Accounting and organizational change in a residential care home – A case study

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Abstract

The study at hand deals with an assisted living facility that intends to improve its operational performance for residents and staff. Through the use of time-driven activity-based costing and transfer pricing, tradeoffs become apparent. These need to be addressed in a revised incentive system for the responsible manager. The study may be used for class discussion to illustrate contemporary accounting issues.

Keywords: *Time-driven activity-based costing; transfer pricing; teaching notes; target setting; incentives.*

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1 Introduction

Redshank Senior Living (RSL) is a senior living facility that is part of the corporation Redshank SE. Among its various services in hospitality and sports, Redshank SE runs RSL as an assisted living investment center. Its senior citizen residents each have a private apartment and all meals are provided. Seniors in assisted living are no longer capable of fully organizing their day by themselves. The skilled staff in assisted living facilities provide the help they need. All residents pay the same daily fee for these services. This division of RSL is in high demand, has a waiting list, and runs at full capacity.

2 Time–driven Activity–based Costing (approx. 40 minutes)

Currently, RSL calculates the daily rates for residents by adding all costs for the residential space, the meals, and the care staff, and dividing this sum by the number of resident days. RSL adds a markup for its shareholders that is customary in this industry. Recently, some insurance firms that pay for the health care of the residents have complained that charging the same fee to all residents is not a realistic reflection of the resources that each individual consumes. Their legal departments have urged RSL to revise their daily rates immediately.

RSL's new head accountant, Amy, recognizes that every resident consumes roughly the same apartment space and the same number of meals. But she sees that residents have different needs in terms of assistance. Amy uses a National Medical Association classification system to classify residents into three groups from A (little assistance needed) to C (much assistance needed). Some of the services require a high level of skill, especially for the C–classification residents. Trained nurses must perform these services. More basic services are carried out by assistants who either have no formal training or are studying for their nursing qualifications. Amy thinks that time–driven activity–based costing (TDABC) would be the most suitable costing system to determine individual costs per resident day. She familiarized herself with the standard estimated timings for individual care tasks prescribed by the National Medical Association, conducted interviews with the staff, and analyzed written documentation on RSL care. She compiled the following information on the residents and staff of RSL:

Resident classification	Annual resident days	Assistance hours (nurses)	Assistance hours (assistants)
A	20,000	12,000	22,000
B	10,000	15,000	11,000
C	6,500	30,000	10,000
Total	**36,500**	**57,000**	**43,000**

	Total	Nurses	Assistants
# staff (FTE, full–time equivalents)	68	26	42
Annual practical capacity per FTE (h)	n/a	1,785	1,400
Available hours of staff (h)	105,210	46,410	58,800
Cost per staff hour (EUR)	n/a	65.00	40.00
Total cost of staff (EUR)	**5,368,650**	**3,016,650**	**2,352,000**
Total cost of meals and residential space (EUR)	**2,920,000**		

Required

1) Calculate the cost per resident day using the current process costing system.
2) Calculate the cost per resident day for each category (A to C) using TDABC.
3) Explain why the total cost of the division changes when using TDABC. Show the exact numerical transition from one to the other costing system. *[HINT: You do not have to discuss strategic implications at this point.]*

3 Incentive systems (approx. 40 minutes)

Amy takes a closer look at the idle times and overtime worked in the TDABC system. She knows that negative idle time of the nurses is not a good sign. She needs to suggest some improvements to RSL's management. Hiring untrained assistants would be easily possible. But trained nurses are in high demand now and will continue to be in the years to come. The nurses in training at RSL seldom stay once they earn their degree. Amy has heard that qualified nurses who quit RSL tend to raise the issues of overtime, bureaucracy, unacceptable short-term scheduling, and a feeling of not being heard by management. The insurance payments only cover tightly calculated fees for the residents, so there is no leeway for RSL to raise salaries, or to reduce working hours while maintaining salaries across staff. For this reason, Amy's predecessor in accounting thought that incentive plans or systematic staff development dialogues for the nurses and assistants were superfluous.

