current version of COMPAS, scale scores can be referenced to the scale distributions of eight normative groups: (1) male prison/parole, (2) male jail, (3) male probation, (4) male composite, (5) female prison/parole, (6) female jail, (7) female probation and (8) female composite.

What is the proper role of discretion in the use of the tool?

COMPAS provides for the ability to "override" or deviate from typically policy regarding the management and response to risk and needs. Within the COMPAS Screener Judgment tab, for example, several questions allow the screener to introduce their own overall conclusions and judgments about major risks/needs. Ultimately, a final decision is made by the criminal justice professional regarding risk levels. In this decision the statistical procedures of COMPAS remain in a decision support capacity. Such statistical or actuarial procedures are always probabilistic and cannot claim to be without error. Thus, whenever the probation officer or criminal-justice professional reaches a decision that is different from that of the statistical procedure, he or she has the option to override the statistical method and introduce a recommendation to place the person in a different risk level than that recommended by the statistical method. Due to either aggravating or mitigating circumstances not detected by COMPAS one may expect override rates of from 8% to 15%.

The set of reasons that may warrant a change of risk level that is higher than that recommended by the statistical procedure are sometimes referred to as "Aggravating Factors". These include additional information that may be available to the officer that would render a particular offender a higher risk than recommended by the statistical method. Aggravating factors often include extraneous information that makes the offense more serious, more violent, or may appear to make the offender more culpable, more resistant to treatment, and so forth.

Downward overrides may also be made by the criminal justice professional. These are often based on mitigating factors. These include factors that may excuse the offender, reduce the seriousness of the crime, or raise the likelihood of a pro-social adjustment. An override may also be appropriate for an offender scoring high on Risk of Recidivism when the current arrest/conviction (an anomaly) is several years since the last arrest/conviction (and who has not been incarcerated for a lengthy period), e.g. an older offender with the last arrest/convictions from his youth.

Is it important that the tool be validated at the local level?

Northpointe has conducted numerous local validation studies around the country. In each case we found no "statistically significant" deviations from the national norm group studies. COMPAS allows for the local setting of the scale "cut points" to reflect local policy and tolerance of risk, e.g. rural communities may deviate from the COMPAS default cut points violence from to 7 to reflect a more conservative tolerance for that risk while in metropolitan urban areas they would keep it at 8 or even consider moving it to 9. With this said, it is always prudent to have your own local validation study for use in case of any court challenges. Northpointe offers local validation and outcome study services through our R&D Division.

Please explain the components of your product that identify it as a fourth generation assessment tool?

Fourth generation (4G) assessment tools are characterized by: (1) a broader selection of explanatory theories, (2) broader range of risk and need factors (content validity), (3) incorporation of the strengths/resiliency perspective, (4) more advanced statistical modeling, (5) seamless integration of the need/risk domain with the agency management information system (MIS) and criminal justice databases and web-based implementation of assessment technology. Such integration allows users to track offenders from intake to case closure to support sequential case-management monitoring, information feedback, and decision-making. COMPAS has incorporated all of these features (interested readers may obtain full details in Brennan, Dieterich, and Oliver (2007)). Regarding fourth generation (4G) assessments, Andrews, Bonta, and Wormith (2006) identified a few instruments as representing this category including COMPAS.

What are the limitations of the risk tool?

There are a number of interpersonal nuances that COMPAS cannot pick up on, such as demeanor, eye contact, body language, etc. Also, COMPAS is a "broad-band" assessment covering 22 risk and need domains and is not intended to serve as a "narrow-band" assessment for substance abuse, mental illness or sex offending. However, various secondary assessments are provided in the COMPAS software that provide a more in-depth set of information for a particular need area.

Ease of Administration: Simple to Use and Interpret

What training is required to use the tool? Is it simple enough for widespread use?

COMPAS is designed to be user-friendly, even for those with limited computer experience and education. It is in widespread use in prison settings, in jails, and in probation and parole offices. Our standard two-day training provides end-users with a practical ability to use the software, interpret the assessment results, and create case plans that address the highest-scoring needs. Additional training options and curriculums are available to meet the needs of your agency including: advanced COMPAS training covering criminological theory (pathways to crime) and the link to the offender typology assignments, gender responsive training for working with the female population, motivational interviewing, etc.

What is the degree of inter-rater reliability? (Similar scoring by different interviewers)

We purposely designed COMPAS to minimize the risk of inter-rater reliability problems found in other assessments, e.g. LSI/R, by designing test administration to not require semi-structured interviewing. The COMPAS assessment is basically broken down into two sections – Official Records data (current offense/criminal history) and offender self-report. The self-report questions are not "open ended" and subject to the interpretation of the screener. This approach significantly limits the concern of inter-rater reliability.

What is the role of discretion or professional/clinical judgment in the use of the tool?

This is addressed in the Override response above. COMPAS is a "decision support" tool. It is intended to help guide the decision maker in making appropriate case supervision, treatment, and placement decisions.

How often should the offender be re-assessed?

