LS/CMI
Level of Service/Case Management Inventory

Risk/need assessment system for offender treatment planning, placement, and case management

D. A. Andrews, Ph.D., J. L. Bonta, Ph.D., & J. S. Wormith, Ph.D.

Interview/professionally completed; 11 sections

Ages 16 and older

Variable administration time (depending on components used)

B-level user qualification

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Aim

The LS/CMI™ system is a comprehensive measure of risk and need factors, as well as a fully functional case management tool. It is designed to assist professionals in management and treatment planning with adult and late adolescent male and female offenders in justice, forensic, correctional, prevention, and related agencies. By combining risk assessment with case management in a single system, the LS/CMI gives the professional all the necessary tools in a single application.

The LS/CMI system was developed to reflect the expanding knowledge base about offender risk assessment that has emerged since the publication of the Level of Service Inventory—Revised (LSI-R™). The instrument was also updated to assist correctional professionals with the growing list of tasks being assigned to them, namely, a wider range of recommendations to make and intervention goals to manage. The revision includes refining and combining the 54 LSI-R items into 43 LS/CMI Section 1 items while maintaining the item content (for current LSI-R users, LSI-R scores can be converted to LS/CMI scores). Assessors can also indicate areas of offender strength, which could serve as protective factors. Ten additional comprehensive sections have been added. Several of these sections assess mitigating or aggravating factors that can affect risk/need levels, such as a section about concerns specific to incarcerated offenders. Other sections document a professional or administrative override. The final sections deal exclusively with case management considerations, including assessing responsibility concerns to help offenders rehabilitate. See the Instrument section for more details.

Theoretical Background

The LS/CMI system is just the latest addition to the LSI family of assessments. Previously published assessments in the family have included the widely used Level of Service Inventory—Revised (LSI-R™), the shorter Level of Service Inventory—Revised: Screening Version (LSI-R:SV), and the Youth Level of Service/Case Management Inventory (YLS/CMI) for use with offenders aged 12-17. User consultation was paramount in this revision. The LS/CMI system builds on the LSI success to create a comprehensive risk/need and case management system that has been validated with a wide range of offenders.

Risk/need assessments have undergone many transformations since their inception. Classifying offenders initially relied on unstructured clinical judgment. Then, with the first generation of risk/need assessments, assessors began to consider mechanically gathered static predictors. LS/CMI Sections 1.1 (i.e., General Risk/Need Factors—Criminal History) and 2.2 (Specific Risk Need Factors—History of Perpetration) are comprised of static factors that have a demonstrated relationship to risk.

Second-generation risk assessments brought advances by considering dynamic (changeable) predictors in addition to the static risk factors. Dynamic factors can be changed through intervention, programming, and treatment, or as a result of environmental, social, or internal experiences. Dynamic risk items form the majority of Section 1 (all except the Criminal History items).

The third generation of risk assessments integrated risk and need components. The LSI-R is one example of this type of assessment, since it identifies criminogenic needs as well as producing a risk level estimate.

The LS/CMI is a true fourth-generation risk assessment. As can be seen in the figure on the preceding page, and as proposed by Andrews and Bonita (2003), it includes integrated general and specific risk/need components, addresses other client issues (e.g., social, health, and mental health), and responsibility concerns (e.g., cultural concerns or communication difficulties), and includes a case management component. These factors all contribute to client responsibility. Through the use of intervention programs, the offender’s needs can be addressed and the offender’s risk of recidivism can be reduced.

User Qualifications

The LS/CMI assessment can be easily used by counselors, physicians, psychologists, and professionals, including probation and parole officers, institutional case management officers, youth workers, social workers, and other trained professionals and para-professionals. Although many users may be professionals with training in psychological assessment or a related discipline, the administration of the LS/CMI does not necessarily require the completion of courses in psychological testing and measurement at a postsecondary level.
A Comprehensive Model of Risk/Need Assessment in Relationship to the Principles of Effective Correctional Intervention

For LS/CMI Sections 1 through 8, one of several conditions must be met for a user to be qualified. The test administrator must either have MHS b-level qualifications (i.e., have completed graduate level courses in tests/measurement or have received equivalent documented training), or must be trained by an MHS- or author-approved trainer/training program. If neither of these qualifications is met, then the administrator must be supervised by an individual who meets one of these two conditions (i.e., b-level or LS/CMI-trained).

