Education and Training Committee, 10 March 2010

Continuing professional development audits and sample sizes

Executive summary and recommendations

Introduction

At the meeting on 25 March 2009, the Committee agreed to reduce the CPD audit sample size to 2.5%.

This paper discusses an approach to ongoing reporting and to future review of the existing CPD audit sampling methodology.

Decision

The Committee is invited to discuss and agree the decisions outlined on page 10 of the attached paper.

Background information

Council paper – 10 September 2009
www.hpc-uk.org/aboutus/council/councilmeetings_archive/index.asp?id=455 (enclosure 6)

Resource implications

- Commissioning research
- Providing updates and papers for the Education and Training Committee

These resource implications will be accounted for in departmental planning.

Financial implications

- Commissioning research

These financial implications are taken into account in budgeting for the 2010/11 financial year.

Appendices

- Data summary of CPD audit (chiropodists / podiatrists and ODPs), 27 August 2009
- Advice on sample size for CPD audit process, 27 August 2009
- Project brief for CPD revalidation project

Date of paper

26 February 2010

Continuing Professional Development audits and sample sizes

1. Introduction

1.1 At its meeting on 25 March 2009 the Education and Training Committee considered a paper from the Executive about the sample size for audits of registrants' CPD profiles. The paper appended externally commissioned analysis undertaken by the University of Reading which looked at the statistical validity of different sample sizes.

1.2 When the CPD standards and audits were first put in place, it was agreed that a 5% sample would be taken of the first two professions to be audited and that consideration would then be given to dropping this to 2.5% for subsequent professions, dependent on the outcome of the audits. This decision was reached with regard to previous advice from the University of Reading.

1.3 At the meeting of the Education and Training Committee in March 2009, there was considerable debate about whether it was appropriate to reduce the sample size. The Committee agreed to a 2.5% sample size on an ongoing basis but that further review of this should be undertaken after subsequent audits had been completed.

1.4 This paper summarises the background to the ongoing CPD audits; appends recent analysis of audit data; explains ongoing plans for analysis of audit data and reporting to the Education and Training Committee; and discusses the implications and factors involved in any future decision about changing the existing sampling methodology. In particular, the paper proposes that the Committee should keep the audits under review but should not consider a change to the sampling methodology until all 13 professions (regulated as of the CPD standards effective date of 1 July 2006) have been through the audit process at the reduced 2.5% rate and the outcomes known.[1]

2. Background

2.1 This section outlines some of the background which will inform decisions about an approach to ongoing analysis of CPD data and decisions about sampling methodology.

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[1] Practitioner psychologists will be first audited from March 2013. This is because practitioner psychologists are currently in a shorter registration cycle and will renew their registration from March 2011. Thereafter practitioner psychologists will renew their registration in a two-yearly cycle. A registrant can only be audited to demonstrate that they have met the standards for CPD once they have been registered for a full two years.

CPD standards and audits

2.2 The standards for CPD became effective on 1 July 2006 and are linked to each profession's 2 year registration cycle. The audits commenced in July 2008. The first professions to be audited were chiropodists / podiatrists and ODPs.

2.3 To date we have completed the audits of the following professions:

Chiropodists and podiatrists (May 2008)
Operating Department Practitioners (September 2008)
Orthoptists (June 2009)
Paramedics (June 2009)
Clinical scientists (July 2009)
Prosthetists and Orthotists (July 2009)
Speech and language therapists (July 2009)
Occupational therapists (August 2009)
Biomedical scientists (August 2009)
Radiographers (From December 2009)

2.4 The following audits are ongoing:

Physiotherapists (From February 2010)
Arts therapists (March 2010)

2.5 The following audits are forthcoming:

Dietitians (April 2010)

CPD annual report

2.6 The Committee is considering a paper on the CPD annual report at this meeting. This includes statistics for the first four professions who were audited, including the outcomes of the audits.

2.7 Reports in future years are likely to include more analysis of the CPD audit outcomes as more data becomes available.

Revalidation

2.8 As part of the work on revalidation, the Executive will be working jointly with an external researcher to undertake further analysis of the outcomes of audits and CPD profiles. This work aims to identify whether any trends in CPD profiles exist across the Register.

2.9 Some examples of areas the study could focus on include:

- If there are any trends regarding the amount and type of CPD being undertaken and the characteristics of registrants (e.g. differences in gender, time since qualification, type of practice, geographical location etc);

- If there are any trends regarding the different audit results (e.g. accepted, deferred, removed etc) and the characteristics of registrants; and
- Identifying the main factors that contribute to a CPD audit profile not being accepted.

2.10 The work will be both qualitative (for example, looking at the types of CPD that registrants with different audit outcomes have undertaken) and quantitative (for example, looking at whether registrants in independent practice are more likely to encounter difficultly in meeting the CPD audit requirements).

2.11 The project brief for this work is appended to this paper. The commissioned statistical analysis of sample sizes and data trends may help inform this work. This work may also help to inform future discussion and decisions about changing the sampling methodology. [2]

3. Sample sizes

3.1 At its March 2009 meeting, the Committee considered a paper from the Executive proposing to reduce the sample size to 2.5%. The paper included analysis conducted by the Statistical Services Centre of the University of Reading on the statistical validity of different sample sizes. As a statistical analysis, the focus was on the statistical risks of certain sample sizes – i.e. exploring the sample size required to achieve reasonable reliability that the audits will detect 'non-compliance'.[3]

3.2 The report suggested that different sample sizes carry with them different 'margins of error'. This is the statistical margin of risk of failing to detect 'non-compliance' – i.e. sampling differing numbers of registrants carries with it differing levels of risk of non-compliance - in this context, non-compliance is registrants failing to meet the CPD requirements.

3.3 The report acknowledged that a 2.5% sample would lead to a greater 'margin of error' for small professions where the proportional approach to audits would lead to very small numbers of registrants being audited. The analysis illustrated how moving to a fixed sample size approach would help achieve greater statistical reliability in those professions where numbers were very small. (To illustrate, in the audits 2.5% of Orthoptists represented 30 registrants compared to 1,119 of physiotherapists.)

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[2] Link to revalidation paper – September Council

[3] 'Proposal to reduce continuing professional development (CPD) audit sample size from 5% to 2.5% from June 2009 and CPD update', Education and Training Committee, 25 March 2009 http://www.hpc-uk.org/assets/documents/1000271Aeducation_and_training_committee_20090325_enclosure10CPDsamplesizesandCPDupdate.pdf

3.4 For example, the sampling approach could in future be changed to select a fixed number of 500 registrants in each profession or 2.5%, whichever is the greater. This would reduce the statistical risk of failing to detect non-compliance.

3.5 The report acknowledged that a system in which, in effect, there would be a higher chance of being audited in some professions compared to others, may appear to be unfair and that as a consequence a decision would need to be made about the level of risk of non-detection that would be tolerated.

3.6 The above was discussed at length by the Education and Training Committee and the Council at their March 2009 meetings. Some members considered that it would be inappropriate to reduce the 5% sample size because this would be too small to be reliable; it was argued that a fixed sample size approach may be preferable and that 2.5% was too small a sample to carry weight and public confidence. However, others considered that a 2.5% sample was in line with HPC communication messages about the CPD audits to date; that there was not a persuasive argument for retaining the current sample sizes; and that a 2.5% sample still represented a significant number of registrants overall.

3.7 The Committee agreed to reduce the sample size, but that the outcomes of further analysis should be monitored to identify any trends, within, between and across the professions.

4. Ongoing research

4.1 This paper appends two analysis reports from the University of Reading, dated 27 August 2009, discussed below.

4.2 Data summaries of the CPD audits for orthoptists and paramedics are due very shortly and for clinical scientists, prosthetists / orthotists and speech and language therapists are due in April 2010.

