

1.	<pre>loc@iss.canActivateRole(adm, NHS-Caldicott-guardian-cert(org, cg, start, end)) <- loc@iss.hasActivatedRole(adm, RA-admin()), loc@iss.hasActivatedRole(x, NHS-health-org-cert(org, start01, end01)), %start in [start01, end01], end in [start01, end01], start < end, loc='RA-East', iss='RA-East'%</pre>
2.	<pre>loc@iss.canDeactivate(adm, x, NHS-Caldicott-guardian-cert(org, cg, start, end)) <- loc@iss.hasActivatedRole(adm, RA-admin()), %loc='RA-East', iss='RA-East'%</pre>
3.	<pre>loc@iss.other-NHS-health-org-regs(count<y>, x, org, start, end) <- loc@iss.hasActivatedRole(y, NHS-health-org-cert(org, start01, end01)), %start in [start01, end01], end in [start01, end01], start < end, x != y or start != start01 or end != end01, loc='RA-East', iss='RA-East'%</pre>
4.	<pre>loc@iss.isDeactivated(adm, NHS-Caldicott-guardian-cert(org, cg, start, end)) <- loc@iss.isDeactivated(x, NHS-health-org-cert(org, start01, end01)), loc@iss.other-NHS-health-org-regs(n, x, org, start01, end01), %start in [start01, end01], end in [start01, end01], start < end, n=0, loc='RA-East', iss='RA-East'%</pre>
5.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-Caldicott-guardian-cert(org, cg, start, end))) <- %e=cg, loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
6.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-Caldicott-guardian-cert(org, cg, start, end))) <- loc@iss.hasActivatedRole(y, NHS-health-org-cert(org, start01, end01)), %e=org, Current-time() in [start01, end01], loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
7.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-Caldicott-guardian-cert(org, cg, start, end))) <- %e=nhs-serv, nhs-serv in NHS-registration-authorities() or nhs-serv in Integrated-care-records-services(), loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
8.	<pre>loc@iss.canActivateRole(adm, NHS-clinician-cert(org, cli, spcty, start, end)) <- loc@iss.hasActivatedRole(adm, RA-admin()), loc@iss.hasActivatedRole(y, NHS-health-org-cert(org, start01, end01)), %start in [start01, end01], end in [start01, end01], start < end, loc='RA-East', iss='RA-East'%</pre>
9.	<pre>loc@iss.canDeactivate(adm, x, NHS-clinician-cert(org, cli, spcty, start, end)) <- loc@iss.hasActivatedRole(adm, RA-admin()), %loc='RA-East', iss='RA-East'%</pre>
10.	<pre>loc@iss.isDeactivated(adm, NHS-clinician-cert(org, cli, spcty, start, end)) <- loc@iss.isDeactivated(x, NHS-health-org-cert(org, start01, end01)), loc@iss.other-NHS-health-org-regs(others, x, org, start01, end01), %others = {}, start in [start01, end01], end in [start01, end01], start < end, loc='RA-East', iss='RA-East'%</pre>
11.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-clinician-cert(org, cli, spcty, start, end))) <- %e=cli, loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
12.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-clinician-cert(org, cli, spcty, start, end))) <- loc@iss.hasActivatedRole(y, NHS-health-org-cert(org, start01, end01)), %e=org, Current-time() in [start01, end01], loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
13.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-clinician-cert(org, cli, spcty, start, end))) <- %e=nhs-serv, nhs-serv in NHS-registration-authorities() or nhs-serv in Integrated-care-records-services(), loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
14.	<pre>loc@iss.canActivateRole(adm, NHS-health-org-cert(org, start, end)) <- loc@iss.hasActivatedRole(adm, RA-admin()), %loc='RA-East', iss='RA-East'%</pre>
15.	<pre>loc@iss.canDeactivate(adm, x, NHS-health-org-cert(org, start, end)) <- loc@iss.hasActivatedRole(adm, RA-admin()), %loc='RA-East', iss='RA-East'%</pre>
16.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end))) <- loc@iss.hasActivatedRole(y, NHS-Caldicott-guardian-cert(org, cg, start01, end01)), %Current-time() in [start01, end01], e=cg, loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
17.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end))) <- loc@iss.hasActivatedRole(y, NHS-clinician-cert(org, cli, spcty, start01, end01)), %Current-time() in [start01, end01], e=cli, loc='RA-East', iss='RA-East', ra='RA-East'%</pre>
18.	<pre>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end))) <- %e=org,</pre>

	loc='RA-East', iss=ra, ra='RA-East'%
19.	<code>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-health-org-cert(org01, start, end))) <- loc@ra.hasActivatedRole(y, NHS-health-org-cert(org, start01, end01)), %ra in NHS-registration-authorities(), Current-time() in [start01, end01], e=org, loc='RA-East', iss='RA-East', ra='RA-East'%</code>
20.	<code>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-health-org-cert(org01, start, end))) <- org@ra.hasActivatedRole(y, NHS-health-org-cert(org, start01, end01)), %ra in NHS-registration-authorities(), Current-time() in [start01, end01], e=org, loc='RA-East', iss='RA-East', ra='RA-East'%</code>
21.	<code>loc@iss.canRequestCert(e, ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end))) <- %nhs-serv in NHS-registration-authorities(), nhs-serv in Integrated-care-records-services(), e=nhs-serv, loc='RA-East', iss='RA-East', ra='RA-East'%</code>
22.	<code>loc@iss.canActivateRole(adm, RA-admin()) <- loc@iss.hasActivatedRole(x, Register-RA-admin(adm)), %loc='RA-East', iss='RA-East'%</code>
23.	<code>loc@iss.canDeactivate(adm, adm, RA-admin()) <- %loc='RA-East', iss='RA-East'%</code>
24.	<code>loc@iss.isDeactivated(adm, RA-admin()) <- loc@iss.isDeactivated(x, Register-RA-admin(adm)) , %loc='RA-East', iss='RA-East'%</code>
25.	<code>loc@iss.ra-admin-regs(count<x>, adm) <- loc@iss.hasActivatedRole(x, Register-RA-admin(adm)), %loc='RA-East', iss='RA-East'%</code>
26.	<code>loc@iss.canActivateRole(adm, Register-RA-admin(adm01)) <- loc@iss.hasActivatedRole(adm, RA-admin()), loc@iss.ra-admin-regs(n, adm01), %n=0, loc='RA-East', iss='RA-East'%</code>
27.	<code>loc@iss.canDeactivate(adm, x, Register-RA-admin(adm01)) <- loc@iss.hasActivatedRole(adm, RA-admin()), %loc='RA-East', iss='RA-East'%</code>
28.	<code>loc@iss.canActivateRole(adm, MPI-admin()) <- loc@iss.hasActivatedRole(x, Register-MPI-admin(adm)), %loc='MPI', iss='MPI'%</code>
29.	<code>loc@iss.canDeactivate(adm, adm, MPI-admin()) <- %loc='MPI', iss='MPI'%</code>
30.	<code>loc@iss.isDeactivated(adm, MPI-admin()) <- loc@iss.isDeactivated(x, Register-MPI-admin(adm)), %loc='MPI', iss='MPI'%</code>
31.	<code>loc@iss.mpi-admin-regs(count<x>, adm) <- loc@iss.hasActivatedRole(x, Register-MPI-admin(adm)), %loc='MPI', iss='MPI'%</code>
32.	<code>loc@iss.canActivateRole(adm, Register-MPI-admin(adm01)) <- loc@iss.hasActivatedRole(adm, MPI-admin()), loc@iss.mpi-admin-regs(n, adm01), %n=0, loc='MPI', iss='MPI'%</code>
33.	<code>loc@iss.canDeactivate(adm, x, Register-MPI-admin(adm01)) <- loc@iss.hasActivatedRole(adm, MPI-admin()), %loc='MPI', iss='MPI'%</code>
34.	<code>loc@iss.patient-regs(count<x>, pat) <- loc@iss.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc)), %loc='MPI', iss='MPI'%</code>
35.	<code>loc@iss.canActivateRole(adm, MPI-register-patient(pat, icrs-loc)) <- loc@iss.hasActivatedRole(adm, MPI-admin()), loc@iss.patient-regs(n, pat), %n=0, loc='MPI', iss='MPI'%</code>
36.	<code>loc@iss.canDeactivate(adm, x, MPI-register-patient(pat, icrs-loc)) <- loc@iss.hasActivatedRole(adm, MPI-admin()), %loc='MPI', iss='MPI'%</code>
37.	<code>loc@iss.canRequestCert(e, mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc))) <- %loc='MPI', iss='MPI', mpi='MPI', e=pat%</code>
38.	<code>loc@iss.canRequestCert(e, mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc))) <- loc@icrs-loc.canActivateRole(ag, Agent(pat)), %loc='MPI', iss='MPI', mpi='MPI', e=ag%</code>
39.	<code>loc@iss.canRequestCert(e, mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc))) <- icrs-loc@icrs-loc.canActivateRole(ag, Agent(pat)), %loc='MPI', iss='MPI', mpi='MPI', e=ag%</code>
40.	<code>loc@iss.canRequestCert(e, mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc))) <- loc@iss.canActivateRole(stf, Staff()),</code>