Specifically, either the test administrator or his or her supervisor should have an understanding of the basic principles of psychological testing, and especially psychological test interpretation. Although the LS/CMI can be easily administered and scored by individuals with a wide variety of backgrounds, the ultimate responsibility for interpretation must be assumed by an individual who realizes the limitations of such screening and testing procedures. It is also recommended that administrators or their supervisors are familiar with the standards for educational and psychological testing jointly developed by the American Educational Research Association, the American Psychological Association, and the National Council on Measurement in Education (AERA, APA, & NCME, 1999). Administrators/supervisors whose only exposure to testing is gained from the LS/CMI User's Manual will not be qualified to interpret an LS/CMI assessment.

Sections 9 through 11 of the LS/CMI system can be completed by staff who have received training in case management from their respective correctional agency. Therefore, it is the responsibility of the correctional agency to determine which staff members of the organization are authorized to complete Sections 9 to 11.
Norming
Extensive LS/CMI normative data is supplied for Section 1: General Risk/Need Factors. The other sections of the assessment provide qualitative data ideal for use in override decisions and case management planning.

After considerable consultation with LSI-R users and a review of the LS/CMI data, it was determined that LS/CMI norms and descriptive statistics on a variety of legally and demographically defined offender groups would be most helpful. The LS/CMI ColorPlot™ Profile includes cumulative percentages for four groups, taking into account both the type (i.e., inmate or community) and gender of the offender, as shown in the table below. The North American adult normative sample is based on data from community and institutional men and women from both Canada and the United States (N = 135, 791). Additionally, young offender cumulative percentages are available in the LS/CMI User’s Manual. Complete normative information and details of the samples are described in the manual.

Components
The LS/CMI system contains several components:

- The LS/CMI User’s Manual contains scoring criteria, interpretive information, detailed case studies, normative data, reliability and validity information, and information on LS/CMI usage in other countries, such as the UK and Singapore.

- The LS/CMI Scoring Guide is a convenient reference for sites with multiple assessors, providing scoring criteria, interpretive information, and one case study.

- The LS/CMI Interview Guide includes comprehensive questions designed to obtain information needed for completing Sections 1 to 5 of the QuikScore™ Form.

- The LS/CMI Offender History Form gathers information about the offender’s past and present criminal behavior.

- The LS/CMI QuikScore Form contains Sections 1 to 8, described in the Instrument section, which form the core of the risk/needs assessment.

- The LS/CMI ColorPlot™ Profile provides cumulative percentages for male and female community and institutional offenders.

- The LS/CMI Case Management Protocol Form presents sections 9 to 11 and provides an opportunity to set criminogenic and noncriminogenic goals, then record offender progress. Two refills are available for this component. The LS/CMI Program Target and Intervention Plan provides a refill for Section 9, and the LS/CMI Progress Record is a refill for Section 10.

Instrument
The LS/CMI system’s multicomponent evaluation involves obtaining information from many sources about many aspects of the offender’s life. Offenders are first interviewed to gather information so the assessor can accurately complete the assessment. The LS/CMI Interview Guide is highly recommended as an aid in this process. Its questions elicit specific information relevant for completing each LS/CMI item in Sections 1 to 5. A file review of police reports and other relevant data should be used to confirm information obtained from the offender. Interviews with the offender’s friends and family members can complement the assessment process.

Once offender information has been gathered, the assessor can then begin the assessment process. The LS/CMI Offender History Form is a convenient way to summarize offender data, including previous and current convictions. The LS/CMI QuikScore™ (software Sections 1–8) is the core of the assessment process, containing eight sections that help determine the offender risk/need level. Section 1: General Risk/Need Factors contains 43 items used to calculate the risk/need score (the LS/CMI section 1 score), which is comparable to the LSI-R Total score. Assessors also have the opportunity to mark subcomponents as strengths to highlight positive offender qualities.