4.3 For subsequent audits this approach will be reviewed in line with the content of this paper, the revalidation research project and the Committee's discussion at this meeting. For example, it may be more useful for this data analysis to be carried out for the individual professions and aggregated across the professions once all the audits have been completed. It may also be helpful to include data which is correlated to the outcome of the CPD audits.

Data summary of CPD audit

4.4 The first of these reports provides a data summary of the CPD audits of chiropodists / podiatrists and ODPs, looking at trends in the data between the whole of the Register and those selected for audit, in areas such as age and gender. This may, over time, help build up a picture of trends, within, between and across the professions.

Advice on sample size for CPD audit process

4.5 The second piece of research explores from a statistical perspective the factors involved in selecting a fixed sample size. The analysis approaches the question on the basis that the sample size selected should be no greater than that necessary to achieve 'detectability' (i.e. to detect non-compliance) and precision.

4.6 The analysis concludes that a sample of 300 registrants in each profession would carry with it a risk of non-detection of 5%; a sample of 461 would carry a 1% risk. The analysis concludes, however, that no sampling methodology could eliminate the risks of non-detection entirely (in this context, the risk that registrants failing to comply with the CPD standards are not identified). The analysis also concludes that fixed sample sizes would aid more precise comparison between different professions.

5. Approach to future review of sample sizes

5.1 At the Committee's previous discussion, no clear approach to future review was determined and no timetable for future discussion was established. This paper sets out a suggested approach to ongoing reporting and analysis and an approach to reviewing the current sample size methodology.

5.2 The Executive proposes that the Education and Training Committee undertake an ongoing monitoring role in relation to the outcomes of CPD audits and the ongoing external analysis. The Executive proposes that the Committee should receive data relating to the CPD audits and a commentary on that data as papers to note at each meeting of the Committee (when available). This would be in line with regular reporting the Committee receives about the health and character process managed by the Fitness to Practise Department.

5.3 The Executive proposes that the Committee should not proceed to consider whether to change the sampling methodology until all 13 professions currently covered by the audits have been audited at the new 2.5% sample size. This will generate sufficient data for more analysis and this timescale will ensure that the quantitative data analysis commissioned by the Registration Department and the CPD and risk research (quantitative and qualitative), to be undertaken as part of the revalidation work, can be taken into account in the Committee's discussion. This approach would also ensure that the HPC is not seen to unfairly 'penalise' some professions by adversely 'changing the goalposts' each time they go through the audit process. The last of these professions to be audited is ODPs from September 2010.

5.4 Although the statistical analysis will be important to future discussion, there are a number of factors which will also be relevant. These factors are about operations (e.g. operational feasibility of different sampling methodologies), communications (e.g. the impact of any changes on stakeholder relationships) and, most importantly perhaps, what we might term 'philosophical' considerations (e.g. what the Committee and the Council see as the purpose of the CPD standards and the audit process itself).

5.5 Some of the relevant factors are outlined below. These are not intended to be exhaustive but do illustrate that any future decision about changing the CPD sampling methodology might take into account wider factors than just the outcomes of analysis of statistical risk and reliability.

- **The purpose of the CPD audits**

5.6 What is the purpose of the CPD audit process? Are the audits about identifying non-compliance (i.e. picking up registrants who undertake no CPD or whose CPD is inadequate) or about ensuring compliance (i.e. the existence of the audits aims to ensure widespread compliance amongst the registrant population, amongst both those who are audited, and the majority who will not be audited and, indeed, who may never be audited)?

5.7 The answer to these questions may depend on whether or not we consider that most registrants undertake CPD as a routine part of professional practice, regardless of (rather than because of) the CPD standards and audit requirements. To some extent the audits fulfil both of these aims. However, if we consider that most registrants self-declare in good faith at renewal of registration and that ensuring widespread compliance is the most important aim of the audits, the 'narrow focus' of the analysis based on statistical reliability to reduce the risk of non-detection becomes far less relevant to the overall decision.

5.8 In addition, the Council's underlying approach to CPD is that the standards are about encouraging continued learning and development, rather than, expressly, directly or functionally being linked to 'continued competence' and therefore more directly linked to the risk of patient harm. (The revalidation work is separately exploring whether data from the CPD audits can help us develop a risk profile of the regulated professions.)

- **Equity between professions**

5.9 A fixed sample approach (as an illustration) would create dis-equity between professions. For example, a fixed sample of 500 would represent substantially fewer physiotherapists than have been audited this time round, but approximately 40% of all registered orthopists. It could be argued that there is at present insufficient existing evidence to objectively justify a disproportionate approach and it would be difficult to publicly justify this on the basis of statistical analysis alone.

5.10 In its work to date the Committees and the Council have been cognisant of the need to adopt common standards, processes and approaches across the different professions, unless there is a good justification for not doing so. There is a need to be (and to be seen to be) proportionate and to retain consistency and equity across the professions, where possible. Any changes to the audit sample methodology would need to have a clear rationale and be able to be communicated clearly.

- **Operational issues**

5.11 Any future discussion about the sample size would also need to balance proportionality in terms of the cost and resource implications of auditing CPD profiles and the logistical feasibility of different sampling approaches, with the purpose of the CPD audits and the desired outcome. For example, if a fixed sample size approach was to be adopted this would need to be capable of being facilitated by the existing IT system, or the cost and resource implications of development work would need to be taken into account.

6. Decision

6.1 The Committee is invited to agree the following:

- that the Committee should receive regular reporting about the outcome of the CPD audits, together with the outcome of any commissioned research; and

- that the Committee should review the current sampling methodology after all 13 professions covered by the audits have been audited at the new 2.5% rate.

6.2 The Committee is invited to discuss the information, data and analysis that it considers might be valuable to future decisions about the sampling methodology, in order to inform the ongoing work of the Executive.

6.3 The Committee is further invited to discuss the additional factors suggested in paragraphs 5.6 to 5.11 for future decisions, in order to inform the Executive's subsequent analysis and proposals to the Committee.

Health Professions Council
Data summary of CPD Audit

Polly Grove
Statistical Services Centre
University of Reading

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Data Validation Rules

- 'Age' created from DATE_OF_BIRTH: invalid are any entries outside the range 20-80 years old.
- 'Number of years on register' created from the original variable 'START_DATE': invalid are any entries outside the start date range 1963-2009.
- 'Urban/rural Indicator' is based on registrants work postcode: non-UK postcodes are classed as invalid.
- 'Gender': invalid are entries 'U' for unknown and blanks.

Chiropodists (CH)

Number of Records	14444

Summary of key variables

Table 1 summarises the key variables by number and percentage missing. These will relate to blank or missing entries and invalid entries. For example, the urban/rural indicator variable is based on a registrant's work address postcode. Over three quarters of the records had missing or invalid entries here.

Table 1: Missing/invalid Values

		Whole Profession		CPD Audit Sample	
		Number Missing	% Missing	Number Missing	% Missing
Variable	Application Route to Register	0	0	0	0
	Gender	86	0.6	0	0
	Age	380	2.6	0	0
	Number of years since first appearing on the register	1567	10.8	59	9.1
	Urban/rural Indicator	11097	76.8	500	76.9
	Registration Status	0	0	0	0

From here on in the table totals will be based on the **valid totals and percentages**. For example, the variable 'Gender' has 86 missing values, so the total in Table 2 is 14444-86=**14358** and the percentages are calculated from this.

Frequency tables of key variables

The purpose of the following tables is to summarise the key variables across the whole profession and alongside that to present the mirror summary for the CDP audit sample. By randomly selecting the sample, the reason is that the sample will be representative of the profession as a whole. For example in Table 2, the gender distribution is roughly the same in the sample as in the whole profession. However there are instances where the distributions do not match namely 'Number of years on the register' (Table 7 and 8) and 'Application route to register' (Table 9).

