SESSION 5

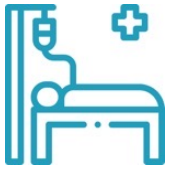
Time-Driven Activity-Based Costing

STEP 1 STEP 2 STEP 3 STEP 4 STEP 5 STEP 6 STEP 7

DIRECT COSTS

The Cost Measurement Process

STEP 1



Select the medical condition or patient segment

STEP 2

Develop care process maps to identify the steps that are being undertaken throughout the patient's care cycle

STEP 3

Identify the resources that are being used at each stage (personnel, equipment, space)

DIRECT COSTS

The Cost Measurement Process

STEP 4

Identify the intensity of each resource. In practice, "intensity of each resource" means knowing how many minutes each resource is spending on treating the patient for the clinical condition

The Cost Measurement Process

STEP 5

Calculate the cost per unit of time for each resource type

STEP 6

Once you have the cost per unit of time, multiply the time each resource spends in the care cycle by the cost per unit time of the resource

The Cost Measurement Process

STEP 7

Add the consumables being used during the patient's care cycle (materials, drugs, etc.)

The Cost Measurement Process

DIRECT COSTS

- This represents all the direct costs of treating the patient
- Usually, when studying the medical condition, one looks only at the direct costs - personnel, equipment, space and consumables

The Cost Measurement Process

INDIRECT COSTS

- We can also allocate indirect costs in some way
- Among the different possible ways of doing allocating indirect costs, is doing a TDABC analysis for the HR, Finance, IT departments, etc.

COST = DIRECT COSTS + INDIRECT COSTS

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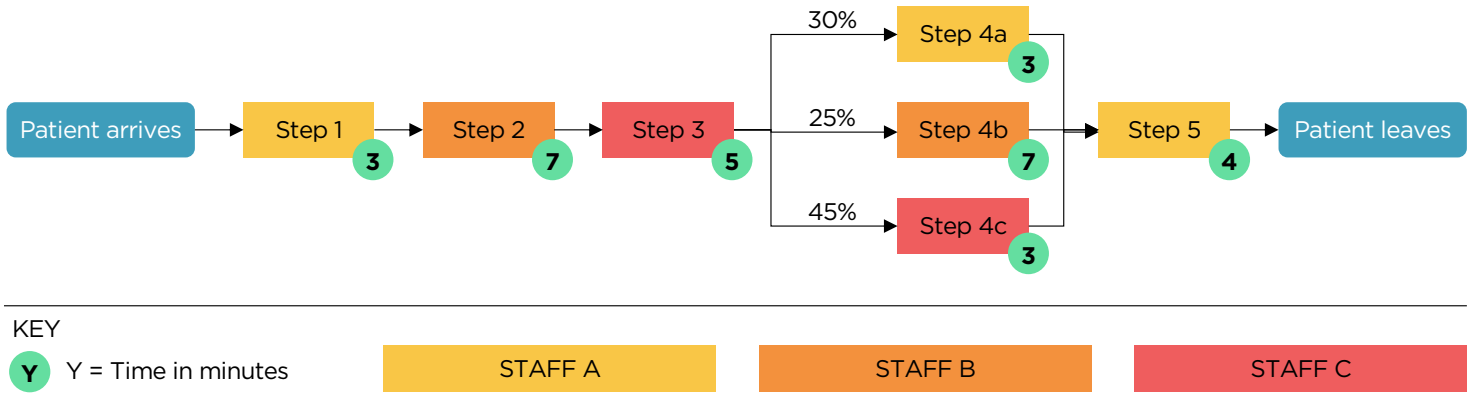
Example *of a Process Map*



Mapping Resource Utilization

- A little more detail is obtained than the maps that result from Lean tools or quality improvement efforts since it is necessary to know what resources are participating in each stage and how much time the resources spend with the patient in a given stage

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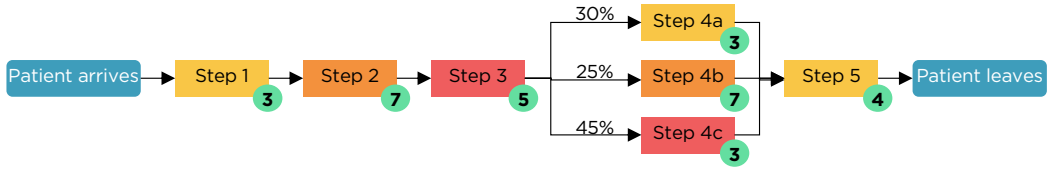
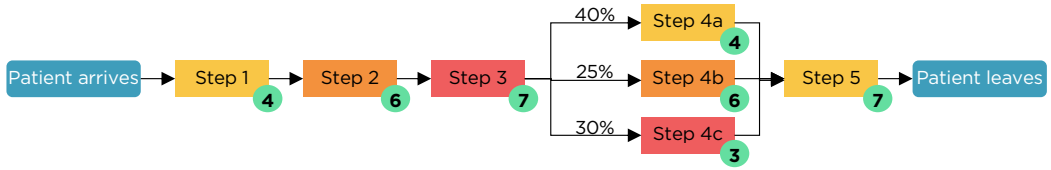
Mapping Resource Utilization

MAP 1

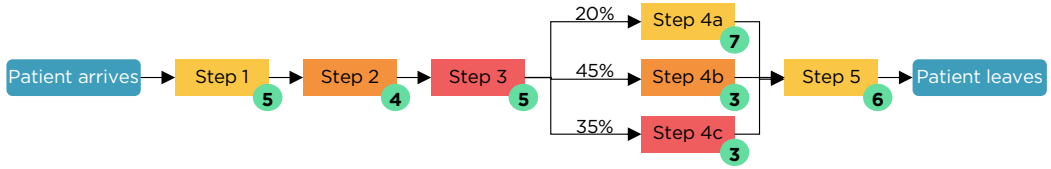


MAP 2



...