	<pre>%loc='MPI', iss='MPI', mpi='MPI', e=stf%</pre>
41.	<pre>loc@iss.canRequestCert(e, mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc)) <- loc@ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], loc='MPI', iss='MPI', mpi='MPI', e=org%</pre>
42.	<pre>loc@iss.canRequestCert(e, mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc)) <- org@ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], loc='MPI', iss='MPI', mpi='MPI', e=org%</pre>
43.	<pre>loc@iss.canActivateRole(cli, Staff()) <- loc@ra.hasActivatedRole(x, NHS-clinician-cert(org, cli, spcty, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], loc='MPI', iss='MPI'%</pre>
44.	<pre>loc@iss.canActivateRole(cg, Staff()) <- loc@ra.hasActivatedRole(x, NHS-Caldicott-guardian-cert(org, cg, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], loc='MPI', iss='MPI'%</pre>
45.	<pre>loc@iss.canActivateRole(cli, Access-denied-by-ICRS-clinician(pat, id, start, end)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %loc='ICRS', iss='ICRS'%</pre>
46.	<pre>loc@iss.canDeactivate(cli, cli, Access-denied-by-ICRS-clinician(pat, id, start, end)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), %loc='ICRS', iss='ICRS'%</pre>
47.	<pre>loc@iss.canDeactivate(cli, cli01, Access-denied-by-ICRS-clinician(pat, id, start, end)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, General-practitioner(pat)), %loc='ICRS', iss='ICRS'%</pre>
48.	<pre>loc@iss.isDeactivated(x, Access-denied-by-ICRS-clinician(pat, id, start, end)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='ICRS', iss='ICRS'%</pre>
49.	<pre>loc@iss.count-access-denied-by-ICRS-patient(count<y>, pat) <- loc@iss.hasActivatedRole(x, Access-denied-by-ICRS-patient(what, who, start, end)), %(what,who)= ((pat, ids, orgs, authors, subjects, from-time, to-time), (orgsl, readersl, spctysl)), y=(what, who, start, end), loc='ICRS', iss='ICRS' %</pre>
50.	<pre>loc@iss.canActivateRole(pat, Access-denied-by-ICRS-patient(what, who, start, end)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.count-access-denied-by-ICRS-patient(n, pat), %(what,who)= ((pat, ids, orgs, authors, subjects, from-time, to-time), (orgsl, readersl, spctysl)), n < 100, loc='ICRS', iss='ICRS'%</pre>
51.	<pre>loc@iss.canActivateRole(ag, Access-denied-by-ICRS-patient(what, who, start, end)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), loc@iss.count-access-denied-by-ICRS-patient(n, pat), %(what,who)= ((pat, ids, orgs, authors, subjects, from-time, to-time), (orgsl, readersl, spctysl)), n < 100, loc='ICRS', iss='ICRS'%</pre>
52.	<pre>loc@iss.canDeactivate(pat, x, Access-denied-by-ICRS-patient(what, whom, start, end)) <- loc@iss.hasActivatedRole(pat, Patient()), %#(7,1)(what) = pat, loc='ICRS', iss='ICRS'%</pre>
53.	<pre>loc@iss.canDeactivate(ag, x, Access-denied-by-ICRS-patient(what, whom, start, end)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %#(7,1)(what) = pat, loc='ICRS', iss='ICRS'%</pre>
54.	<pre>loc@iss.canDeactivate(cli, x, Access-denied-by-ICRS-patient(what, whom, start, end)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, General-practitioner(pat)), %#(7,1)(what) = pat, loc='ICRS', iss='ICRS'%</pre>
55.	<pre>loc@iss.isDeactivated(x, Access-denied-by-ICRS-patient(what, whom, start, end)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %#(7,1)(what) = pat, loc='ICRS', iss='ICRS'%</pre>
56.	<pre>loc@iss.canActivateRole(ag, Agent(pat)) <- loc@iss.hasActivatedRole(x, Register-agent(ag, pat)),</pre>

	<code>%loc='ICRS', iss='ICRS' %</code>
57.	<code>loc@iss.canDeactivate(ag, ag, Agent(pat)) <- %loc='ICRS', iss='ICRS' %</code>
58.	<code>loc@iss.other-agent-regs(count<y>, x, ag, pat) <- loc@iss.hasActivatedRole(y, Register-agent(ag, pat)), %x != y, loc='ICRS', iss='ICRS' %</code>
59.	<code>loc@iss.isDeactivated(ag, Agent(pat)) <- loc@iss.isDeactivated(x, Register-agent(ag, pat)), loc@iss.other-agent-regs(n, x, ag, pat), %n=0, loc='ICRS', iss='ICRS' %</code>
60.	<code>loc@iss.canRequestCert(ag, icrs.canActivateRole(ag, Agent(pat))) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %icrs = 'ICRS', loc='ICRS', iss='ICRS' %</code>
61.	<code>loc@iss.canRequestCert(org, icrs.canActivateRole(ag, Agent(pat))) <- loc@ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end)), %icrs = 'ICRS', ra in NHS-registration-authorities(), Current-time() in [start, end], loc='ICRS', iss='ICRS' %</code>
62.	<code>loc@iss.canRequestCert(org, icrs.canActivateRole(ag, Agent(pat))) <- org@ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end)), %icrs = 'ICRS', ra in NHS-registration-authorities(), Current-time() in [start, end], loc='ICRS', iss='ICRS' %</code>
63.	<code>loc@iss.canActivateRole(cli, ICRS-Clinician(org, spcty)) <- loc@ra.hasActivatedRole(x, NHS-clinician-cert(org, cli, spcty, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], loc='ICRS', iss='ICRS' %</code>
64.	<code>loc@iss.canDeactivate(cli, cli, ICRS-Clinician(org, spcty)) <- %loc='ICRS', iss='ICRS' %</code>
65.	<code>loc@iss.canActivateRole(pat, Consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.hasActivatedRole(cli, Request-consent-to-treatment(pat, org, cli, spcty)), %loc='ICRS', iss='ICRS' %</code>
66.	<code>loc@iss.canActivateRole(ag, Consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), loc@iss.hasActivatedRole(cli, Request-consent-to-treatment(pat, org, cli, spcty)), %loc='ICRS', iss='ICRS' %</code>
67.	<code>loc@iss.canActivateRole(cli, Consent-to-treatment(pat, org, cli01, spcty)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, General-practitioner(pat)), loc@iss.hasActivatedRole(cli01, Request-consent-to-treatment(pat, org, cli01, spcty)), %loc='ICRS', iss='ICRS' %</code>
68.	<code>loc@iss.other-consent-to-treatment-requests(count<y>, x, pat, org, cli, spcty) <- loc@iss.hasActivatedRole(y, Request-consent-to-treatment(pat, org, cli, spcty)), %x != y, loc='ICRS', iss='ICRS' %</code>
69.	<code>loc@iss.isDeactivated(x, Consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.isDeactivated(y, Request-consent-to-treatment(pat, org, cli, spcty)), loc@iss.other-consent-to-treatment-requests(n, y, pat, org, cli, spcty), %n=0, loc='ICRS', iss='ICRS' %</code>
70.	<code>loc@iss.canActivateRole(cli, ICRS-Emergency-clinician(org, pat)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(pat, Patient()), %loc='ICRS', iss='ICRS' %</code>
71.	<code>loc@iss.canDeactivate(cli, cli, ICRS-Emergency-clinician(org, pat)) <- %loc='ICRS', iss='ICRS' %</code>
72.	<code>loc@iss.isDeactivated(x, ICRS-Emergency-clinician(org, pat)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='ICRS', iss='ICRS' %</code>
73.	<code>loc@iss.canActivateRole(cli, General-practitioner(pat)) <- loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %spcty = 'GP', loc='ICRS', iss='ICRS' %</code>
74.	<code>loc@iss.canActivateRole(adm, ICRS-admin()) <- loc@iss.hasActivatedRole(x, Register-ICRS-admin(adm)), %loc='ICRS', iss='ICRS' %</code>
75.	<code>loc@iss.canDeactivate(adm, adm, ICRS-admin()) <- %loc='ICRS', iss='ICRS' %</code>
76.	<code>loc@iss.isDeactivated(adm, ICRS-admin()) <- loc@iss.isDeactivated(x, Register-ICRS-admin(adm)), %loc='ICRS', iss='ICRS' %</code>
77.	<code>loc@iss.canActivateRole(pat, Patient()) <- loc@iss.hasActivatedRole(x, Register-patient(pat)),</code>

