The RSS Professional Pathway

Trevor Lewis PhD, CStat, CSci, PStat
Member of the RSS Professional Affairs Committee

Professional Statisticians’ Forum meeting
at Errol Street
27th March 2018
Trevor Lewis: career to-date

University of Bradford
- Lecturer in Mathematical Statistics 1974/82

Pfizer (multinational pharmaceutical company)
- Consulting Statistician 1982/90
- Head of Biometrics 1990/2000
- VP Development Operations 2000/04

TLwise Consulting Ltd
- Director and consulting statistician 2004 onwards
- Primarily providing advice on design, analysis and reporting of clinical trials

Integration & re-engineering of Pfizer global biometrics organisation, processes and systems 1989/2001

Pharma industry-wide stats expert/working groups (ABPI, EFPIA, ICH) 1991/2001

Royal Statistical Society
VP and Chair of Professional Affairs Committee 1998/2000, 2011/12

Pfizer mergers & acquisitions (Warner-Lambert, Pharmacia) 2000/03

Science Council
Chair of CPD learning group 2011-
Member of Registration Authority 2012-
Professionalism

Expectations of a professional
- Being trustworthy, ethical, up-to-date and competent

Adhering to a Code of Conduct
- Working in the public interest
- Obligations to employers/clients
- Obligations to the profession and the Professional Body
- Professional competence & integrity

Model of ‘Professionalism in Science’ developed by the Science Council
- Technical competence
- Ethical competence
- Engagement in CPD and reflective practice
True Professionalism:
the courage to care about your people, your clients and your career
by David H Maister (Simon & Schuster, 1997)

The courage to care about your people, your clients and your career

Losers  Cruisers  Dynamos
### Losers
- Do not meet the basic standards of quality, client service and hard work
- Are working in a ‘dying practice’ area
- Have disruption in their personal life

### Cruisers
- Fully competent, work hard, do good work, take care of their clients
- Experts at repetitive work, but not going anywhere
- Do well for the time being living off existing skills; will be overtaken by others
- Have a job, not a career

### Dynamos
- Have a personal strategic plan
- Work to learn something new, continually adding new skills and knowledge
- Find ways to get out of the flow of repetitive work
- Pursue active career development and continuous self-improvement
Support network

- The professional statistician
- The employer
- The professional body (RSS)
What the support network provides

<table>
<thead>
<tr>
<th>Employer</th>
<th>Professional body</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The opportunity to practice</td>
<td>• Professional standards</td>
</tr>
<tr>
<td>• A career pathway within the organisation</td>
<td>• A professional pathway recognised by awards</td>
</tr>
<tr>
<td>• A network of colleagues focused on business sector</td>
<td>• A network of colleagues focused on discipline</td>
</tr>
<tr>
<td>• Development to advance your value to your employer</td>
<td>• Development opportunities focused on your career needs</td>
</tr>
<tr>
<td>• Annual performance appraisal &amp; goal setting</td>
<td>• Periodic professional appraisal (revalidation)</td>
</tr>
<tr>
<td>• A transient &amp; variable presence</td>
<td>• A permanent &amp; consistent presence</td>
</tr>
</tbody>
</table>
The RSS professional pathway

**Education in Statistics**
- RSS accredited degree
- Degree(s) that meet the RSS Level6/7 standard
- GradStat

**Statistical practice**
- Professional Code of Conduct
- Training & Experience (approx 5 years)
- CStat/CSci

**Career progression**
- Adherence to Code of Conduct
- Compliance with CPD Policy
- Revalidation - retaining CStat/CSci status
Pathway to Chartered Statistician (CStat) status

www.rss.org.uk/cstat

<table>
<thead>
<tr>
<th>Standard route</th>
<th>Competency route</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.</strong> Statistical education to the GradStat standard (RSS Level 6/7)</td>
<td><strong>1.</strong> Formal statistical education does not meet GradStat standard (RSS Level 6/7)</td>
</tr>
<tr>
<td><strong>B.</strong> Refereed evidence of professional training and experience (about 5 years)</td>
<td><strong>2.</strong> Standard route B&amp;C</td>
</tr>
<tr>
<td><strong>C.</strong> Professional development in line with RSS CPD Policy for the last 2 years</td>
<td><strong>3.</strong> Verified additional information on supplemental formal training and competency achievement in professional practice</td>
</tr>
</tbody>
</table>

Professional register: [www.rss.org.uk/professional-registers](http://www.rss.org.uk/professional-registers)
Pathway to Chartered Scientist (CSci) status

www.rss.org.uk/csci

<table>
<thead>
<tr>
<th>Background info</th>
<th>Additional requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>• An award of the Science Council that the RSS is licensed to offer to CStats</td>
<td>• A Masters level degree (or an M-level report)</td>
</tr>
<tr>
<td>• About 200 professionally active CStats also hold CSci award</td>
<td>• Evidence of achievement of 15 competencies in professional practice:</td>
</tr>
<tr>
<td>• Can apply simultaneously for CStat &amp; CSci via the same online system</td>
<td>– Application of knowledge and understanding (3)</td>
</tr>
<tr>
<td></td>
<td>– Personal responsibility (4)</td>
</tr>
<tr>
<td></td>
<td>– Interpersonal skills (3)</td>
</tr>
<tr>
<td></td>
<td>– Professional practice (3)</td>
</tr>
<tr>
<td></td>
<td>– Professionalism (2)</td>
</tr>
</tbody>
</table>

Register: [www.sciencecouncil.org/the-professional-registers/search](http://www.sciencecouncil.org/the-professional-registers/search)
Retaining professional status (CStat/CSci) The basis of revalidation

