

MANAGING THE WORKLOAD AND WORKFLOW OF A RADIATION PROTECTION ADVISOR IN MEDICINE

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1) INTRODUCTION AND OBJECTIVES

IRS Ltd. is an RPA Body and currently employs 3 certificated RPAs with 2 awaiting accreditation by RPA2000 providing a range of RPA services to healthcare and industry. The objective of this paper is to highlight the diversity of work undertaken by an RPA working in healthcare and to demonstrate solutions to manage this diverse workload. The development of a managed approach to establishing workflows is essential to ensure the efficient provision of RPA services. In addition RPA activities that can be directed towards RPA training, which will facilitate first time RPA certification or recertification for existing RPAs need to be planned and managed. The ability to manage and analyse RPA workload and workflow also impacts on the business management capability of our organisation. Any management system must be capable of workflow analysis on the types and frequencies of various tasks and must accommodate trend analysis to define focus areas for particular activities. In addition the RPA management system must be able to integrate with other IT functionality within the organization such as customer relationship management systems in order to facilitate business planning and management of new and existing work within the context of the organization as a whole.

2) METHODS

We have developed a relational database using MySQL with an MSAccess front end to log, track and interrogate the work and tasks associated with operating as an RPA. The database is multi-faceted in that it links in to our technical support services, administration and customer relationship management systems to provide a fully integrated management tool. The JCS switchboard is used to register an RPA task to a job bank (COM) which can then be accessed by RPAs who will request a job from the unassigned jobs list. Individual RPAs also raise jobs on this system against their own work activity and areas of expertise. An indicator of how long the job has been open since it was raised allows us to monitor our RPA service performance against Service Level Agreement (SLA) requirements and Key Performance Indicators (KPIs). By selecting Reports the Administration window is opened from where a range of reports and analyses are possible and can be associated with the organisation as a whole, by individual RPA, by location or by work and task type.

RPA	Job Card ID	Date-In	Customer	Task Code	Details	Open
COM	RPA12-0388	14/02/2012		Survey Reports		22
COM	RPA12-0393	15/02/2012		Other		21
DH	RPA12-0401	15/02/2012		Personal Monitoring		21
PAC	RPA12-0416	17/02/2012		Survey Reports		19
JF	RPA12-0417	17/02/2012		Survey Reports		19
COM	RPA12-0421	17/02/2012		Survey Reports		19
COM	RPA12-0428	20/02/2012		New Plans/Installations		16
COM	RPA12-0430	20/02/2012		New Plans/Installations		16
PAC	RPA12-0431	20/02/2012		Survey Reports		16
COM	RPA12-0433	20/02/2012		Self Audit Report		16
MW	RPA12-0441	21/02/2012		Survey Reports		15
COM	RPA12-0451	22/02/2012		Survey Reports		14
COM	RPA12-0452	22/02/2012		Survey Reports		14
DH	RPA12-0455	23/02/2012		Survey Reports		13
COM	RPA12-0461	27/02/2012		Survey Reports		9
MW	RPA12-0462	27/02/2012		Patient Dose Assessment		9
PAC	RPA12-0469	27/02/2012		Survey Reports		9

Summarised Reports

- Based on RPA*
 - Selected RPA workload per all Trust(s)
 - All RPA's workload per all Trust(s)
 - RPA workload per selected Trust/Category
 - RPA workcode for Trust/Category
 - RPA Taskcode for Trust/Category
 - RPA Work by Contact type
 - Totals reports by RPA
 - Jobs Less than 1 Hour
 - All Workcode Workload split by RPA
 - All RPA Workcode Summary
 - Workcode Summary by RPA
 - Taskcode workload for all workcodes (RPA Specific)
 - RPA workload by selected Taskcode (Non Trust)
 - Overall RPA Workload
 - Work Code Analysis
- Based on Site*
 - Workload for all Trusts
 - Workload for non Trust
 - Workload for Trusts+ Non Trusts
 - All Trusts workload (Split by RPA)
 - Trust/Category Workcode Summary
 - Trust/Category Taskcode Summary
 - Total Workload by TaskCode (Non Trust)
 - Overall Site/Customer Workload
 - RPA workload (Trusts Only)

Detailed Reports

- All Open Jobs
- All Jobs Open for a specific RPA*
- All Jobs for specific Trust/Category*
- All Jobs for a specific Customer*
- Late Jobs (Closed)*
- Late PDA/FD Jobs (Closed)*
- RPC Report*
- ALL JCS DATA - EXCEL COMPATIBLE*
- RPA JCS Workflow Analysis*
- Customise Report