	<code>%loc='ICRS', iss='ICRS'%</code>
78.	<code>loc@iss.canDeactivate(pat, pat, Patient()) <- %loc='ICRS', iss='ICRS'%</code>
79.	<code>loc@iss.isDeactivated(pat, Patient()) <- loc@iss.isDeactivated(x, Register-patient(pat)), %loc='ICRS', iss='ICRS'%</code>
80.	<code>loc@iss.canActivateRole(cli, Referrer(pat, org, cli01, spcty)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty01)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty01)), %loc='ICRS', iss='ICRS'%</code>
81.	<code>loc@iss.canDeactivate(cli, cli, Referrer(pat, org, cli01, spcty)) <- %loc='ICRS', iss='ICRS'%</code>
82.	<code>loc@iss.canDeactivate(pat, cli, Referrer(pat, org, cli01, spcty)) <- %loc='ICRS', iss='ICRS'%</code>
83.	<code>loc@iss.agent-regs(count<x>, pat) <- loc@iss.hasActivatedRole(pat, Register-agent(x, pat)), %loc='ICRS', iss='ICRS'%</code>
84.	<code>loc@iss.canActivateRole(pat, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.agent-regs(n, pat), %n < 3, loc='ICRS', iss='ICRS'%</code>
85.	<code>loc@iss.canActivateRole(cli, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, General-practitioner(pat)), %loc='ICRS', iss='ICRS'%</code>
86.	<code>loc@iss.canDeactivate(pat, pat, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='ICRS', iss='ICRS'%</code>
87.	<code>loc@iss.canDeactivate(cli, x, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, General-practitioner(pat)), %loc='ICRS', iss='ICRS'%</code>
88.	<code>loc@iss.isDeactivated(x, Register-agent(agent, pat)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='ICRS', iss='ICRS'%</code>
89.	<code>loc@iss.icrs-admin-regs(count<x>, adm) <- loc@iss.hasActivatedRole(x, Register-ICRS-admin(adm)), %loc='ICRS', iss='ICRS'%</code>
90.	<code>loc@iss.canActivateRole(adm, Register-ICRS-admin(adm01)) <- loc@iss.hasActivatedRole(adm, ICRS-admin()), loc@iss.icrs-admin-regs(n, adm01), %n=0, loc='ICRS', iss='ICRS'%</code>
91.	<code>loc@iss.canDeactivate(adm, x, Register-ICRS-admin(adm01)) <- loc@iss.hasActivatedRole(adm, ICRS-admin()), %loc='ICRS', iss='ICRS'%</code>
92.	<code>loc@iss.patient-regs(count<x>, pat) <- loc@iss.hasActivatedRole(x, Register-patient(pat)), %loc='ICRS', iss='ICRS'%</code>
93.	<code>loc@iss.canActivateRole(adm, Register-patient(pat)) <- loc@iss.hasActivatedRole(adm, ICRS-admin()), loc@iss.patient-regs(n, pat), %n=0, loc='ICRS', iss='ICRS'%</code>
94.	<code>loc@iss.canDeactivate(adm, x, Register-patient(pat)) <- loc@iss.hasActivatedRole(adm, ICRS-admin()), %loc='ICRS', iss='ICRS'%</code>
95.	<code>loc@iss.canActivateRole(cli, Request-consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(pat, Patient()), %loc='ICRS', iss='ICRS'%</code>
96.	<code>loc@iss.canDeactivate(cli, cli, Request-consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), %loc='ICRS', iss='ICRS'%</code>
97.	<code>loc@iss.canDeactivate(pat, x, Request-consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='ICRS', iss='ICRS'%</code>
98.	<code>loc@iss.canDeactivate(ag, x, Request-consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %loc='ICRS', iss='ICRS'%</code>
99.	<code>loc@iss.canDeactivate(cli, x, Request-consent-to-treatment(pat, org, cli01, spcty)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, General-practitioner(pat)), %loc='ICRS', iss='ICRS'%</code>
100.	<code>loc@iss.isDeactivated(x, Request-consent-to-treatment(pat, org, cli, spcty)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='ICRS', iss='ICRS'%</code>
101.	<code>loc@iss.canActivateRole(pat, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()),</code>

	<pre> %x in Get-ICRS-record-third-parties(pat, id), loc='ICRS', iss='ICRS'% </pre>
102.	<pre> loc@iss.canActivateRole(ag, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %x in Get-ICRS-record-third-parties(pat, id), loc='ICRS', iss='ICRS'% </pre>
103.	<pre> loc@iss.canActivateRole(cli, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %x in Get-ICRS-record-third-parties(pat, id), loc='ICRS', iss='ICRS'% </pre>
104.	<pre> loc@iss.canDeactivate(pat, pat, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='ICRS', iss='ICRS'% </pre>
105.	<pre> loc@iss.canDeactivate(ag, ag, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(pat, Agent(pat)), %loc='ICRS', iss='ICRS'% </pre>
106.	<pre> loc@iss.canDeactivate(cli, cli, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), %loc='ICRS', iss='ICRS'% </pre>
107.	<pre> loc@iss.canDeactivate(x, y, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(x, Third-party()), %loc='ICRS', iss='ICRS'% </pre>
108.	<pre> loc@iss.isDeactivated(x, Request-third-party-consent(y, pat, id)) <- loc@iss.isDeactivated(z, Register-patient(pat)), %loc='ICRS', iss='ICRS'% </pre>
109.	<pre> loc@iss.canActivateRole(x, Third-party()) <- loc@iss.hasActivatedRole(y, Request-third-party-consent(x, pat, id)), %loc='ICRS', iss='ICRS'% </pre>
110.	<pre> loc@iss.canDeactivate(x, x, Third-party()) <- %loc='ICRS', iss='ICRS'% </pre>
111.	<pre> loc@iss.other-third-party-consent-requests(count<x>, y, z) <- loc@iss.hasActivatedRole(x, Request-third-party-consent(z, pat, id)), %x != y, loc='ICRS', iss='ICRS'% </pre>
112.	<pre> loc@iss.isDeactivated(x, Third-party()) <- loc@iss.isDeactivated(y, Request-third-party-consent(x, pat, id)), loc@iss.other-third-party-consent-requests(n, y, x), %n=0, loc='ICRS', iss='ICRS'% </pre>
113.	<pre> loc@iss.canActivateRole(x, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(x, Third-party()), loc@iss.hasActivatedRole(y, Request-third-party-consent(x, pat, id)), %loc='ICRS', iss='ICRS'% </pre>
114.	<pre> loc@iss.canActivateRole(cli, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), loc@iss.hasActivatedRole(y, Request-third-party-consent(x, pat, id)), %loc='ICRS', iss='ICRS'% </pre>
115.	<pre> loc@iss.canDeactivate(x, y, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(x, Third-party()), %loc='ICRS', iss='ICRS'% </pre>
116.	<pre> loc@iss.isDeactivated(x, Third-party-consent(x, pat, id)) <- loc@iss.isDeactivated(y, Register-patient(pat)), loc@iss.patient-regs(n, pat), %n=0, loc='ICRS', iss='ICRS'% </pre>
117.	<pre> loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)) <- loc@iss.canActivateRole(cli, ICRS-Clinician(org, spcty)), loc@iss.hasActivatedRole(x, Consent-to-treatment(pat, org, cli, spcty)), %loc='ICRS', iss='ICRS'% </pre>
118.	<pre> loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)) <- loc@iss.hasActivatedRole(cli, ICRS-Emergency-clinician(org, pat)), %spcty = 'A-and-E', loc='ICRS', iss='ICRS'% </pre>
119.	<pre> loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)) <- loc@iss.canActivateRole(cli, ICRS-Clinician(org, spcty)), loc@iss.hasActivatedRole(x, Referrer(pat, org, cli, spcty)), %loc='ICRS', iss='ICRS'% </pre>
120.	<pre> loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)) <- loc@org.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), loc@ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], loc='ICRS', iss='ICRS'% </pre>
121.	<pre> loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)) <- org@org.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), org@ra.hasActivatedRole(x, NHS-health-org-cert(org, start, end)), %ra in NHS-registration-authorities(), Current-time() in [start, end], </pre>