Table 2: Gender Frequency

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Gender	Male	4061	28.3%	172	26.5%
	Female	10297	71.7%	478	73.5%
	Total	14358	100.0%	650	100.0%

Table 3: Age Category Frequency

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Age Categories	<= 25 years	464	3.3%	9	1.4%
	26 to 35 years	2342	16.7%	93	14.3%
	36 to 45 years	4098	29.1%	135	20.8%
	46 to 55 years	3862	27.5%	191	29.4%
	56 to 65 years	2451	17.4%	178	27.4%
	>= 66 years	847	6.0%	44	6.8%
	Total	14064	100.0%	650	100.0%

Table 4: Age Category Frequency

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Age Categories	50 years and younger	9075	64.5%	322	49.5%
	Over 50 years	4989	35.5%	328	50.5%
	Total	14064	100.0%	650	100.0%

Table 5: Age Statistics

	Valid N	Mean	Maximum	Minimum	Median
	Whole Profession				
Age	14064	46.3	80	21	46.0
	CPD Audit Sample				
Age	650	49.2	79	25	51.0

Table 6: Age Statistics by Gender

		Age				
		Valid N	Mean	Maximum	Minimum	Median
		Whole Profession				
Gender	Male	3823	48.9	80	21	48.0
	Female	10155	45.4	80	21	45.0
	Total	13978	46.4	80	21	46.0
		CPD Audit Sample				
Gender	Male	172	52.3	77	25	54.0
	Female	478	48.0	79	25	50.0
	Total	650	49.2	79	25	51.0

Table 7: Number of Years on the Register

		Whole Profession		**CPD Audit Sample**	
		Valid N	Column N %	Valid N	Column N %
Number of years since first appearing on the register	<= 5 years	5751	44.7%	575	97.3%
	6 to 10 years	1602	12.4%	15	2.5%
	11 to 15 years	1515	11.8%	0	0%
	16 to 20 years	1420	11.0%	1	0.2%
	21 to 25 years	1287	10.0%	0	0%
	26 to 30 years	963	7.5%	0	0%
	31 to 35 years	273	2.1%	0	0%
	36 to 40 years	29	0.2%	0	0%
	41 to 45 years	23	0.2%	0	0%
	>= 46 years	14	0.1%	0	0%
	Total	12877	100.0%	591	100.0%

Table 8: Number of Years on the Register Statistics

	Valid N	Mean	Maximum	Minimum	Median
	Whole Profession				
Years on Register	12877	11.3	46	0	8.0
	CPD Audit Sample				
Years on Register	591	4.3	19	3	4.0

Table 9: Application Route to Register

		Whole Profession		**CPD Audit Sample**	
		Valid N	Column N %	Valid N	Column N %
Application Route to Register	Grandparenting (specific route unknown)	151	1.0%	18	2.8%
	Grandparenting Route A	2796	19.4%	405	62.3%
	Grandparenting Route B	745	5.2%	83	12.8%
	International	192	1.3%	4	.6%
	UK	10560	73.1%	140	21.5%
	Total	14444	100.0%	650	100.0%

Table 10: UK Country of Work

		Whole Profession		**CPD Audit Sample**	
		Valid N	Column N %	Valid N	Column N %
Country of Work	England/Wales	2825	84.4%	142	94.7%
	Northern Ireland	192	5.7%	4	2.7%
	Scotland	330	9.9%	4	2.7%
	Total	3347	100.0%	150	100.0%

Table 11: Urban Indicator

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Overall Urban/Rural Indicator	Urban >10,000	2633	78.7%	108	72.0%
	Town/Fringe, Small Town	430	12.8%	22	14.7%
	Village, Hamlet, Rural	284	8.5%	20	13.3%
	Total	3347	100.0%	150	100.0%

Table 12: Registration Status Frequency

		Whole Profession	
		Valid N	Column N %
Status	DEREGISTERED_CPD_LAPSED	3	0%
	DEREGISTERED_CPD_REJECTED	5	0%
	DEREGISTERED_DECEASED	2	0%
	DEREGISTERED_INTERMED_LAPSED	6	0%
	DEREGISTERED_LAPSED	51	0.4%
	DEREGISTERED_VOLUNTEERED	1717	11.9%
	REGISTERED	12660	87.6%
	Total	14444	100.0%

Table 13: Registration Status Frequency by Audit Selection

		Not selected for CPD Audit		Selected for CPD Audit	
		Valid N	Column N %	Valid N	Column N %
Status	DEREGISTERED_CPD_LAPSED	0	0%	3	0.5%
	DEREGISTERED_CPD_REJECTED	0	0%	5	0.8%
	DEREGISTERED_DECEASED	0	0%	2	0.3%
	DEREGISTERED_INTERMED_LAPSED	0	0%	6	0.9%
	DEREGISTERED_LAPSED	0	0%	51	7.8%
	DEREGISTERED_VOLUNTEERED	1672	12.1%	45	6.9%
	REGISTERED	12122	87.9%	538	82.8%
	Total	13794	100.0%	650	100.0%

Improving the outcome categories for the variable 'CPD Audit Status'

Table 14a shows the original outcome categories for the variable 'CPD Status' which only applies to those records selected for CPD Audit. In Table 14b an attempt is made at reducing these categories to something more concise, however these can be re-decided very easily as HPC see fit. As you can see there is no category indicating that a registrant was removed from the register following failure of the CPD audit.

Table 14a: CPD Audit Status ORIGINAL

		Count	Column N %
CPD_Status	1. Accepted	469	72.2%
	2. DEFERRAL_REJECTED	2	.3%
	3. DEFERRAL_REQUESTED	6	.9%
	4. Deferred	64	9.8%
	5. FURTHER_INFORMATION_REQUIRED	3	.5%
	6. PROFILE_INCOMPLETE	6	.9%
	7. SELECTED_FOR_CPD	97	14.9%
	8. Under Scrutiny - Further Information Received	1	.2%
	9. Under Scrutiny - Further Time Given	2	.3%
Total		650	100.0%

Table 14b: CPD Audit Status

			Count	Column N %
CPD Audit Status	1	Accepted	469	72.2%
	6	CPD profile incomplete	6	0.9%
	2	Deferral rejected	2	0.3%
	3	Deferral requested	6	0.9%
	4	Deferred	64	9.8%
	5, 8, 9	In the process	6	0.9%
	7	Selected for CPD	97	14.9%
		Total	650	100.0%

Table 15 is a cross-tabulation of CPD audit status as in table 14b with Registration status as in table 13. Again it only applies to those selected for the audit hence the total being the same as in tables 14a and 14b. Please see Appendix 2 for some explanations on the interpretation of some of the combinations in this table.