Professionals are Trustworthy, Ethical, Up-to-date & Competent

Adherence to the Society’s Code of Conduct
- Working in the public interest
- Obligations to employers/clients
- Obligations to the profession
- Professional competence & integrity

Compliance with the Society’s CPD Policy
- Maintenance, improvement and broadening of knowledge and skill
- Maintenance of records of CPD activities and reflective practice
## Revalidation processes

<table>
<thead>
<tr>
<th>CStat only</th>
<th>CStat &amp; CSci</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong><a href="http://www.rss.org.uk/cstat-revalidation">www.rss.org.uk/cstat-revalidation</a></strong></td>
<td><strong><a href="http://www.rss.org.uk/csci-revalidation">www.rss.org.uk/csci-revalidation</a></strong></td>
</tr>
<tr>
<td>• Revalidation normally takes place on a 5-year cycle for those who are professionally active.</td>
<td>• Revalidation takes place annually and serves revalidation needs of both awards.</td>
</tr>
<tr>
<td>• If <strong>not</strong> professionally active can retain CStat without undertaking revalidation; and professional register indicates career break, career change or retired.</td>
<td>• If (permanently) <strong>not</strong> professionally active need to relinquish CSci status.</td>
</tr>
<tr>
<td>• Submit a declaration &amp; CPD summary on 5&lt;sup&gt;th&lt;/sup&gt; year of cycle; and possibly be audited.</td>
<td>• Make declaration each year; and possibly be selected for audit.</td>
</tr>
</tbody>
</table>

**Audit**: Submit a CPD summary and a completed Revalidation Form
Value of CStat

To CStat holders
- Supports career progression
- Raises confidence and self-esteem

To employers and clients
- Increases credibility of work product
- Signifies ability and integrity

To the profession and RSS
- Defines professional standards
- Provides a community and network
Value of CStat
(according to holders of the award (2011))

- It is a prestigious professional award – attests to professionalism and quality of work
- It is an award that is valued in my current role (by employer, clients, colleagues, funders)
- It is an award that is helpful to career progression (promotion, job applications)
- It is an award that is of personal value to me (sense of belonging to professional community)
- I hold the award in order to be supportive to my profession and my professional body (RSS)
- It enables me to be listed in the RSS Directory of Consultants
  www.rss.org.uk/consultants
Today: Increased relevance of the professional pathway (GradStat, CStat/CSci)

- Increased focus on professionals, their accountability, and need for them to work in the public interest
- Increased recognition of ‘evidence based decision making’ and awareness of the misrepresentation of ‘evidence’
- Greater variety of education and career pathways – confusing for employers and clients
- More choice, less control of career pathways – greater need for practitioners to have professional body support
Take advantage of what the RSS has to offer as a professional body

How has NOT holding the CStat award enhanced

• Your career as a statistician?
• Your support to your colleagues & profession?
• Your support to your professional body?
• Your delivery to clients?

How could holding the CStat award be of benefit to you?

• The response to this question will be personal to you ..... Please take the time to ask yourself the question ... and if necessary investigate further what the award has to offer you.
The Society’s CPD Policy

In each 12-month period

At least 60 learning hours

Activities from at least 3 of 5 categories
- Work-based learning, professional, formal/educational, self-directed learning, other

Reflection on benefit
- To self (specific skills and knowledge gained)
- To users of your work (employer, clients, colleagues, students, etc)

Download CPD Policy from www.rss.org.uk/cpd
Pyramid of Knowledge & Skill

Processes
(people, tasks, problems, decisions)

Interpersonal skills
(consultancy, influencing, negotiating, teamwork, leadership, mentoring)

Knowledge of context
(scienctific, social, business setting; legal, regulatory, standards framework)

Technical foundation
(problem formulation, methodology development and implementation)
Pyramid of Knowledge & Skill

Processes
   Effectiveness
Interpersonal skills
   Impact
Knowledge of context
   Relevance
Technical foundation
   Competence & Confidence
# Scope of CPD activities

<table>
<thead>
<tr>
<th>Category</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work based learning</td>
<td>e.g. experiential learning, in-service training, secondments, supervision</td>
</tr>
<tr>
<td>Professional activity</td>
<td>e.g. involvement in a professional body, giving presentations at conferences, networking</td>
</tr>
<tr>
<td>Formal / Educational</td>
<td>e.g. writing articles / papers, attending training courses or scientific meetings, gaining qualifications</td>
</tr>
<tr>
<td>Self-directed learning</td>
<td>e.g. reading journals, reviewing books / articles, reflective practice</td>
</tr>
<tr>
<td>Other</td>
<td>e.g. relevant transferable skills developed through involvement in strategic projects &amp; community work</td>
</tr>
</tbody>
</table>
## RSS CPD activity summary

<table>
<thead>
<tr>
<th>Category</th>
<th>Description of activity</th>
<th>Start Date</th>
<th>End Date</th>
<th>Learning Hrs</th>
<th>Outcome: Benefit to practice &amp; users</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work-based learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional activity</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Formal/ educational</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-directed learning</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td>&gt;60</td>
<td></td>
</tr>
</tbody>
</table>

Recommended formats: - the above ([www.rss.org.uk/cpdprofiles](http://www.rss.org.uk/cpdprofiles))
  - online CPD system accessed via MyRSS.
The RSS professional pathway

**Education in Statistics**
- RSS accredited degree
- Degree(s) that meet the RSS Level 6/7 standard
- GradStat

**Statistical practice**
- Professional Code of Conduct
- Training & Experience (approx 5 years)
- CStat/CSci

**Career progression**
- Adherence to Code of Conduct
- Compliance with CPD Policy
- **Revalidation** - retaining CStat/CSci status
Any Questions?