	loc='ICRS', iss='ICRS'%
122.	loc@iss.consent-to-treatment-requests(count<x>, pat, org, cli, spcty) <- loc@iss.hasActivatedRole(x, Request-consent-to-treatment(pat, org, cli, spcty)), %loc='ICRS', iss='ICRS'%
123.	loc@iss.referrers(count<x>, pat, org, cli, spcty) <- loc@iss.hasActivatedRole(x, Referrer(pat, org, cli, spcty)), %loc='ICRS', iss='ICRS'%
124.	loc@iss.other-referrers(count<y>, x, pat, org, cli, spcty) <- loc@iss.hasActivatedRole(y, Referrer(pat, org, cli, spcty)), %x != y, loc='ICRS', iss='ICRS'%
125.	loc@iss.isDeactivated(cli, Treating-clinician(pat, org, spcty)) <- loc@iss.isDeactivated(x, Consent-to-treatment(pat, org, cli, spcty)), loc@iss.other-consent-to-treatment-requests(n, x, pat, org, cli, spcty), loc@iss.referrers(m, pat, org, cli, spcty), %n=0, m=0, loc='ICRS', iss='ICRS'%
126.	loc@iss.isDeactivated(cli, Treating-clinician(pat, org, spcty)) <- loc@iss.isDeactivated(cli, ICRS-Emergency-clinician(org, pat)), loc@iss.consent-to-treatment-requests(n, pat, org, cli, spcty), loc@iss.referrers(m, pat, org, cli, spcty), %n=0, m=0, spcty = 'A-and-E', loc='ICRS', iss='ICRS'%
127.	loc@iss.isDeactivated(cli, Treating-clinician(pat, org, spcty)) <- loc@iss.isDeactivated(x, Referrer(pat, org, cli, spcty)), loc@iss.other-referrers(n, x, pat, org, cli, spcty), loc@iss.consent-to-treatment-requests(m, pat, org, cli, spcty), %n=0, m=0, loc='ICRS', iss='ICRS'%
128.	loc@iss.permits(cli, Add-ICRS-record-item(pat, cli, group, subjects, third-parties)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %loc='ICRS', iss='ICRS'%
129.	loc@iss.permits(ag, Annotate-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %loc='ICRS', iss='ICRS'%
130.	loc@iss.permits(pat, Annotate-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='ICRS', iss='ICRS'%
131.	loc@iss.permits(pat, Annotate-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %loc='ICRS', iss='ICRS'%
132.	loc@iss.permits(cli, Force-read-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %loc='ICRS', iss='ICRS'%
133.	loc@iss.permits(pat, Get-ICRS-record-item-ids(pat)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='ICRS', iss='ICRS'%
134.	loc@iss.permits(ag, Get-ICRS-record-item-ids(pat)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %loc='ICRS', iss='ICRS'%
135.	loc@iss.permits(cli, Get-ICRS-record-item-ids(pat)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), %loc='ICRS', iss='ICRS'%
136.	loc@iss.third-party-consent(group<consenter>, pat, id) <- loc@iss.hasActivatedRole(x, Third-party-consent(consenter, pat, id)), %loc='ICRS', iss='ICRS'%
137.	loc@iss.count-access-denied-by-ICRS-patient2(count<x>, a, b) <- loc@iss.hasActivatedRole(x, Access-denied-by-ICRS-patient(what, whom, start, end)), %a=(pat, id), b=(org, reader, spcty), what=(pat, ids, orgs, authors, subjects, from-time, to-time), whom=(orgs1, readers1, spctys1), Get-ICRS-record-org(pat, id) in orgs, Get-ICRS-record-author(pat, id) in authors, sub in Get-ICRS-record-subjects(pat, id), sub in subjects, Get-ICRS-record-time(pat, id) in [from-time, to-time], org in orgs1, reader in readers1, spcty in spctys1, Current-time() in [start, end], loc='ICRS', iss='ICRS'%
138.	loc@iss.count-access-denied-by-ICRS-clinician(count<x>, pat, id) <- loc@iss.hasActivatedRole(x, Access-denied-by-ICRS-clinician(pat, id, start, end)), %Current-time() in [start, end],

	loc='ICRS', iss='ICRS'%
139.	loc@iss.permits(pat, Read-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.count-access-denied-by-ICRS-patient2(n, a, b), loc@iss.count-access-denied-by-ICRS-clinician(m, pat, id), loc@iss.third-party-consent(consenters, pat, id), %n=0, m=0, a=(pat, id), b=('No-org', pat, 'No-spcty'), Get-ICRS-record-third-parties(pat, id) subseteq consenters, loc='ICRS', iss='ICRS'%
140.	loc@iss.permits(ag, Read-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), loc@iss.count-access-denied-by-ICRS-patient2(n, a, b), loc@iss.count-access-denied-by-ICRS-clinician(m, pat, id), loc@iss.third-party-consent(consenters, pat, id), %n=0, m=0, a=(pat, id), b=('No-org', ag, 'No-spcty'), Get-ICRS-record-third-parties(pat, id) subseteq consenters, loc='ICRS', iss='ICRS'%
141.	loc@iss.permits(cli, Read-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), %Get-ICRS-record-org(pat, id) = org, Get-ICRS-record-author(pat, id) = cli, loc='ICRS', iss='ICRS'%
142.	loc@iss.permits(cli, Read-ICRS-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, ICRS-Clinician(org, spcty)), loc@iss.canActivateRole(cli, Treating-clinician(pat, org, spcty)), loc@iss.count-access-denied-by-ICRS-patient2(n, a, b), %n=0, a=(pat, id), b=(org, cli, spcty), Get-ICRS-record-subjects(pat, id) subseteq Permitted-subjects(spcty), loc='ICRS', iss='ICRS'%
143.	loc@iss.canRequestCert(x, ra.hasActivatedRole(y, NHS-health-org-cert(org, start, end))) <- %loc='Addenbrookes', iss='Addenbrookes', ra='RA-East', org='Addenbrookes'%
144.	loc@iss.canActivateRole(cli, Access-denied-by-clinician(pat, id, start, end)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%
145.	loc@iss.canDeactivate(cli, cli, Access-denied-by-clinician(pat, id, start, end)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), %loc='Addenbrookes', iss='Addenbrookes'%
146.	loc@iss.canDeactivate(cg, cli, Access-denied-by-clinician(pat, id, start, end)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%
147.	loc@iss.isDeactivated(x, Access-denied-by-clinician(pat, id, start, end)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%
148.	loc@iss.countAccessDeniedByPatient(count<y>, pat) <- loc@iss.hasActivatedRole(x, Access-denied-by-patient(what, who, start, end)), %what=(pat, ids, authors, groups, subjects, from-time, to-time), who=(orgs1, readers1, groups1, spctys1), y=(what, who, start, end), loc='Addenbrookes', iss='Addenbrookes'%
149.	loc@iss.canActivateRole(pat, Access-denied-by-patient(what, who, start, end)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.countAccessDeniedByPatient(n, pat), %what=(pat, ids, authors, groups, subjects, from-time, to-time), who=(orgs1, readers1, groups1, spctys1), n < 100, loc='Addenbrookes', iss='Addenbrookes'%
150.	loc@iss.canActivateRole(ag, Access-denied-by-patient(what, who, start, end)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), loc@iss.countAccessDeniedByPatient(n, pat), %what=(pat, ids, authors, groups, subjects, from-time, to-time), who=(orgs1, readers1, groups1, spctys1), n < 100, loc='Addenbrookes', iss='Addenbrookes'%
151.	loc@iss.canDeactivate(pat, x, Access-denied-by-patient(what, whom, start, end)) <- loc@iss.hasActivatedRole(pat, Patient()), %#(7,1)(what) = pat, loc='Addenbrookes', iss='Addenbrookes'%
152.	loc@iss.canDeactivate(ag, x, Access-denied-by-patient(what, whom, start, end)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %#(7,1)(what) = pat, loc='Addenbrookes', iss='Addenbrookes'%
153.	loc@iss.canDeactivate(cg, x, Access-denied-by-patient(what, whom, start, end)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%
154.	loc@iss.isDeactivated(x, Access-denied-by-patient(what, whom, start, end)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %#(7,1)(what) = pat, loc='Addenbrookes', iss='Addenbrookes'%
155.	loc@iss.canActivateRole(agent, Agent(pat)) <-