Table 15: CDP Audit Status against Registration Status

		Status							
		DEREGISTERED_CPD_LAPSED	DEREGISTERED_CPD_REJECTED	DEREGISTERED_DECEASED	DEREGISTERED_INTERMED_LAPSED	DEREGISTERED_LAPSED	DEREGISTERED_VOLUNTEERED	REGISTERED	Total
CPD Audit Status	Accepted	0	0	1	2	0	1	465	469
	CPD profile incomplete	0	3	0	0	0	3	0	6
	Deferral rejected	0	0	0	0	2	0	0	2
	Deferral requested	0	0	1	0	4	1	0	6
	Deferred	0	0	0	0	1	0	63	64
	In the process	0	2	0	0	0	2	2	6
	Selected for CPD	3	0	0	4	44	38	8	97
	Total	3	5	2	6	51	45	538	650

Operating Department Practitioners (ODP)

Number of Records	9931

Summary of key variables

Table 16: Missing Values

		Whole Profession		CPD Audit Sample	
		Number Missing	% Missing	Number Missing	% Missing
Variable	Application Route to Register	0	0	0	0
	Gender	207	2.1	25	5.3
	Age	17	0.2	0	0
	Number of years since first appearing on the register	17	0.2	17	3.6
	Urban/rural Indicator	7291	73.4	339	72.4
	Registration Status	0	0	0	0

Frequency tables of key variables

Table 17: Gender Frequency

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Gender	Male	4812	49.5%	262	59.1%
	Female	4912	50.5%	181	40.9%
	Total	9724	100.0%	443	100.0%

Table 18: Age Category Frequency

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Age Categories	<= 25 years	417	4.2%	2	0.4%
	26 to 35 years	2417	24.4%	92	19.7%
	36 to 45 years	3676	37.1%	176	37.6%
	46 to 55 years	2598	26.2%	136	29.1%
	56 to 65 years	747	7.5%	59	12.6%
	>= 66 years	59	0.6%	3	0.6%
	Total	9914	100.0%	468	100.0%

Table 19: Age Category Frequency

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Age Categories	50 years and younger	8112	81.8%	347	74.1%
	Over 50 years	1802	18.2%	121	25.9%
	Total	9914	100.0%	468	100.0%

Table 20: Age Statistics

	Valid N	Mean	Maximum	Minimum	Median
	Whole Profession				
Age	9914	41.5	76	20	41.0
	CPD Audit Sample				
Age	468	44.2	72	24	44.0

Table 21: Age Statistics by Gender

		Age				
		Valid N	Mean	Maximum	Minimum	Median
		Whole Profession				
Gender	Male	4803	43.9	76	20	44.0
	Female	4905	38.9	72	20	38.0
	Total	9708	41.3	76	20	41.0
		CPD Audit Sample				
Gender	Male	262	46.3	72	25	45.5
	Female	181	40.6	66	24	40.0
	Total	443	44.0	72	24	44.0

Table 22: Number of Years on the Register

		Whole Profession		**CPD Audit Sample**	
		Valid N	Column N %	Valid N	Column N %
Number of years since first appearing on the register	1 year or less	1126	11.4%	0	0%
	2 to 3 years	1330	13.4%	32	7.1%
	4 to 5 years	7458	75.2%	419	92.9%
	> 5 years	0	0%	0	0%
	Total	9914	100.0%	451	100.0%

Table 23: Number of Years on the Register Statistics

	Valid N	Mean	Maximum	Minimum	Median
	Whole Profession				
Years on Register	9914	3.4	4	0	4.0
	CPD Audit Sample				
Years on Register	451	3.9	4	3	4.0

Table 24: Application Route to Register

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Application Route to Register	Grandparenting (specific route unknown)	2	0%	0	0%
	Grandparenting Route A	32	0.3%	1	0.2%
	Grandparenting Route B	0	0%	0	0%
	International	20	0.2%	1	0.2%
	UK	9877	99.5%	466	99.6%
	Total	9931	100.0%	468	100.0%

Table 25: UK Country of Work

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Country of Work	England/Wales	2502	94.8%	119	92.2%
	Northern Ireland	16	0.6%	1	0.8%
	Scotland	122	4.6%	9	7.0%
	Total	2640	100.0%	129	100.0%

Table 26: Urban Indicator

		Whole Profession		CPD Audit Sample	
		Valid N	Column N %	Valid N	Column N %
Overall Urban/Rural Indicator	Urban >10,000	2350	89.0%	112	86.8%
	Town/Fringe, Small Town	83	3.1%	4	3.1%
	Village, Hamlet, Rural	207	7.8%	13	10.1%
	Total	2640	100.0%	129	100.0%

Table 27: Registration Status Frequency

		Whole Profession	
		Valid N	Column N %
Status	DEREGISTERED_CPD_LAPSED	2	<0.001%
	DEREGISTERED_DECEASED	1	<0.001%
	DEREGISTERED_LAPSED	16	.2%
	DEREGISTERED_VOLUNTEERED	252	2.5%
	REGISTERED	9660	97.3%
	Total	9931	100.0%

Table 28: Registration Status Frequency by Audit Selection

		Not selected for CPD Audit		Selected for CPD Audit	
		Valid N	Column N %	Valid N	Column N %
Status	DEREGISTERED_CPD_LAPSED	0	0%	2	0.4%
	DEREGISTERED_DECEASED	0	0%	1	0.2%
	DEREGISTERED_LAPSED	0	0%	16	3.4%
	DEREGISTERED_VOLUNTEERED	241	2.5%	11	2.4%
	REGISTERED	9222	97.5%	438	93.6%
	Total	9463	100.0%	468	100.0%

Table 29: CPD Audit Status Frequency

		Count	Column N %
CPD Audit Status	Accepted	366	78.2%
	CPD profile received	2	0.4%
	Deferral requested	4	0.9%
	Deferred	46	9.8%
	In the process	14	3.0%
	Selected for CPD	36	7.7%
	Total	468	100.0%

Table 30: CDP Audit Status against Registration Status

		Status					
		DEREGISTERED_CPD_LAPSED	DEREGISTERED_DECEASED	DEREGISTERED_LAPSED	DEREGISTERED_VOLUNTEERED	REGISTERED	Total
CPD Audit Status	Accepted	0	0	0	0	366	366
	CPD profile received	0	0	1	0	1	2
	Deferral requested	0	0	0	1	3	4
	Deferred	0	0	0	1	45	46
	In the process	0	0	0	0	14	14
	Selected for CPD	2	1	15	9	9	36
	Total	2	1	16	11	438	468

Appendix 1 – Derivation of the Urban/rural Indicator

Table 31: National Statistics Postcode Directory (NSPD) Urban/rural indicators

Indicator	England/Wales	Scotland	Northern Ireland
1	Urban >= 10k-WS* sparse	Large Urban Area > 125,000	Belfast Metropolitan Urban Area
2	Town and Fringe-WS sparse	Other Urban Area 100,000 - 125,000	Derry Urban Area
3	Village-WS sparse	Accessible Small Town 3,000-10,000	Large Town 18,000 - 75,000
4	Hamlet and Isolated Dwelling-WS sparse	Remote Small Town 3000-10,000	Medium Town 10,000- 18,000
5	Urban >= 10k-WS less sparse	Very Remote Small Town 3,000-10,000	Small Town 4,500 - 10,000
6	Town and Fringe-WS less sparse	Accessible Rural < 3,000	Intermediate Settlement 2,250 - 4,500
7	Village-WS less sparse	Remote Rural < 3,000	Village 1,000 - 2,250
8	Hamlet and Isolated Dwelling-WS less sparse	Very Remote Rural < 3,000	Small Village, Hamlet, Open Countryside <1,000

*WS=wider surrounds

Table 32: Derived Urban/rural categories

	England/Wales Indicators	Scotland Indicators	Northern Ireland Indicators
Urban >10,000	1, 5	1, 2	1, 2, 3, 4
Town/Fringe, Small Town	2, 6	3, 4, 5	5, 6
Village, Hamlet, Rural	3, 4, 7, 8	6, 7, 8	7, 8

Appendix 2 – Interpretation of CPD Status and Registration Status

Taken from an email from Roy Dunn.