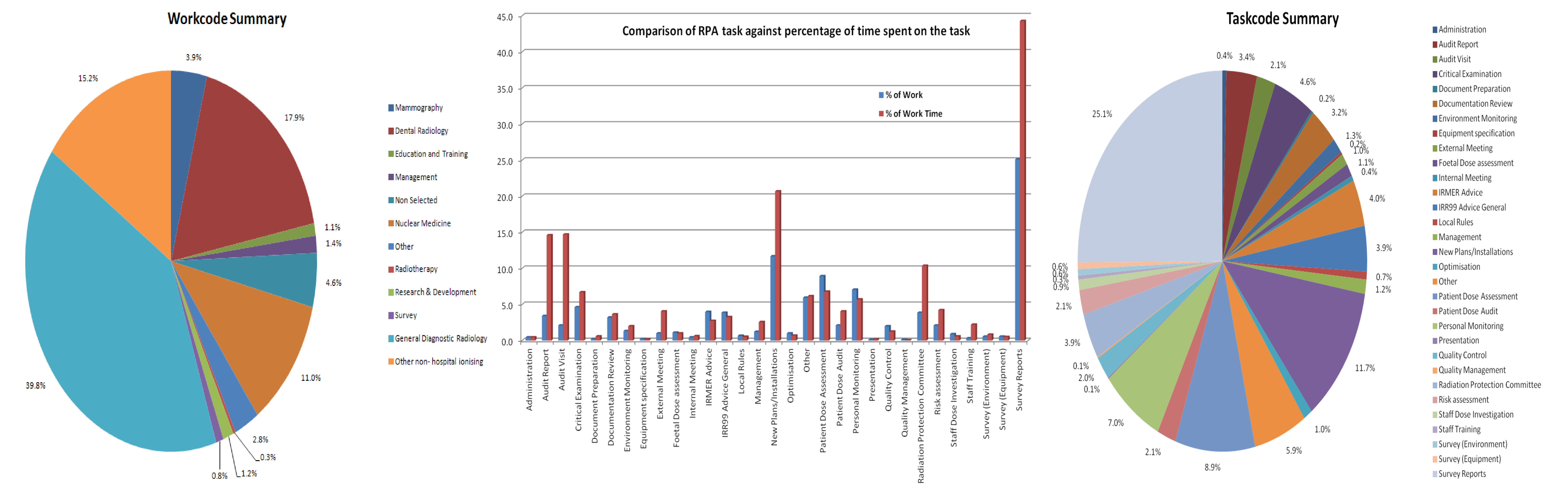
Incident Reports

- List for specific Trust/Site*
- Graph for specific Trust/Category*
- Graph for all Trusts and hospitals*
- Graph for all sites and hospitals*

Note: Those with an asterisk (*) are dependent on the 'Report Date Period above' (Green Task Bar)

3) RESULTS

The pie charts show two facets of RPA workload analysis displayed as a percentage of total activity. The Workcode summary provides a breakdown of all the areas of ionising radiation usage within the hospital environment encountered by RPAs during 2011. The Taskcode Summary chart provides a breakdown of the different tasks undertaken by RPAs in relation to the individual workcodes. As can be seen from the Workcode Summary the greatest involvement of the RPA in a hospital environment is in general diagnostic radiology with around 40% of RPA activity in this area. The category "other non-hospital ionising" relates to other RPA work undertaken outside of the hospital environment. The histogram allows us to analyse the efficiency of our operations by comparing the time spent on a task against the fraction of total work activity associated with it.



4) DISCUSSION

By targeting general diagnostic radiology we can analyse this work area by task. Some 31 individual tasks have so far been identified. 25% of those tasks involve reporting to hospital management on the outcomes of surveys of equipment and the environment undertaken by technical support staff and almost 12% of activity involves commenting on plans and providing shielding advice for new installations. Of interest is the comparison between the percentage breakdown of tasks against the percentage of time spent on those tasks. For example whilst 28.5% of RPA activity is taken up with report production (survey and audit reports) this task consumes 58.9% of the RPA's time. Other high time consumption activities are provision of advice on new plans and installations (20.7% of time against 11.7% of total activity), audit visits (14.7% against 2.1%) and attendance at Radiation Protection Committees (10.4% against 3.9%) although the latter two tasks involve a high travel component away from base. There is, therefore, scope to further investigate ways in which high time factor tasks can be carried out more efficiently.

5) CONCLUSIONS

The introduction of comprehensive management systems is essential in managing the workload and workflow of an RPA. This method of tracking and analysing work patterns and tasks can demonstrate those areas where the RPA is being appropriately consulted as required by Regulation 13 of IRR99. Importantly the system allows us to equate RPA tasks with the competencies required for RPA certification. This approach to managing RPA workload and workflow provides an invaluable business management tool for our organisation and demonstrates transparency and ethical business practices to our customers.