Section 1 contains the following subcomponents:

- Criminal History (8 items)
- Education/Employment (9 items)
- Family/Marital (4 items)
- Leisure/Recreation (2 items)
- Companions (4 items)
- Alcohol/Drug Problem (8 items)
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- Procriminal Attitude/Orientation (4 items)
- Antisocial Pattern (4 items)

Researchers have termed these areas the "big eight" because of their well-evaluated predictivity and applicability. Once these items have been rated, an offender's score is compared to the normative group by plotting the score on the ColorPlot™ Profile. Norms are provided for gender and type of offender (i.e., community, institutional). Tables are also presented showing the probability of inmate and community offenders recidivating, based on offender risk level. Note that LSI-R scores can easily be converted to LS/CMI Section 1 scores to compare assessments. The remaining sections are not scored; instead, they yield valuable qualitative offender data, such as past victimization that may have influenced behavior. Items also consider concerns relevant to providing offender programming, such as cultural concerns and the offender's intellectual capacity. The additional information is especially valuable when considering overriding the score-based risk/need level.

Once the initial risk/need level is determined and offenders have been classified, the LS/CMI Case Management Protocol (Sections 9 to 11) can be used to establish treatment goals and track offender progress.

The 11 LS/CMI sections function together to comprehensively assess offender risk/need levels and track offender progress over time. The content of all 11 sections is listed in the following table.

<table>
<thead>
<tr>
<th>LS/CMI Section Functions</th>
<th>Content</th>
</tr>
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<tbody>
<tr>
<td><strong>Section</strong></td>
<td><strong>Content</strong></td>
</tr>
<tr>
<td>1. General Risk/Need Factors</td>
<td>Total Risk/Need score</td>
</tr>
<tr>
<td>2. Specific Risk/Need Factors</td>
<td>Personal problems with criminogenic potential (e.g., racist behavior), history of perpetration</td>
</tr>
<tr>
<td>3. Prison Experience—Institutional Factors</td>
<td>Crucial institutional considerations including history of incarceration and barriers to release</td>
</tr>
<tr>
<td>4. Other Client Issues</td>
<td>Supplementary psychological and physical health, financial, accommodation, and victimization items</td>
</tr>
<tr>
<td>5. Special Responsivity Considerations</td>
<td>Dominant responsivity considerations from clinical research and correctional opinion</td>
</tr>
<tr>
<td>6. Risk/Need Summary and Override</td>
<td>Summarizes risk/need scores and allows for overriding score-based risk/need level</td>
</tr>
<tr>
<td>7. Risk/Need Profile</td>
<td>Graphically summarizes the Section 1 subcomponent and risk/need level scores</td>
</tr>
<tr>
<td>8. Program/Placement Decision</td>
<td>Record of major classification decisions (e.g., program placement)</td>
</tr>
<tr>
<td>9. Case Management Plan</td>
<td>Lists criminogenic needs, non-criminogenic needs, and special responsivity considerations</td>
</tr>
<tr>
<td>10. Progress Record</td>
<td>Log of activities designed to measure change resulting from case management strategies</td>
</tr>
<tr>
<td>11. Discharge Summary</td>
<td>Summarizes information useful if the offender returns to custody or community supervision</td>
</tr>
</tbody>
</table>
Format
Two LS/CMI formats are available: paper-and-pencil (using a QuikScore™ Form) and software. It is recommended that users of both the paper-and-pencil and software methods complete the LS/CMI Interview Guide with the offender before rating the offender.

Four components are involved in a paper-and-pencil LS/CMI assessment.

1. The offender’s past behavior is summarized, as are the details of the current offence(s), on the LS/CMI Offender History Form.
2. Section 1 is scored on the MHS QuikScore™ Form, which contains all of Sections 1 to 8, described previously. The LS/CMI Section 1 results transfer through to the scoring grid, allowing for easy score calculation. (Sections 2 to 8 are conveniently attached, though are not scored.)
3. Section 1 scores are plotted on the LS/CMI ColorPlot™ form.
4. The LS/CMI Case Management Protocol is completed, allowing for supervision planning and tracking of offender progress. Refill sheets for sections 9 and 10 are available.