Registration Status	
• **Deregistered_CPD_Lapsed**	People that made no submission for CPD and just lapsed by not paying or signing the declaration.
• **Deregistered _CPD_Rejected**	Submitted CPD profile, but did not complete the process in time, or provide enough information and were thus removed from the register. The CPD_Rejected version is not permanent, as they may appeal against the decision via an FTP run process.
Combinations of CPD Status and Registration Status	
• **Deregistered _Lapsed and Selected for CPD**	Lapsed without making any CPD submissions (didn't pay, didn't sign, didn't submit CPD)
• **Deregistered _Volunteered and Selected for CPD**	Submitted voluntary de registration form before the lapsing date.
• **Registered and Selected for CPD**	Error records where someone's deferral request was refused and the registrant was not informed in time, or those that are undergoing a non public FTP process where they are not allowed to lapsed even if not paying, not signing the declaration or taking part in CPD audit.
• **Deregistered _Lapsed and selected for CPD**	Lapsed without making any CPD submissions.
• **Deregistered _CPD_ lapsed and Selected for CPD**	Renewed the registration but did not make CPD submission and did not appeal against removal from the register.
• **Deregistered_volunteered/DEFERRAL_REQUESTED** • **Deregistered_volunteered/FURTHER_INFORMATION_REQUIRED** • **Deregistered_volunteered/PROFILE_INCOMPLETE** • **Deregistered_Lapsed/ DEFERRAL_REQUESTED** • **Deregistered_Lapsed/ DEFERRAL_REJECTED** • **Deregistered_Lapsed/ DEFERRED**	When treating "deregistration" as a planned route to avoid producing more CPD documentation, the combinations here may be interpreted more clearly. Deregistering either by asking to leave the register (Deregistered Volunteered**)**, or just not paying and signing the declaration (Deregistered Lapsed) has the result of stopping further CPD requirements in the short term. Deferral_Rejected would be a classic case where someone unable to fulfil the requirements gets out of the CPD process by simply not paying or signing their renewal from. Further_information_required or Profile _incomplete suggest an attempt to fulfil CPD audit process in the short term, then deciding to terminate the registration process.

Health Professions Council
Advice on Sample Size for CPD Audit Process

Polly Grove
Statistical Services Centre
University of Reading

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Introduction

This report looks at offering insight into selecting a fixed sample size for each profession that is subject to HPC's CPD audit. Terms in bold appear in a glossary at the end of the report.

Finding Evidence

- *Finding it if it's out there*
- *Risk of non-detection*
- *Minimum detectable rate from our sample*

By taking a suitably sized random **sample** of a **population** (all the registrants in a particular profession) we can obtain evidence (but not necessarily proof) that some members of that profession are not meeting the CPD standard. Clearly, if the CPD profile of any member of the **sample** is not accepted, then there must be some rate of non-acceptance in the profession. We may refer to the rate of non-acceptance as our **proportion of interest**.

But if all the members in the **sample** are accepted, we cannot say that the whole profession would be accepted, but only that we have no evidence of the cases that would not be accepted, and that the rate of non-acceptance is likely to be below a given percentage i.e. it was too small for our sample size to detect.

The larger the **sample** we take, the more likely it is that we will find the **proportion of interest** (if it exists in the profession), or (if all members of the **sample** are accepted on the CPD audit) we obtain a decrease in the likely level of the **proportion of interest**. However, increasing the **sample** size costs money, and beyond a certain point the gains become rather small.

Now we consider being able to find cases in our sample that we are interested in finding given that there are some out there. If for example our proportion of interest was believed to be 1% (one case in every 100 failed CPD) a sample size of 100 would be insufficient; there is a very high risk of not capturing any cases with that sample size i.e. a high risk of non-detection.

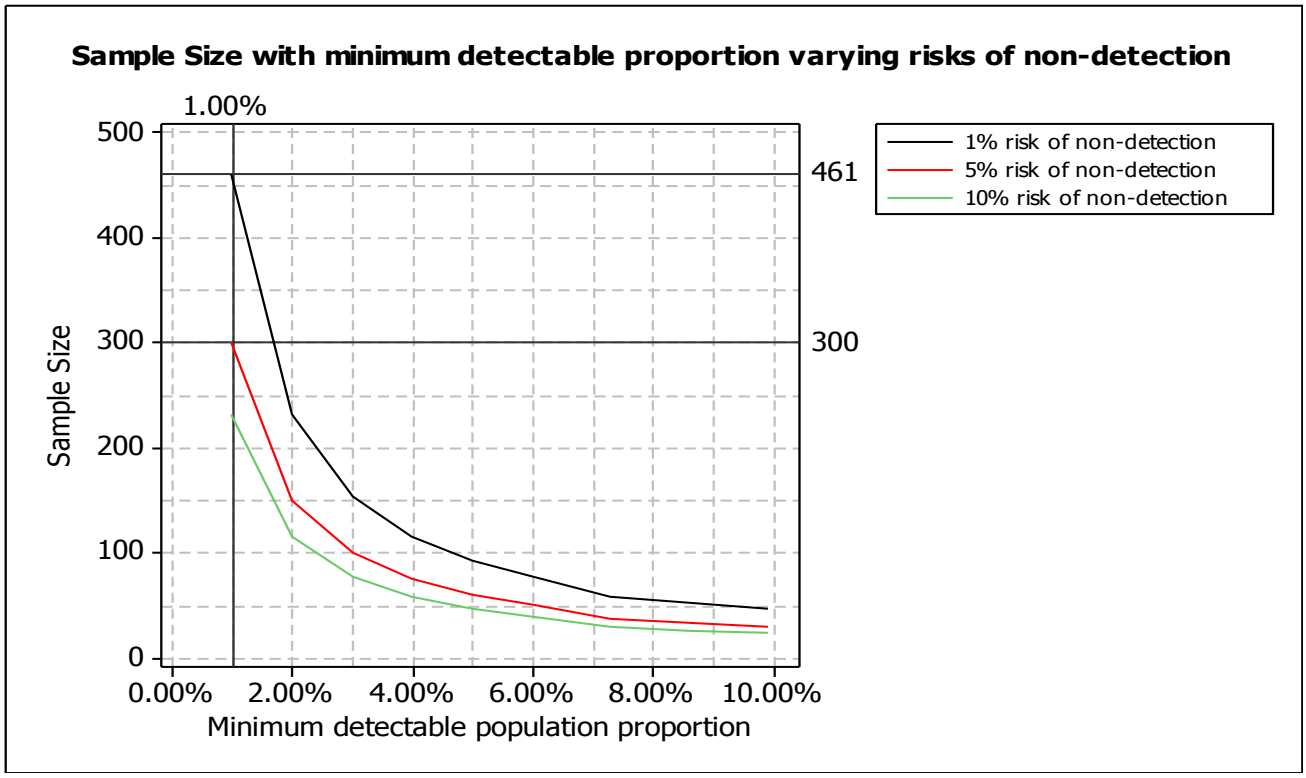
To determine a suitable **sample** size, a minimum detectable **proportion of interest** needs to be decided upon. For example, it may be decided above 1% is reasonable, and then the **sample** size is chosen such that it is unlikely that we wouldn't find any cases in our sample if the actual **proportion of interest** is 1% or greater.

The following table gives the sample size required for various minimum detectable population proportions, for risks of non-detection of 1%, 5% and 10% i.e. we fix the column and rows and see the impact on the required sample size.

Table 1: Sample sizes

Minimum detectable population proportion	Risk of non-detection 1%	5%	10%
1%	461	300	231
2%	231	150	116
3%	154	100	77
4%	116	75	58
5%	93	60	47
6%	77	50	39
7%	58	38	29
9%	52	34	26
10%	47	30	24

Figure 1: Varying sample sizes



Now, since a sampling approach is proposed, there will always be some risk of non-detection in our sample. A widespread and historically acceptable level for this risk is often taken to be 5%. We have power over controlling this risk hence the three columns in Table 1 and the three lines on the figure representing risks of 1%, 5% and 10% respectively for the purposes of comparison.

Being able to detect a rate as small as 1% in our population would require a sample size of 300, with a risk of non-detection of 5%. The rates HPC are concerned with (proportion of cases failing CPD) are typically assumed to be small hence they may assume a rate of 1% in the population and hence choose a sample size that allows detection of at least this rate given that it exists.