	<pre> loc@iss.canActivateRole(pat, Patient()), loc@mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc)), loc@icrs-loc.canActivateRole(agent, Agent(pat)), %loc='Addenbrookes', iss='Addenbrookes', mpi='MPI'% </pre>
156.	<pre> loc@iss.canActivateRole(agent, Agent(pat)) <- loc@iss.canActivateRole(pat, Patient()), mpi@mpi.hasActivatedRole(x, MPI-register-patient(pat, icrs-loc)), icrs-loc@icrs-loc.canActivateRole(agent, Agent(pat)), %loc='Addenbrookes', iss='Addenbrookes', mpi='MPI'% </pre>
157.	<pre> loc@iss.canActivateRole(agent, Agent(pat)) <- loc@iss.hasActivatedRole(x, Register-agent(agent, pat)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
158.	<pre> loc@iss.other-agent-regs(count<y>, x, ag, pat) <- loc@iss.hasActivatedRole(y, Register-agent(ag, pat)), %x != y, loc='Addenbrookes', iss='Addenbrookes'% </pre>
159.	<pre> loc@iss.isDeactivated(ag, Agent(pat)) <- loc@iss.isDeactivated(x, Register-agent(ag, pat)), loc@iss.other-agent-regs(n, x, ag, pat), %n=0, loc='Addenbrookes', iss='Addenbrookes'% </pre>
160.	<pre> loc@iss.canActivateRole(cg, Caldicott-guardian()) <- loc@iss.hasActivatedRole(x, Register-Caldicott-guardian(cg)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
161.	<pre> loc@iss.canDeactivate(cg, cg, Caldicott-guardian()) <- %loc='Addenbrookes', iss='Addenbrookes'% </pre>
162.	<pre> loc@iss.isDeactivated(cg, Caldicott-guardian()) <- loc@iss.isDeactivated(x, Register-Caldicott-guardian(cg)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
163.	<pre> loc@iss.canActivateRole(cli, Clinician(spcty)) <- loc@iss.hasActivatedRole(x, Register-clinician(cli, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
164.	<pre> loc@iss.canDeactivate(cli, cli, Clinician(spcty)) <- %loc='Addenbrookes', iss='Addenbrookes'% </pre>
165.	<pre> loc@iss.isDeactivated(cli, Clinician(spcty)) <- loc@iss.isDeactivated(x, Register-clinician(cli, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
166.	<pre> loc@iss.canActivateRole(pat, Consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.hasActivatedRole(x, Request-consent-to-referral(pat, org, cli, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
167.	<pre> loc@iss.canActivateRole(cg, Consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), loc@iss.hasActivatedRole(x, Request-consent-to-referral(pat, org, cli, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
168.	<pre> loc@iss.canDeactivate(pat, pat, Consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
169.	<pre> loc@iss.canDeactivate(cg, x, Consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
170.	<pre> loc@iss.isDeactivated(x, Consent-to-referral(pat, org, cli, spcty)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
171.	<pre> loc@iss.canActivateRole(cli, Emergency-clinician(pat)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
172.	<pre> loc@iss.canDeactivate(cli, cli, Emergency-clinician(pat)) <- %loc='Addenbrookes', iss='Addenbrookes'% </pre>
173.	<pre> loc@iss.canDeactivate(cg, cli, Emergency-clinician(pat)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
174.	<pre> loc@iss.isDeactivated(x, Emergency-clinician(pat)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
175.	<pre> loc@iss.other-spcty-clinician-regs(count<x>, spcty, cli) <- loc@iss.hasActivatedRole(x, Register-clinician(cli, spcty01)), %spcty != spcty01, loc='Addenbrookes', iss='Addenbrookes'% </pre>
176.	<pre> loc@iss.isDeactivated(x, Emergency-clinician(pat)) <- loc@iss.isDeactivated(y, Register-clinician(cli, spcty)), loc@iss.other-spcty-clinician-regs(n, spcty, cli), %n=0, loc='Addenbrookes', iss='Addenbrookes'% </pre>
177.	<pre> loc@iss.canActivateRole(cli, Ext-treating-clinician(ref, pat, org, spcty)) <- loc@iss.hasActivatedRole(ref, Referrer(pat, org, cli, spcty)), loc@ra.hasActivatedRole(y, NHS-clinician-cert(org, cli, spcty, start, end)), %ra in NHS-registration-authorities(), </pre>

