MANAGING THE WORKLOAD AND WORKFLOW OF A RADIATION PROTECTION ADVISOR IN MEDICINE
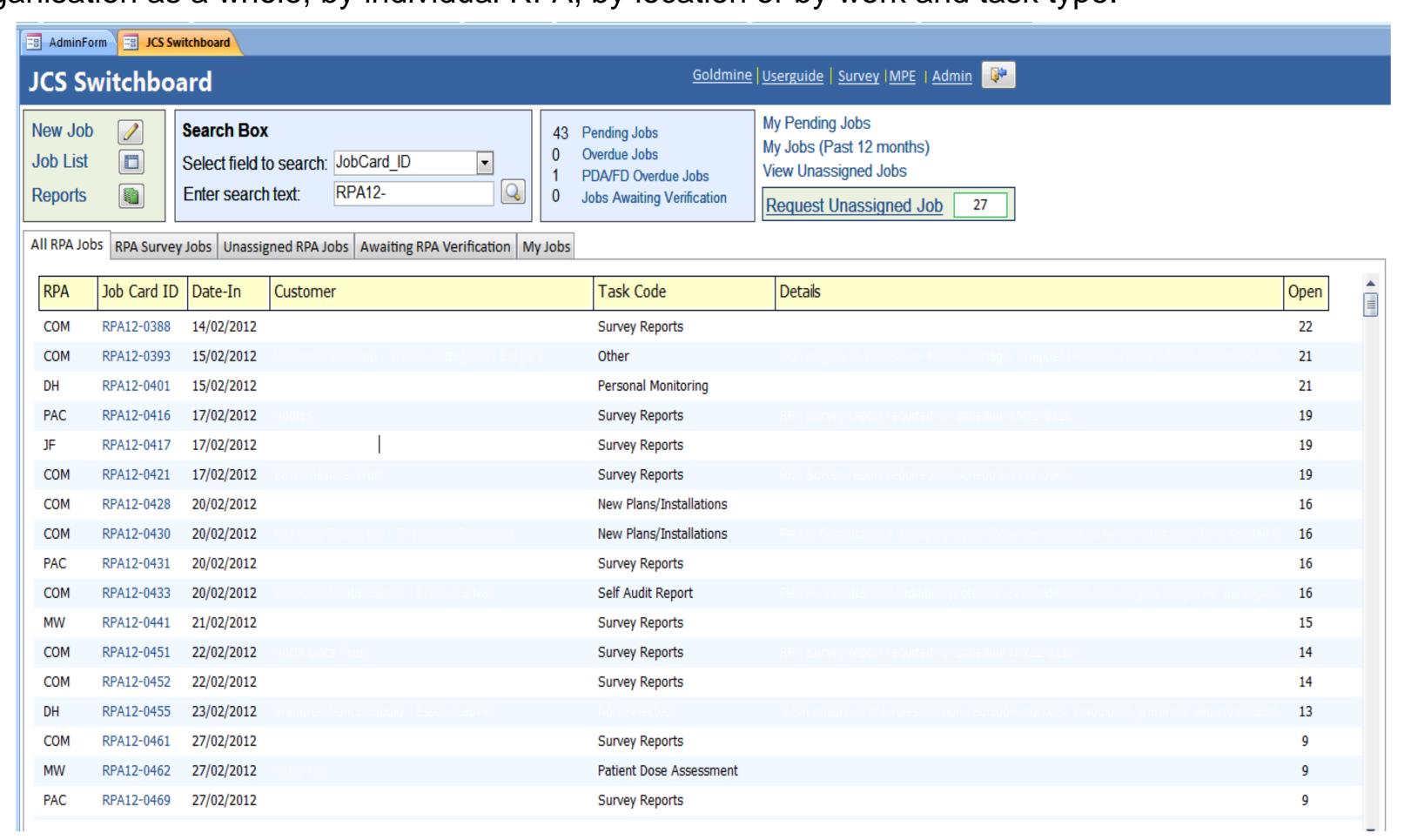
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1) INTRODUCTION AND OBJECTIVES

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.
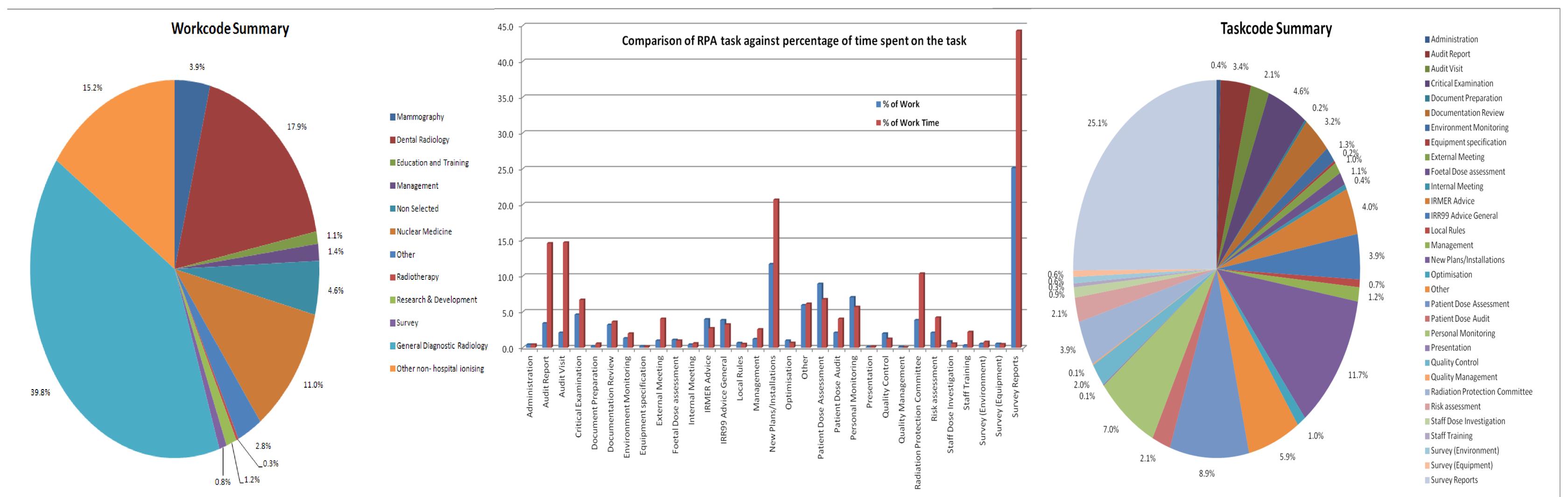
2) METHODS

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.

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.

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