The information in Table 1 above is represented graphically in Figure 1. Here we see that as sample size decreases, the proportion of interest we are able to detect increases. So making the assumption that the true proportion of interest in the population is greater means we can take a smaller sample. For example, we may make the assumption that the proportion of interest is at least 4%, that is to say we are not interested in a rate less than this. From the figure this would require a sample size of roughly 75 with 5% risk of non-detection. We may work the other way by first fixing the sample size, 100 say, in which case the minimum population proportion we could hope to detect is 3%. If the population proportion is less than this we have little hope of capturing it with a sample of that size.

When sampling, it is impossible to avoid risk of non-detection. However, it can be reduced by increasing the sample i.e. you run a smaller risk of missing any cases when you sample more cases. Keeping the proportion of interest in the population at 1% but improving the risk of non-detection in the sample from 5% (1 in 20 chance) to 1% (1 in 100 chance) the required sample size increases from 300 to 461. These scenarios are marked on Figure 1.

Estimating the Proportion of Interest

- *How precise is our sample estimate?*
- *Varying our confidence level and effect of sample size*

This requirement is somewhat different from that of the previous section, as here we are interested in how precisely the **sample** can estimate the actual level of the **proportion of interest** in a profession, regardless of whether there is evidence of non-acceptance. Generally, the bigger the **sample,** the more precise the estimate.

Tables 2 and 3 fix sample size and sample proportion (i.e. imagine this is the rate we find in our sample as opposed to the true underlying population proportion) and show the result on precision as shown by **confidence intervals**.

Table 2 gives approximate 95% **confidence intervals** for our estimate of the proportion of interest for various **sample** sizes and sample proportions. A **confidence interval** shown as x%-y% means that there is a 95% probability than the actual level of the **proportion of interest** is between x% and y%. For example, for a sample size of 100 say we find a 3% rate of CPD profile failure in the sample. This is clearly an estimate of the rate in that profession and as such has uncertainty attached to it. We quantify this with a confidence interval. We find 3%, but there is a 95% probability that the true rate is between 0.6% and 8.6% i.e. although in our 100 we have found 3 cases, in the profession (the population) it could be a rate of over 8% or likely very small. Increasing the sample size reduces the error attached to the estimate shown by the narrowing of the CIs as you move down the table. Improvements become less significant however towards the larger sample sizes; the effect of diminishing returns is apparent. This is represented graphically for one scenario in Figure 2.

Table 3 repeats the scenarios however with a 99% **confidence interval**. This has the effect of widening the CIs since for the same sample size and sample proportion the CI needs to be wider than before to ensure a 99% probability of it containing the true population proportion.

Table 2: 95% Confidence Intervals

Sample size	Proportion of interest found in the sample			
	1%	3%	5%	10%
20	-	-	0.1%-24.9%	1.2%-31.7%
40	-	<0.0%-13.2%	0.6%-17.0%	2.7%-23.7%
60	-	0.4%-11.6%	1.0%-13.9%	3.7%-20.6%
80	-	0.3%-8.8%	1.3%-12.4%	4.4%-18.8%
100	<0.0%-5.5%	0.6%-8.6%	1.6%-11.3%	4.9%-17.7%
120	<0.0%-5.0%	0.7%-7.9%	1.8%-10.6%	5.2%-16.9%
140	<0.0%-4.0%	0.7%-7.2%	2.0%-10.1%	5.5%-16.3%
160	0.1%-4.5%	1.0%-7.2%	2.1%-9.7%	5.8%-15.8%
180	0.1%-4.0%	0.9%-6.4%	2.3%-9.3%	6.0%-15.4%
200	0.1%-3.6%	1.1%-6.5%	2.4%-9.0%	6.2%-15.1%
300	0.2%-2.9%	1.3%-5.7%	2.8%-8.2%	6.8%-14.0%
400	0.2%-2.6%	1.5%-5.2%	3.0%-7.7%	7.2%-13.4%
500	0.3%-2.4%	1.6%-4.9%	3.2%-7.3%	7.5%-13.0%
1000	0.4%-1.9%	2.0%-4.3%	3.7%-6.6%	8.2%-12.1%

Table 3: 99% Confidence Intervals

Sample size	Proportion of interest found in the sample			
	1%	3%	5%	10%
20	-	-	<0.0%-31.8%	0.5%-38.8%
40	-	<0.0%-13.2%	0.2%-21.2%	1.7%-28.3%
60	-	0.1%-14.6%	0.5%-17.1%	2.6%-24.1%
80	-	0.1%-11.1%	0.8%-15.0%	3.3%-21.8%
100	<0.0%-7.2%	0.3%-10.6%	1.0%-13.6%	3.8%-21.2%
120	<0.0%-6.1%	0.5%-10.2%	1.2%-12.6%	4.2%-19.2%
140	<0.0%-5.2%	0.4%-8.8%	1.4%-11.9%	4.5%-18.3%
160	<0.0%-5.7%	0.6%-8.6%	1.6%-11.3%	4.8%-17.7%
180	<0.0%-5.1%	0.6%-7.7%	1.7%-10.8%	5.0%-17.2%
200	<0.0%-4.6%	0.7%-7.7%	1.8%-10.4%	5.2%-16.7%
300	0.1%-3.7%	1.0%-6.6%	2.3%-9.2%	6.0%-15.3%
400	0.1%-3.2%	1.2%-6.0%	2.6%-8.6%	6.5%-14.5%
500	0.2%-2.9%	1.3%-5.6%	2.8%-8.1%	6.8%-14.0%
1000	0.3%-2.2%	1.7%-4.7%	3.3%-7.1%	7.7%-12.7%