	Current-time() in [start, end], loc='Addenbrookes', iss='Addenbrookes'%
178.	loc@iss.canDeactivate(cli, cli, Ext-treating-clinician(ref, pat, org, spcty)) <- %loc='Addenbrookes', iss='Addenbrookes'%
179.	loc@iss.isDeactivated(cli, Ext-treating-clinician(ref, pat, org, spcty)) <- loc@iss.isDeactivated(ref, Referrer(pat, org, cli, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%
180.	loc@iss.canActivateRole(hd, Head-of-team(team)) <- loc@iss.hasActivatedRole(x, Register-head-of-team(hd, team)), %loc='Addenbrookes', iss='Addenbrookes'%
181.	loc@iss.canDeactivate(hd, hd, Head-of-team(team)) <- %loc='Addenbrookes', iss='Addenbrookes'%
182.	loc@iss.isDeactivated(hd, Head-of-team(team)) <- loc@iss.isDeactivated(x, Register-head-of-team(hd, team)), %loc='Addenbrookes', iss='Addenbrookes'%
183.	loc@iss.canActivateRole(cli, Head-of-ward(ward)) <- loc@iss.hasActivatedRole(x, Register-head-of-ward(cli, ward)), %loc='Addenbrookes', iss='Addenbrookes'%
184.	loc@iss.canDeactivate(cli, cli, Head-of-ward(ward)) <- %loc='Addenbrookes', iss='Addenbrookes'%
185.	loc@iss.isDeactivated(cli, Head-of-ward(ward)) <- loc@iss.isDeactivated(x, Register-head-of-ward(cli, ward)), %loc='Addenbrookes', iss='Addenbrookes'%
186.	loc@iss.canActivateRole(mgr, HR-mgr()) <- loc@iss.hasActivatedRole(x, Register-HR-mgr(mgr)), %loc='Addenbrookes', iss='Addenbrookes'%
187.	loc@iss.canDeactivate(mgr, mgr, HR-mgr()) <- %loc='Addenbrookes', iss='Addenbrookes'%
188.	loc@iss.isDeactivated(mgr, HR-mgr()) <- loc@iss.isDeactivated(x, Register-HR-mgr(mgr)), %loc='Addenbrookes', iss='Addenbrookes' %
189.	loc@iss.canActivateRole(pat, Patient()) <- loc@iss.hasActivatedRole(x, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes' %
190.	loc@iss.canDeactivate(pat, pat, Patient()) <- %loc='Addenbrookes', iss='Addenbrookes'%
191.	loc@iss.isDeactivated(pat, Patient()) <- loc@iss.isDeactivated(x, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes' %
192.	loc@iss.canActivateRole(rec, Receptionist()) <- loc@iss.hasActivatedRole(x, Register-receptionist(rec)), %loc='Addenbrookes', iss='Addenbrookes'%
193.	loc@iss.canDeactivate(rec, rec, Receptionist()) <- %loc='Addenbrookes', iss='Addenbrookes'%
194.	loc@iss.isDeactivated(rec, Receptionist()) <- loc@iss.isDeactivated(x, Register-receptionist(rec)), %loc='Addenbrookes', iss='Addenbrookes' %
195.	loc@iss.canActivateRole(cli, Referrer(pat, org, cli01, spcty)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty01)), loc@iss.hasActivatedRole(x, Consent-to-referral(pat, org, cli01, spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty01)), %loc='Addenbrookes', iss='Addenbrookes'%
196.	loc@iss.canDeactivate(cli, cli, Referrer(pat, org, cli01, spcty)) <- %loc='Addenbrookes', iss='Addenbrookes'%
197.	loc@iss.other-referral-consents(count<y>, x, pat, org, cli, spcty) <- loc@iss.hasActivatedRole(y, Consent-to-referral(pat, org, cli, spcty)), %x != y, loc='Addenbrookes', iss='Addenbrookes'%
198.	loc@iss.isDeactivated(cli, Referrer(pat, org, cli01, spcty)) <- loc@iss.isDeactivated(x, Consent-to-referral(pat, org, cli01, spcty)), loc@iss.other-referral-consents(n, x, pat, org, cli, spcty), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
199.	loc@iss.canActivateRole(pat, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes' %
200.	loc@iss.canActivateRole(cg, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), loc@iss.canActivateRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'%
201.	loc@iss.canDeactivate(pat, pat, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'%
202.	loc@iss.canDeactivate(cg, x, Register-agent(agent, pat)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%
203.	loc@iss.isDeactivated(x, Register-agent(agent, pat)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%
204.	loc@iss.cg-regs(count<x>, cg) <-

	<code>loc@iss.hasActivatedRole(x, Register-Caldicott-guardian(cg)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
205.	<code>loc@iss.canActivateRole(mgr, Register-Caldicott-guardian(cg)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.cg-regs(n, cg), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
206.	<code>loc@iss.canDeactivate(mgr, x, Register-Caldicott-guardian(cg)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
207.	<code>loc@iss.clinician-regs(count<x>, cli, spcty) <- loc@iss.hasActivatedRole(x, Register-clinician(cli, spcty)) , %loc='Addenbrookes', iss='Addenbrookes'%</code>
208.	<code>loc@iss.canActivateRole(mgr, Register-clinician(cli, spcty)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.clinician-regs(n, cli, spcty), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
209.	<code>loc@iss.canDeactivate(mgr, x, Register-clinician(cli, spcty)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
210.	<code>loc@iss.head-of-team-regs(count<x>, hd, team) <- loc@iss.hasActivatedRole(x, Register-head-of-team(hd, team)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
211.	<code>loc@iss.canActivateRole(mgr, Register-head-of-team(hd, team)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.hasActivatedRole(x, Register-team-member(hd, team, spcty)), loc@iss.head-of-team-regs(n, hd, team), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
212.	<code>loc@iss.canDeactivate(mgr, x, Register-head-of-team(hd, team)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
213.	<code>loc@iss.isDeactivated(x, Register-head-of-team(hd, team)) <- loc@iss.isDeactivated(y, Register-team-member(hd, team, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
214.	<code>loc@iss.head-of-ward-regs(count<x>, cli, ward) <- loc@iss.hasActivatedRole(x, Register-head-of-ward(cli, ward)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
215.	<code>loc@iss.canActivateRole(mgr, Register-head-of-ward(cli, ward)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.hasActivatedRole(x, Register-ward-member(cli, ward, spcty)), loc@iss.head-of-ward-regs(n, cli, ward), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
216.	<code>loc@iss.canDeactivate(mgr, x, Register-head-of-ward(cli, ward)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
217.	<code>loc@iss.isDeactivated(x, Register-head-of-ward(cli, ward)) <- loc@iss.isDeactivated(y, Register-ward-member(cli, ward, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
218.	<code>loc@iss.hr-manager-regs(count<x>, mgr) <- loc@iss.hasActivatedRole(x, Register-HR-mgr(mgr)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
219.	<code>loc@iss.canActivateRole(mgr, Register-HR-mgr(mgr01)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.hr-manager-regs(n, mgr), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
220.	<code>loc@iss.canDeactivate(mgr, x, Register-HR-mgr(mgr01)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
221.	<code>loc@iss.patient-regs(count<x>, pat) <- loc@iss.hasActivatedRole(x, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
222.	<code>loc@iss.canActivateRole(rec, Register-patient(pat)) <- loc@iss.hasActivatedRole(rec, Receptionist()), loc@iss.patient-regs(n, pat), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
223.	<code>loc@iss.canDeactivate(rec, x, Register-patient(pat)) <- loc@iss.hasActivatedRole(rec, Receptionist()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
224.	<code>loc@iss.receptionist-regs(count<x>, rec) <- loc@iss.hasActivatedRole(x, Register-receptionist(rec)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
225.	<code>loc@iss.canActivateRole(mgr, Register-receptionist(rec)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.receptionist-regs(n, rec), %n=0,</code>

	loc='Addenbrookes', iss='Addenbrookes'%
226.	loc@iss.canDeactivate(mgr, x, Register-receptionist(rec)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%
227.	loc@iss.team-episode-regs(count<x>, pat, team) <- loc@iss.hasActivatedRole(x, Register-team-episode(pat, team)), %loc='Addenbrookes', iss='Addenbrookes' %
228.	loc@iss.canActivateRole(rec, Register-team-episode(pat, team)) <- loc@iss.hasActivatedRole(rec, Receptionist()), loc@iss.canActivateRole(pat, Patient()), loc@iss.team-episode-regs(n, pat, team), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
229.	loc@iss.canActivateRole(cli, Register-team-episode(pat, team)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.hasActivatedRole(x, Register-team-member(cli, team, spcty)), loc@iss.canActivateRole(pat, Patient()), loc@iss.team-episode-regs(n, pat, team), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
230.	loc@iss.canDeactivate(cg, x, Register-team-episode(pat, team)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%
231.	loc@iss.canDeactivate(rec, x, Register-team-episode(pat, team)) <- loc@iss.hasActivatedRole(rec, Receptionist()), %loc='Addenbrookes', iss='Addenbrookes'%
232.	loc@iss.canDeactivate(cli, x, Register-team-episode(pat, team)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.hasActivatedRole(x, Register-team-member(cli, team, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%
233.	loc@iss.isDeactivated(x, Register-team-episode(pat, team)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%
234.	loc@iss.team-member-regs(count<x>, mem, team, spcty) <- loc@iss.hasActivatedRole(x, Register-team-member(mem, team, spcty)), %loc='Addenbrookes', iss='Addenbrookes' %
235.	loc@iss.canActivateRole(mgr, Register-team-member(mem, team, spcty)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.canActivateRole(mem, Clinician(spcty)), loc@iss.team-member-regs(n, mem, team, spcty), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
236.	loc@iss.canActivateRole(hd, Register-team-member(mem, team, spcty)) <- loc@iss.hasActivatedRole(hd, Clinician(spcty01)), loc@iss.canActivateRole(hd, Head-of-team(team)), loc@iss.canActivateRole(mem, Clinician(spcty)), loc@iss.team-member-regs(n, mem, team, spcty), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
237.	loc@iss.canDeactivate(mgr, x, Register-team-member(mem, team, spcty)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%
238.	loc@iss.canDeactivate(hd, x, Register-team-member(mem, team, spcty)) <- loc@iss.hasActivatedRole(hd, Clinician(spcty01)), loc@iss.canActivateRole(hd, Head-of-team(team)), %loc='Addenbrookes', iss='Addenbrookes'%
239.	loc@iss.isDeactivated(x, Register-team-member(mem, team, spcty)) <- loc@iss.isDeactivated(y, Register-clinician(mem, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%
240.	loc@iss.ward-episode-regs(count<x>, pat, ward) <- loc@iss.hasActivatedRole(x, Register-ward-episode(pat, ward)), %loc='Addenbrookes', iss='Addenbrookes' %
241.	loc@iss.canActivateRole(rec, Register-ward-episode(pat, ward)) <- loc@iss.hasActivatedRole(rec, Receptionist()), loc@iss.canActivateRole(pat, Patient()), loc@iss.ward-episode-regs(n, pat, ward), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
242.	loc@iss.canActivateRole(hd, Register-ward-episode(pat, ward)) <- loc@iss.hasActivatedRole(hd, Clinician(spcty)), loc@iss.canActivateRole(hd, Head-of-ward(ward)), loc@iss.canActivateRole(pat, Patient()), loc@iss.ward-episode-regs(n, pat, ward), %n=0, loc='Addenbrookes', iss='Addenbrookes'%
243.	loc@iss.canDeactivate(cg, x, Register-ward-episode(pat, ward)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%
244.	loc@iss.canDeactivate(rec, x, Register-ward-episode(pat, ward)) <- loc@iss.hasActivatedRole(rec, Receptionist()),