Reassessment of an offender is left to the discretion of the agency. While COMPAS allows for reassessment over time and the "overlay" of previous bar chart reports upon the latest report – its use depends on several factors including agency case management goals and objectives, average time an offender is under supervision/on the caseload, staff resources, and the purpose for conducting reassessments. Northpointe suggest that if reassessments are conducted they may best be done at least eight to 12 months after the initial assessment. This to better measure true change in the client's life style and social supports as compared to changes the system has foisted upon them, e.g. getting them into treatment, getting them a job, place to stay, etc. – time allows for determining whether they can stay sober, keep a job, maintain stable housing, etc. In addition, alternatives to reassessing in COMPAS include keeping the case plan current (monitoring and recording progress, adding new goals and tasks as primary needs are addressed e.g. modifying the case plan based on progress or lack thereof with the offender) and using the COMPAS Case Supervision Review instrument as a short tool to review and modify the supervision assignment level every six months.

Is the tool easy to score? Is the scoring automated?

Reassessments are conducted using the same as software mechanics as performing a new assessment. In a reassessment, the current offense and all static information previously entered in the last assessment come forward – only the dynamic questions require re-answering. You may also elect to reassess using all 22 scales or any subset of scales that may best support your re-assessment decision support thus shortening the length of the reassessment.

The Case Supervision Review instrument is a 23 item point and click response questionnaire that is completed by the case manager/supervising agent and does not need the client present. It is automatically scored and produces a supervision adjustment recommendation. The instrument is intended to be an objective decision support tool to guide adjustments in the current supervision level.

What are the features of the case management package? What types of reports does it generate?

COMPAS currently allows for the monitoring and tracking of program referrals, enrollments, termination dates and reasons, service providers and doses of treatment. Combined with the rest of the COMPAS database this allows for conducting process evaluations, program performance and outcomes analysis, service gap analysis, and to assist in determining which programs work with which offender populations. Numerous roster or statistical reports can be created thru the COMPAS Quick Charts feature or our new ad-hoc report generator.

The COMPAS database may also be exported to third party spreadsheets and stat packages. In addition, we are in beta testing of the new COMPAS Case Manager module that will offer comprehensive offender case management tracking including court activity, drug court case management, scheduling, accounting, bench warrants, violations, supervision condition tracking, event logs, drug testing, etc.

Cost

What is the cost? How determined?

Software licensing is based on the desired COMPAS package (Basic, Standard or Advanced) and is priced on a per user annual unlimited use license. Various trainings from which to choose, hosting services, project consultancy, local validation studies, outcomes studies, etc., are all offered as individual optional services from which you may pick and choose to best match your agency's needs and budget.

Training costs?

Training costs vary somewhat depending on the type of training desired. Generally, training instructor fees are $1,200 to $1,300 per day plus travel and materials reimbursement.

What customer service and support services included?

Northpointe offers comprehensive customer support and software technical support 8 to 5 business days EST. Emergency service is also available. Costs for these services are generally covered under the software maintenance and support line item.

Technical and Support

Do you provide a fully hosted solution complete with vendor upgrades, maintenance, security, back-up, reports, etc.?

Northpointe handles all application upgrades and support. The local IT department is responsible for local security policies (login and passwords) and data backups. We will provide all the guidance and support necessary to walk your folks thru these issues.

Please describe this program and how much it costs?

SQL Server handles all backup needs and does not require further software purchases.

Describe the support program that accompanies this and its costs?

No support program is needed.

Describe our ability to customize the hosted solution?

There are multiple customization opportunities from adding customized forms to interfacing with your current IMS systems. At the system manager level you may customize COMPAS drop down help text and tweak COMPAS question language terms. Customizations usually require a more in depth discussion on your specific architecture and needs.

Describe our ability to customize reports from the hosted solution?

COMPAS provides both a Quick Charts and Ad-Report Generator feature. This allows user to easily custom build and save an unlimited number of rosters, statistical summaries and trend charts. The results of these reports as well as the entire COMPAS database may also be exported to other applications e.g. Excel, Word, various statistical packages, etc. for further customization.

Can we import or export data to/from the hosted solution? What format is required?

Yes, our standard hosted interface to import/export data is using SOAP Web Services.

Local - if we choose to not to use a hosted but rather local installed solution:

Describe the software, how it is installed and to what its installed?

The application is a web application that is installed under IIS with a SQL Server database. Installation is usually a manual process of setting up IIS directories and configuring to fit your hosted environment.

Describe a single solution versus a network solution?

Being a web application they are both the same solution.

What professional services do you offer to install and configure? How much are these services?

Installation and configuration are included in the application purchase. This is assuming Northpointe is granted remote access. Onsite installations require additional costs. Our standard rate is $150/hr.

Describe technical support for a local solution and if we need to train a system administrator to provide local application support?

Technical support is provided via remote connection, email and phone. System administrators only need a basic understanding of IIS, network security and SQL Server. Application support is provided by Northpointe.

Can we import or export data to/from the hosted solution? What format is required?

Yes, our standard interface to import/export data is using SOAP Web Services. We also support customized import routines to import/export data in excel and .CSV formats in locally hosted scenarios.