All 11 LS/CMI sections can also be completed by the user using MHS software, which can be purchased on a per-use basis, site-licensed, or customized to fit with your database. Sections 1 to 8 are summarized in a Profile Report, which includes profiles of the offender’s Section 1 scores with interpretive information and ratings for the remaining sections. The LS/CMI Case Management Protocol components are included in a separate report. The LS/CMI for Windows® software is part of the MHS Professional Tool Suite. This sophisticated software technology features MHS SmartLink™, a client-management platform (refer to the MHS Professional Tool Suite brochure, available from MHS, for more information).

Scientific Validation
Extensive scientific validation has been conducted on the LS/CMI’s reliability and validity. The manual presents detailed data on various populations, including Canadian (federal and provincial), U.S., British, Singaporean, and young (16- to 17-year-old) offenders. The LS/CMI User’s Manual documents the following psychometric data:

- Internal consistency reliability
- Inter-rater and test-retest reliability
- Parallel forms reliability
- Standard error of measurement
- Predictive validity
- Concurrent validity

Three case studies serve as examples of the LS/CMI’s applicability with various offender populations.

Translations
Using a worldwide network of over 400 translators with backgrounds in psychology and medicine, MHS produces accurate translations of its psychological assessments. Currently, the LS/CMI assessment is available in English only. For information about the availability of the LS/CMI in other languages, please contact the MHS Translations Department at translations@mhs.com.

Supporting Literature

Level of Service/Case Management Inventory

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LS/CMI Authors

Dr. D. A. Andrews is a professor of psychology and a member of the Institute of Criminology and Criminal Justice at Carleton University. He received his doctorate degree from Queen’s University and is a member of the College of Psychologists of Ontario. His research interests are in the area of criminal justice, corrections, and other human service areas. He also has an interest in the social psychology of criminal knowledge. Dr. Andrews is the author of numerous books, monographs, technical reports, and articles. He is coauthor of Assessing the Youthful Offender: Issues and Techniques with Dr. Robert Hoge (Hoge & Andrews, 1996), and coauthor of The Psychology of Criminal Conduct (Andrews & Bonta, 2003) and the Level of Service Inventory-Revised with Dr. James Bonta.

Dr. James Bonta was a psychologist at the Ottawa-Carleton Detention Centre, a maximum security remand centre for adults and young offenders, and later became Chief Psychologist at that institution. During his 14 years at the detention centre, he established the only full-time psychology department in a jail setting in Canada. In 1990, Dr. Bonta joined Public Safety and Emergency Preparedness Canada (formerly Solicitor General of Canada), and he is presently Director of Corrections Research. Throughout his career, Dr. Bonta has held various academic appointments and professional posts. Presently, he is a member of the Editorial Advisory Boards for the Canadian Journal of Criminology and Criminal Justice and Behavior. He is also a Fellow of the Canadian Psychological Association. Dr. Bonta has also published extensively in the areas of risk assessment and offender rehabilitation.

Dr. J. Stephen Wormith is Chair of Forensic Psychology in the Psychology Department at the University of Saskatchewan. He is also Adjunct Professor at both Carleton University and the University of Ottawa. Formerly, he was Psychologist-in-Chief for the Ontario Ministry of Community Safety and Correctional Services and Deputy Superintendent (Treatment) at the Rideau Correctional and Treatment Centre. Dr. Wormith’s research activities have concentrated on the assessment, treatment, and therapeutic processes of offenders, including various special offender groups, sexual offenders, and mentally disordered offenders. He is also active in the voluntary sector as president of Crime Prevention Saskatchewan, vice-president of the Canadian Training Institute, and the Canadian Psychological Association’s representative in the National Association Active in Criminal Justice.
Complements for LS/CMI

- Clarke Sex History Questionnaire for Males-Revised (SHQ-R)
- Hare Psychopathy Checklist-Revised (PCL-R™): 2nd Edition
- Jesness Behavior Checklist (JBC)
- Jesness Inventory-Revised (JI-R)
- Level of Service Inventory-Revised: Screening Version (LSI-R:SV)
- Paulhus Deception Scales (PDS)
- Spousal Assault Risk Assessment Guide (SARA)
- Youth Level of Service/Case Management Inventory (YLS/CMI™)

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