	<pre>%loc='Addenbrookes', iss='Addenbrookes'%</pre>
245.	<pre>loc@iss.canDeactivate(hd, x, Register-ward-episode(pat, ward)) <- loc@iss.hasActivatedRole(hd, Clinician(spcty)), loc@iss.canActivateRole(hd, Head-of-ward(ward)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
246.	<pre>loc@iss.isDeactivated(x, Register-ward-episode(pat, ward)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
247.	<pre>loc@iss.ward-member-regs(count<x>, cli, ward, spcty) <- loc@iss.hasActivatedRole(x, Register-ward-member(cli, ward, spcty)), %loc='Addenbrookes', iss='Addenbrookes' %</pre>
248.	<pre>loc@iss.canActivateRole(mgr, Register-ward-member(cli, ward, spcty)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), loc@iss.canActivateRole(cli, Clinician(spcty)), loc@iss.ward-member-regs(n, cli, ward, spcty), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</pre>
249.	<pre>loc@iss.canActivateRole(hd, Register-ward-member(cli, ward, spcty)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty01)), loc@iss.canActivateRole(hd, Head-of-ward(ward)), loc@iss.canActivateRole(cli, Clinician(spcty)), loc@iss.ward-member-regs(n, cli, ward, spcty), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</pre>
250.	<pre>loc@iss.canDeactivate(mgr, x, Register-ward-member(cli, ward, spcty)) <- loc@iss.hasActivatedRole(mgr, HR-mgr()), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
251.	<pre>loc@iss.canDeactivate(hd, x, Register-ward-member(cli, ward, spcty)) <- loc@iss.hasActivatedRole(hd, Clinician(spcty01)), loc@iss.canActivateRole(hd, Head-of-ward(ward)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
252.	<pre>loc@iss.isDeactivated(x, Register-ward-member(cli, ward, spcty)) <- loc@iss.isDeactivated(y, Register-clinician(cli, spcty)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
253.	<pre>loc@iss.canActivateRole(cli, Request-consent-to-referral(pat, org, cli01, spcty)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty01)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, team, spcty01)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
254.	<pre>loc@iss.canDeactivate(cli, cli, Request-consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
255.	<pre>loc@iss.canDeactivate(pat, x, Request-consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
256.	<pre>loc@iss.canDeactivate(ag, x, Request-consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
257.	<pre>loc@iss.canDeactivate(cg, x, Request-consent-to-referral(pat, org, cli, spcty)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
258.	<pre>loc@iss.isDeactivated(x, Request-consent-to-referral(pat, org, cli, spcty)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</pre>
259.	<pre>loc@iss.canActivateRole(pat, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), %x in Get-record-third-parties(pat, id), loc='Addenbrookes', iss='Addenbrookes'%</pre>
260.	<pre>loc@iss.canActivateRole(ag, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %x in Get-record-third-parties(pat, id), loc='Addenbrookes', iss='Addenbrookes'%</pre>
261.	<pre>loc@iss.canActivateRole(cli, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), %x in Get-record-third-parties(pat, id), loc='Addenbrookes', iss='Addenbrookes'%</pre>
262.	<pre>loc@iss.canActivateRole(cg, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %x in Get-record-third-parties(pat, id), loc='Addenbrookes', iss='Addenbrookes'%</pre>
263.	<pre>loc@iss.canDeactivate(pat, pat, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes' %</pre>
264.	<pre>loc@iss.canDeactivate(ag, ag, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(pat, Agent(pat)), %loc='Addenbrookes', iss='Addenbrookes' %</pre>
265.	<pre>loc@iss.canDeactivate(cli, cli, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), %loc='Addenbrookes', iss='Addenbrookes' %</pre>
266.	<pre>loc@iss.canDeactivate(cg, x, Request-third-party-consent(y, pat, id)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()),</pre>

	<code>%loc='Addenbrookes', iss='Addenbrookes'%</code>
267.	<code>loc@iss.canDeactivate(x, y, Request-third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(x, Third-party()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
268.	<code>loc@iss.isDeactivated(x, Request-third-party-consent(x01, pat, id)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
269.	<code>loc@iss.canActivateRole(x, Third-party()) <- loc@iss.hasActivatedRole(y, Request-third-party-consent(x, pat, id)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
270.	<code>loc@iss.canDeactivate(x, x, Third-party()) <- %loc='Addenbrookes', iss='Addenbrookes'%</code>
271.	<code>loc@iss.other-third-party-requests(count<y>, x, third-party) <- loc@iss.hasActivatedRole(y, Request-third-party-consent(third-party, pat, id)), %x != y, loc='Addenbrookes', iss='Addenbrookes'%</code>
272.	<code>loc@iss.isDeactivated(x, Third-party()) <- loc@iss.isDeactivated(y, Request-third-party-consent(x, pat, id)), loc@iss.other-third-party-requests(n, y, x), %n=0, loc='Addenbrookes', iss='Addenbrookes'%</code>
273.	<code>loc@iss.canActivateRole(x, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(x, Third-party()), loc@iss.hasActivatedRole(y, Request-third-party-consent(x, pat, id)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
274.	<code>loc@iss.canActivateRole(cg, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), loc@iss.hasActivatedRole(y, Request-third-party-consent(x, pat, id)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
275.	<code>loc@iss.canDeactivate(x, x, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(x, Third-party()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
276.	<code>loc@iss.canDeactivate(cg, x, Third-party-consent(x, pat, id)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'%</code>
277.	<code>loc@iss.isDeactivated(x, Third-party-consent(x, pat, id)) <- loc@iss.isDeactivated(y, Register-patient(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
278.	<code>loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.canActivateRole(cli, Clinician(spcty)), loc@iss.hasActivatedRole(x, Register-team-member(cli, team, spcty)), loc@iss.hasActivatedRole(y, Register-team-episode(pat, team)), %group = team, loc='Addenbrookes', iss='Addenbrookes'%</code>
279.	<code>loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.canActivateRole(cli, Clinician(spcty)), loc@iss.hasActivatedRole(x, Register-ward-member(cli, ward, spcty)), loc@iss.hasActivatedRole(x, Register-ward-episode(pat, ward)), %group = ward, loc='Addenbrookes', iss='Addenbrookes'%</code>
280.	<code>loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.hasActivatedRole(cli, Emergency-clinician(pat)), %group = 'A-and-E', spcty = 'A-and-E', loc='Addenbrookes', iss='Addenbrookes'%</code>
281.	<code>loc@iss.canDeactivate(cli, cli, Group-treating-clinician(pat, group, spcty)) <- %loc='Addenbrookes', iss='Addenbrookes'%</code>
282.	<code>loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.isDeactivated(x, Register-team-member(cli, team, spcty)), loc@iss.ward-member-regs(n, cli, ward, spcty), %n=0, group = team, ward = team, (group != 'A-and-E' or spcty != 'A-and-E'), loc='Addenbrookes', iss='Addenbrookes'%</code>
283.	<code>loc@iss.is-emergency-clinician(group<x>, pat) <- loc@iss.hasActivatedRole(x, Emergency-clinician(pat)), %loc='Addenbrookes', iss='Addenbrookes'%</code>
284.	<code>loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.isDeactivated(x, Register-team-member(cli, team, spcty)), loc@iss.ward-member-regs(n, cli, ward, spcty), loc@iss.is-emergency-clinician(clis, pat), %n=0, cli in (UNIV~clis), group = team, ward = team, group = 'A-and-E', spcty = 'A-and-E', loc='Addenbrookes', iss='Addenbrookes'%</code>
285.	<code>loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <-</code>