Figure 2: Sample size and confidence interval

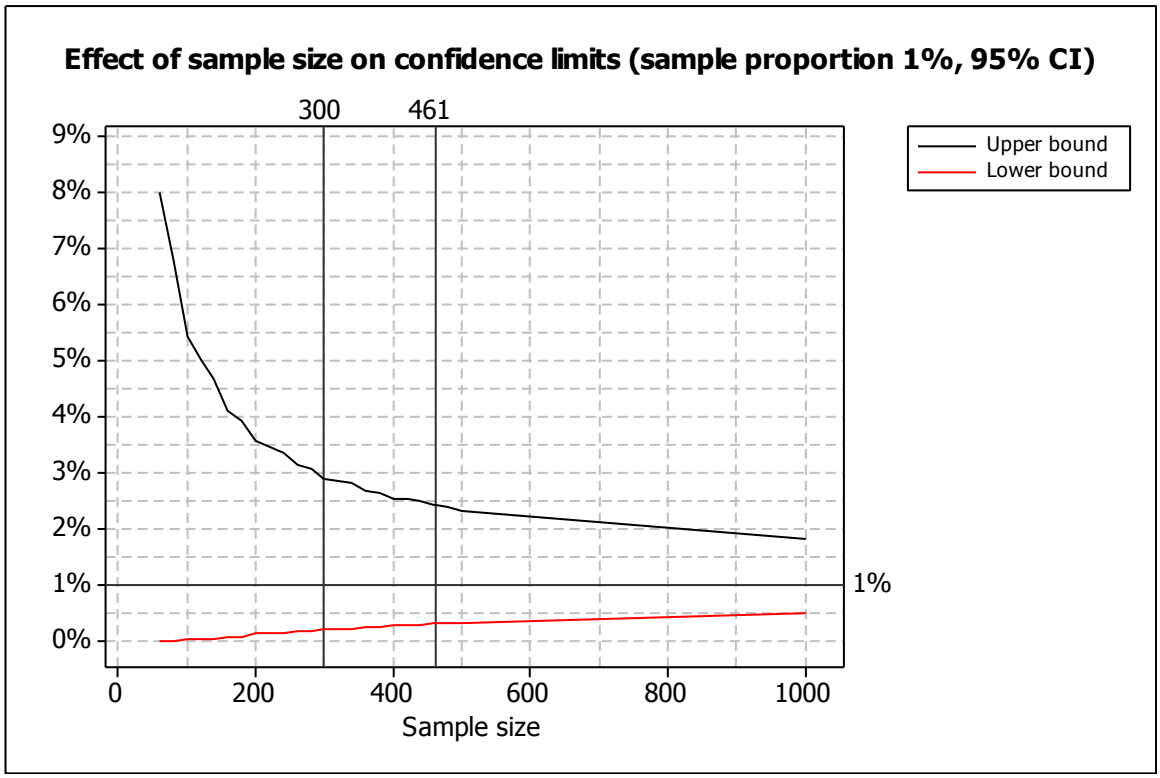


Figure 2 relates to finding a **sample** proportion of 1% and a confidence level of 95%. From Figure 2 we can see that if you have a rate of 1% in a small sample it is not precisely estimated (wide confidence limits). Marked on the above figure are the proposed sample sizes from the first section. As you increase the sample size, the estimate is more precisely estimated and hence a narrowing of the confidence bands is apparent. Increasing the sample size beyond a certain point results in little added gain in precision of the sample estimate.

Conclusions and Remarks

The chosen sample size should be the greater of those needed to satisfy the two requirements of detectability and precision. A sample size of 300 will allow detection of a population proportion of at least 1% when accepting a risk of non-detection of 5%. There is some evidence that rates of interest in the professions, (e.g. removal due to failure of CPD Audit, lapsing due to CPD Audit selection), are indeed small and may lie between 1% and 10%. Hence a sample size that ensures the ability to detect a small rate is most sensible and recommended.

Through the very nature of taking a sample, the risk of potentially not capturing cases of interest will never be absent. However, as highlighted earlier in the report, a conventional probability for this risk is 5%. By weighing up the seriousness of missing cases alongside the cost implications of increasing sample size one may argue that it is worth improving the risk of non-detection to a 1% chance. The required sample size in this case would be 461.

The sampling approach proposed here advises randomly selecting a fixed number of registrants from each profession regardless of the size of the profession. Selecting the same number of registrants from each profession allows reporting to be equally precise between professions i.e. each profession will have the same minimum detectable population proportion and the estimates drawn from each profession will be equally precise. The same assumptions will be made about each profession. This is a huge benefit to HPC as they may wish to inter-compare professions where there may be some expectation that professions behave differently.

Appendix 1 offers some additional reading on the area of surveys and sampling and is material from the Office of National Statistics (ONS) website.

Appendix 1

http://www.ons.gov.uk/about-statistics/user-guidance/lm-guide/methods/quality-measures/index.html

Quality measures

Data quality is measured by relevance, accuracy, timeliness, accessibility, comparability and coherence. The Guidelines for Measuring Statistical Quality give further detailed explanation. Indicators of accuracy include sampling variability measures and revisions. The Office for National Statistics (ONS) aims to develop and implement a coherent, comprehensive, effective and systematic approach to quality measurement and reporting. The programme of Quality Reviews is an important way of ensuring that National Statistics and other official statistics are fit for purpose and the quality and value of these outputs continues to improve.

Sampling variability

Surveys provide estimates of population characteristics rather than exact measurements. Due to survey costs and the need to reduce the burden on those responding to periodic surveys, it is usual to collect information from a sample of people or businesses, instead of the whole population. A number of sample design techniques, such as stratification by sub-groups, can also be used to reduce survey costs and at the same time provide reliable estimates.

In principle, many random samples could be drawn and each would give a different result. This is because each sample would be made up of different people or businesses who would give different answers to the questions asked. The spread of these results is the sampling variability, which generally reduces with increasing sample size. A confidence interval is a range of values, defined by a lower and upper bound, which indicates the variability of an estimate. Statistical methods are used to calculate the sampling variability from which the confidence interval can be determined.

For example, with a 95 per cent confidence interval, it is expected that in 95 per cent of the survey samples (19 out of 20), the resulting confidence interval will contain the true value that would be obtained by surveying the whole population. The monthly labour market statistics First Release includes 95 per cent confidence intervals for key labour market statistics.

Confidence intervals can be large and the reliability of survey estimates poor when sub-groups of data are analysed with small sample sizes. Examples from the Labour Force Survey (LFS) include local area estimates for ethnic minority groups. The reliability of such data may be assessed by comparing estimates over different survey periods to determine whether there is a consistent trend or whether the estimates vary randomly. Consideration can also be given to increasing sample sizes by aggregating data, for example by combining ethnic groups, using larger geographical areas or by aggregating data over time.

Sampling variability also affects the interpretation of estimates of change over time. Where a change in an estimate over time is less than the sampling variability of the change, the change is not statistically significant and could be attributed to the variability of the estimate.

Glossary of terms

Sample-a randomly selected group that is assumed to be representative of our population. We extend conclusions from our sample to the whole population.

Population –group from which we draw our sample and about which we wish to extend findings. Here we consider each profession as a population.

Proportion of interest-the parameter we are estimating in our sample is a proportion. For example, out of our sample of registrants from a particular profession, how many failed the CPD audit, or our proportion of interest may relate to proportion of deferrals in our sample. It is that rate which we are interested in estimating and reporting. In order to determine sample sizes, it is necessary to have an understanding of the expected size of the proportion of interest.

Precision- the closeness with which the estimated parameter from our sample can be expected to approximate the true (unknown) parameter in the population.

Margin of error, *d*-defined as half the width of the confidence interval. The margin of error is expressed with the estimated parameter, p, as $p \pm d$. For a 95% confidence interval, the margin of error around the reported proportion has a 95% probability of including the true proportion. The larger d the less precise the estimate. Sample size impacts on the size of d.

Confidence interval, CI-a lower and upper bound around our estimate indicating the precision of our estimate. The true value of what we're estimating is likely to be contained in the interval. The 'likely' depends on the chosen confidence level, typically chosen to be 95% (can be 90%, 99%). As above a larger sample size yields a more precise estimate meaning a tighter CI. Increasing the desired confidence level widens the CI.

Risk of non-detection- the probability of not finding any cases in our sample even though we may expect there to be some out there i.e. the risk of getting it wrong (i.e. accepting that the profession has less than a certain proportion of interest when it actually has more). The risk of non-detection depends on the true size proportion of interest in the population and our sample size; decreasing the risk, increases the sample size. This probability is conventionally taken to be 5% (1 in 20 chance) but other values may be chosen if more appropriate.

Analysis of HPC's CPD audit profiles

1. Project aim

1.1 To analyse the Health Professions Council (HPC) registrant continuing professional development (CPD) audit profiles and associated data, to identify what, if any, trends exist regarding the profiles and assessment results across the Register.

1.2 This project is part of a series of research projects being undertaken during phase one of the HPC's revalidation work.

2. This document

2.1 This brief outlines the overall aims of the project and is designed to provide some of the background information required for the initial proposal. It is envisaged that a more detailed meeting will be required with representatives from the HPC to fine tune the objectives and research.

3. Background to revalidation

3.1 In 2007, the White Paper, 'Trust, Assurance and Safety – The Regulation of Health Professionals in the 21st Century' concluded that revalidation was necessary for the non-medical healthcare professions. Revalidation is the concept that registrants should be additionally subject to some kind of periodic check to make sure that they continue to be fit to practise.

3.2 In November 2008, the Department of Health published the 'Principles for Revalidation – Report of the Working Group for Non-Medical Revalidation'. This report established twelve principles for any revalidation model, including requirements that any revalidation process should be risk based and effective in confirming fitness to practise.