The only nurse with a bonus plan is Greg, the head nurse. Amy thinks that solving the problem of the nurse shortage might be linked to Greg's incentive plan, since he has a major say in hiring and staffing. Amy has a hunch that some things seem odd in his plan. Currently, his bonus plan has the following features:

- The bonus plan measures the change of cost per resident day from the previous year. Greg receives 0.2% of the operating profit as a positive/negative bonus component for each EUR that costs are reduced/increased by.[1]
- Quality of care is measured by a resident satisfaction survey on a scale from 1 to 10. Greg receives 0.2% of the operating profit as a positive/negative bonus component for each full point that satisfaction exceeds/underperforms the benchmark of 8.0.[2]
- One negative bonus component can reduce a positive bonus component in the same year. But total bonuses cannot be negative, and they are not carried forward.

[1] Example: Operating profit is 5,000,000 EUR. Cost per resident day decreased by 1.01 EUR (e.g., in 2021, it was 199.00 EUR, and in 2020, it was 200.01 EUR). Then: 5,000,000 EUR x 0.2% x 1.01 EUR = +10,100 EUR contribution to total bonus.

[2] Example: Operating profit is 5,000,000 EUR. Satisfaction is 7.7 and underperforms the benchmark by -0.3 (=7.7 – 8.0). Then: 5,000,000 EUR x 0.2% x -0.3 EUR = -3,000 EUR contribution to total bonus.

Items	**2021**	**2020**	**2019**	**2018**
Operating profit RSL (EUR)	3,900,000	3,600,000	3,325,000	3,150,000
Cost per resident day (EUR)	227.09	230.17	232.89	232.55
Quality of care (scale from 1-10)	8.9	7.7	6.7	6.5
Response rate resident satisfaction survey (%)	17%	51%	85%	99%

Required

4) Calculate Greg's bonuses for 2021, 2020 and 2019.
5) Name the two most pressing issues Amy should address when revising Greg's bonus plan. Explain in detail how your suggestions would resolve some of the problems RSL currently faces.
6) Amy considers incentivizing the rest of the staff as well (nurses, nurses in training, assistants). Describe two feasible initiatives.

4 Transfer pricing (approx. 40 minutes)

Amy needs to solve a transfer pricing issue, since a new product might need to be sourced from another RSL division: Redshank Deluxe (RD). RD is an independent division within Redshank SE. It caters meals to RSL and other customers. RSL must buy all its hot meals from RD. RD packages food in reusable, sealed trays, and delivers them to RSL. RSL always buys the "Deluxe Dinner", which tends to contain so-called comfort food (i.e. meat, potatoes/rice/noodles, vegetables, heavy cream). RD estimates its direct costs for a Deluxe Dinner are 2.00 EUR. Variable overhead costs amount to 1.00 EUR per meal according to RD's TDABC system. According to Redshank SE's transfer pricing policy, RD may add a markup of 20% on its variable cost. Once the trays are delivered, RSL needs to heat and serve the meal, for which RSL incurs a variable cost of 0.25 EUR per serving.

Due to diverse dietary restrictions, some residents have recently demanded an organic, vegan dinner alternative. RD has created a new meal, called "Organic V". Direct costs are 2.75 EUR, and it will take 25% more time to handle than the Deluxe Dinner. Although RD operates at full capacity, demand for Deluxe Dinners exceeds supply. RD would need to forgo the production of Deluxe Dinners for other clients in order to produce Organic V for RSL. RSL's contracts with the residents' insurance companies state that RSL may not charge more than 4.88 EUR for a hot meal. RSL's pricing must not discriminate against residents based on their dietary preferences. Redshank SE has incentivized the heads of divisions of RSL and RD to maximize their divisions' profits, and specifically avoid losses from transfer pricing.

Required

7) Discuss a feasible range of transfer prices for Deluxe Dinners.

8) Assume that Redshank SE has set a transfer price of 3.60 EUR for the Deluxe Dinner. Discuss <u>one</u> option to create a feasible range of transfer prices for Organic V. *[Hint: Arguments must be supported by numerical analysis].*

9) RSL asks Redshank SE if it can buy hot meals from a different, external caterer than RD. Discuss <u>two</u> pitfalls that Redshank SE would like to avoid if it allows RSL to source externally.

5 Discussion

A suggested solution is available from the author upon request.

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