	<pre> loc@iss.isDeactivated(x, Register-ward-member(cli, ward, spcty)), loc@iss.team-member-regs(n, cli, team, spcty), %n=0, group = ward, team = ward, (group != 'A-and-E' or spcty != 'A-and-E'), loc='Addenbrookes', iss='Addenbrookes'% </pre>
286.	<pre> loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.isDeactivated(x, Register-ward-member(cli, ward, spcty)), loc@iss.team-member-regs(n, cli, team, spcty), loc@iss.is-emergency-clinician(clis, pat), %n=0, cli in (UNIV~clis), group = ward, team = ward, group = 'A-and-E', spcty = 'A-and-E', loc='Addenbrookes', iss='Addenbrookes'% </pre>
287.	<pre> loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.isDeactivated(x, Register-team-episode(pat, team)), %group = team, loc='Addenbrookes', iss='Addenbrookes'% </pre>
288.	<pre> loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.isDeactivated(x, Register-ward-episode(pat, ward)), %group = ward, loc='Addenbrookes', iss='Addenbrookes'% </pre>
289.	<pre> loc@iss.isDeactivated(cli, Group-treating-clinician(pat, group, spcty)) <- loc@iss.isDeactivated(cli, Emergency-clinician(pat)), %group = 'A-and-E', spcty = 'A-and-E', loc='Addenbrookes', iss='Addenbrookes'% </pre>
290.	<pre> loc@iss.canRequestCert(cli, iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty))) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
291.	<pre> loc@iss.canRequestCert(icrs, iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty))) <- %icrs in Integrated-care-records-services(), loc='Addenbrookes', iss='Addenbrookes'% </pre>
292.	<pre> loc@iss.permits(cli, Add-record-item(pat, cli, group, subjects, third-parties)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
293.	<pre> loc@iss.permits(cli, Add-record-item(pat, cli, group, subjects, third-parties)) <- loc@iss.hasActivatedRole(cli, Ext-treating-clinician(ref, pat, org, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
294.	<pre> loc@iss.permits(ag, Annotate-record-item(pat, id)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
295.	<pre> loc@iss.permits(pat, Annotate-record-item(pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
296.	<pre> loc@iss.permits(pat, Annotate-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
297.	<pre> loc@iss.permits(cg, Force-read-record-item(pat, id)) <- loc@iss.hasActivatedRole(cg, Caldicott-guardian()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
298.	<pre> loc@iss.permits(cli, Force-read-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
299.	<pre> loc@iss.permits(pat, Get-record-item-ids(pat)) <- loc@iss.hasActivatedRole(pat, Patient()), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
300.	<pre> loc@iss.permits(ag, Get-record-item-ids(pat)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
301.	<pre> loc@iss.permits(cli, Get-record-item-ids(pat)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
302.	<pre> loc@iss.third-party-consent(group<consenter>, pat, id) <- loc@iss.hasActivatedRole(x, Third-party-consent(consenter, pat, id)), %loc='Addenbrookes', iss='Addenbrookes'% </pre>
303.	<pre> loc@iss.countAccessDeniedByPatient2(count<x>, a, b) <- loc@iss.hasActivatedRole(x, Access-denied-by-patient(what, whom, start, end)), %a=(pat, id), b=(org, reader, group, spcty), what=(pat, ids, authors, groups, subjects, from-time, to-time), </pre>

	<pre> whom=(orgs1, readers1, groups1, spctys1), Get-record-author(pat, id) in authors, Get-record-group(pat, id) in groups, sub in Get-record-subjects(pat, id), sub in subjects, Get-record-time(pat, id) in [from-time, to-time], org in orgs1, reader in readers1, group in groups1, spcty in spctys1, Current-time() in [start, end], loc='Addenbrookes', iss='Addenbrookes'% </pre>
304.	<pre> loc@iss.count-access-denied-by-clinician(count<x>, pat, id) <- loc@iss.hasActivatedRole(x, Access-denied-by-clinician(pat, id, start, end)), %Current-time() in [start, end], loc='Addenbrookes', iss='Addenbrookes'% </pre>
305.	<pre> loc@iss.permits(ag, Read-record-item(pat, id)) <- loc@iss.hasActivatedRole(ag, Agent(pat)), loc@iss.countAccessDeniedByPatient2(n, a, b), loc@iss.count-access-denied-by-clinician(m, pat, id), loc@iss.third-party-consent(consenters, pat, id), %a=(pat, id), b=('No-org', ag, 'No-group', 'No-spcty'), n=0, m=0, Get-record-third-parties(pat, id) subseteq consenters, loc='Addenbrookes', iss='Addenbrookes'% </pre>
306.	<pre> loc@iss.permits(cli, Read-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), %Get-record-author(pat, id) = cli, loc='Addenbrookes', iss='Addenbrookes'% </pre>
307.	<pre> loc@iss.permits(cli, Read-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.hasActivatedRole(x, Register-team-member(cli, team, spcty)), %Get-record-group(pat, id) = team, loc='Addenbrookes', iss='Addenbrookes'% </pre>
308.	<pre> loc@iss.permits(cli, Read-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, Clinician(spcty)), loc@iss.canActivateRole(cli, Group-treating-clinician(pat, group, spcty)), loc@iss.countAccessDeniedByPatient2(n, a, b), %n=0, a=(pat, id), b=('Addenbrookes', cli, group, spcty), Get-record-subjects(pat, id) subseteq Permitted-subjects(spcty), loc='Addenbrookes', iss='Addenbrookes'% </pre>
309.	<pre> loc@iss.permits(cli, Read-record-item(pat, id)) <- loc@iss.hasActivatedRole(cli, Ext-treating-clinician(ref, pat, org, spcty)), loc@iss.countAccessDeniedByPatient2(n, a, b), %n=0, a=(pat, id), b=(org, cli, 'Ext-group', spcty), Get-record-subjects(pat, id) subseteq Permitted-subjects(spcty), loc='Addenbrookes', iss='Addenbrookes'% </pre>
310.	<pre> loc@iss.permits(pat, Read-record-item(pat, id)) <- loc@iss.hasActivatedRole(pat, Patient()), loc@iss.countAccessDeniedByPatient2(n, a, b), loc@iss.count-access-denied-by-clinician(m, pat, id), loc@iss.third-party-consent(consenters, pat, id), %n=0, m=0, a=(pat, id), b=('No-org', pat, 'No-group', 'No-spcty'), Get-record-third-parties(pat, id) subseteq consenters, loc='Addenbrookes', iss='Addenbrookes'% </pre>
311.	<pre> loc@iss.canActivateRole(x, HR-mgr()) <- %loc='Addenbrookes', iss='Addenbrookes', x='Mo'% </pre>
312.	<pre> loc@iss.canActivateRole(x, RA-admin()) <- %loc='RA-East', iss='RA-East', x='Mo'% </pre>
313.	<pre> loc@iss.canActivateRole(x, MPI-admin()) <- %loc='MPI', iss='MPI', x='Mo'% </pre>
314.	<pre> loc@iss.canActivateRole(x, ICRS-admin()) <- %loc='ICRS', iss='ICRS', x='Mo'% </pre>