3.3 In October 2008, the Council approved a report of the Continuing Fitness to Practise Professional Liaison Group (PLG), 'Continuing Fitness to Practise – Towards an evidence based approach to revalidation'. This report concluded that, on the basis of the current evidence, revalidation for the professions regulated by the HPC was not necessary. However, a number of further pieces of work were identified as necessary in order to build the evidence base in this area further.

3.4 In December 2009, the Council approved the Revalidation Project Brief which builds on the PLG's report and outlines the work the HPC is undertaking over three phases.

4. HPC's approach to revalidation

Phase one

4.1 The first (current) phase focuses on whether additional measures, such as a system of revalidation, are needed to ensure the continuing fitness to practise of our registrants.

4.2 We are undertaking nine research projects focussing on:

- the current level of risk posed to the public by our registrants;
- whether there are any gaps in our current systems that mean fitness to practise concerns are not being identified; and
- the feasibility and cost of different revalidation approaches that are already in use across the UK and internationally.

4.3 This project is one of the nine projects being undertaking in phase one.

Phase two

4.4 If after the completion of phase one, the HPC decides to introduce a system of revalidation, phase two would involve developing and consulting on the standards that registrants would need to meet. During this phase we would also consult on and make the necessary change to legislation.

Phase three

4.5 Phase three would then involve developing and piloting the system to be used, ahead of an incremental roll out across the professions.

5. Background to CPD audits

5.1 Since July 2006, the HPC has required all health professionals on the Register to undertake CPD and to keep a record of their CPD activities. This is a legal requirement and every time a health professional has renewed their registration since this date we have asked them to sign and confirm that they have met our standards for CPD.

5.2 In 2008, we began conducting CPD audits. At the same time as registration is renewed, a random sample of registrants from each profession is selected to complete CPD profile and provide evidence to show how they have met our CPD standards. The profiles are then assessed by a panel.

5.3 As of January 2010, nine professions have been audited. Four professions will be audited in 2010. The remaining profession (practitioner psychologists) joined the HPC register on 1 July 2009 and will not be audited until 2013.

5.4 CPD audit profiles and assessment results are now available for the following professions:

- Chiropodists - 650 registrants selected for audit
- Operating department practitioners - 470 registrants selected for audit
- Orthoptists - 30 registrants selected for audit

- Paramedics - 378 registrants selected for audit
- Clinical scientists - 112 registrants selected for audit
- Prosthetists / orthotists - 22 registrants selected for audit
- Speech and language therapists - 305 registrants selected for audit
- Occupational therapists - 764 registrants selected for audit
- Biomedical scientists - 564 registrants selected for audit

5.5 Audit profiles will be available for the following professions before the end of 2010:

- Radiographers - approx 660 registrants will be selected for audit
- Physiotherapists - approx 1060 registrants will be selected for audit
- Arts therapists - approx 60 registrants will be selected for audit
- Dietitians - approx 160 registrants will be selected for audit

6. Analysis of HPC's CPD audit profiles - scope of research

6.1 This project will involve analysing the available CPD audit profiles and associated data to identify whether any trends exist across the Register.

6.2 The HPC is in the process of producing the first annual report on CPD. This project will be the first time that an in-depth analysis has been undertaken.

6.3 The consultant researcher will work closely with the HPC revalidation policy manager through the duration of the project.

6.4 We anticipate that the first stage of the project will involve the consultant researcher reviewing the available data and ensuring that the analysis will be robust (noting that the level of available data means that the analysis may not be statistically valid).

6.5 The next stage of the project will involve undertaking the analysis.

6.6 One HPC employee will be available for a short term (approx six weeks) to perform some of the basic data entry and ensure that the appointed researcher has access to the required data in an appropriate format.

6.7 Some examples of areas the study could focus on include:

- If there are any trends regarding the amount and type of CPD being undertaken and the characteristics of registrants (e.g. differences in gender, time since qualification, type of practice, geographical location etc)
- If there are any trends regarding the different audit results (e.g. accepted, deferred, removed etc) and the characteristics of registrants; and
- Identifying the main factors that contribute to a CPD audit profile not being accepted.

6.8 This project has close links with a second project being undertaken as part of HPC's revalidation work – Analysis of fitness to practise data. We envisage that the same consultant researcher may complete both projects; however this is not a requirement.

7. Next steps

7.1 Proposals for this work should be submitted in writing to the Revalidation Policy Manager no later than **30 April 2010**. We anticipate a starting date of early August, however this is flexible.

7.2 As this project is being advertised with the Analysis of CPD audit profiles project, applicants may wish to submit the proposals for both projects together. Applicants may also choose to submit the two proposals separately. In this case we would appreciate an indication of whether you are planning to apply for both.

7.3 The proposal document should detail the research approach and methodology and must include detailed timings and a breakdown of cost. We would anticipate a budget of circa £10,000 and a project duration of around six months.

7.4 We expect that the outcomes from the analysis would be a report detailing the findings.

7.5 We would also expect regular updates as the research progresses.

7.6 We would wish to discuss the above expectations with the interested parties.

8. Further information

Contact Megan Scott, Policy Manager
Direct dial 020 7840 9760 or email megan.scott@hpc-uk.org

9. References

Department of Health (2008), Principles for Revalidation – Report of the Working Group for Non-Medical Revalidation
www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_091111

Europe Economics (2009) Report for Department of Health Non-medical revalidation working group (enclosed)

Health Professions Council (2008), Continuing Fitness to Practise – Towards an evidence-based approach to revalidation (enclosed)

Health Professions Council (2009), Continuing professional development and your registration
http://www.hpc-uk.org/publications/brochures/index.asp?id=103

Health Professions Council (2009), Health Professions Council response to ‘Principles for Revalidation – Report of the Working Group for Non-Medical Revalidation’
www.hpc-uk.org/assets/documents/1000274D20090326-Council-enclosure16-revalidation.pdf

Health Professions Council (2009), Revalidation project brief (enclosed)

Trust, Assurance and Safety – The Regulation of Health Professionals in the 21st Century (2007)
www.official-documents.gov.uk/document/cm70/7013/7013.pdf

10. Background

10.1 The HPC is an independent regulator of health professionals set up to protect the members of the public who use the services of those it regulates. To do this, the organisation sets and maintains standards which cover education and training, behaviour, professional skills and health, maintains a register of health professionals who meet these standards, approves and monitors UK educational programmes which lead to registration and takes action if a registrant's fitness to practise falls below the standards.

10.2 We have been in existence since April 2002 and now regulate 14 professions (c.200,000 registrants), including physiotherapists, chiropodists/podiatrists and practitioner psychologists (from 1 July 2009). It is anticipated that the numbers of professions that the HPC regulate will increase in the coming years to include counsellors and psychotherapists and a range of healthcare science professions.

10.3 The HPC has an annual income of approximately £15 million of which £5.6 million is spent on the operations of the fitness to practise function. The HPC is funded entirely from fees payable by the professionals it regulates.

10.4 In 2007/2008, 0.24% of HPC registrants were subject to a complaint via our fitness to practise process. 88% of cases considered were about conduct or had a conduct element with just 10% of cases concerning competence and 1% of cases about the physical or mental health of the registrant.

11. Organisational Structure

11.1 The HPC is governed by the Council which consists of 20 members made up of 10 registrants and 10 lay members. The Council is supported in its work by the statutory and non-statutory committees and the members of the Executive employed by the organisation. There are currently around 130 employees.

11.2 The organisation is divided into departments including: Chief Executive's office; Communications; Education; Finance; Fitness to Practise; Human Resources; Information Technology; Policy and Standards; Registrations; Secretariat.