MAP 15



- We will need 10 or 15 process maps to really see all the treatment that a patient undergoes during the medical condition
- But this is just more of the same

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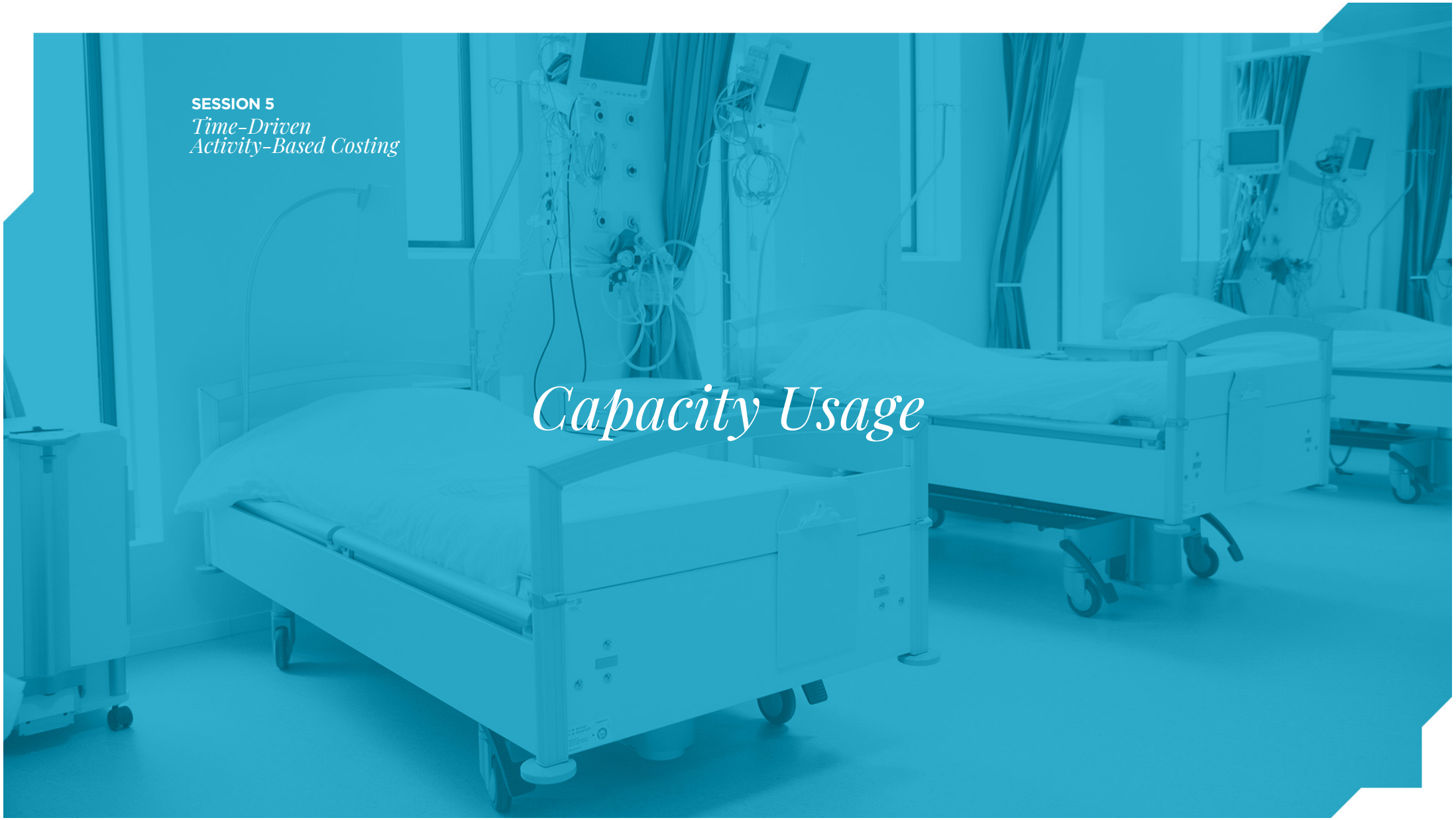
2 parameters need to be estimated

1  Capacity usage

2  Capacity cost rate



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Capacity Usage

Estimate how much time each resource is spending

- To obtain estimates, we can organize individual interviews, have group meetings and brainstorming together, or take surveys of people

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Estimate how much time each resource is spending

- We also validate some of these subjective estimates by shadowing the patient, i.e., 1 or 2 dozen patients are followed during the care cycle, and find out how much time the patients spend with the professionals they encounter along the way

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Estimate how much time each resource is spending

- Currently, a lot of data is electronically time-stamped. We can use those time stamps and get very objective data.
  When did the surgeon enter the OR?
  When did the anesthesia start?
  When did it end?

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Estimate how much time each resource is spending

- In the future, with electronic tracking of patients and care givers, we will know who is in contact with whom, and when, and it will be possible to build process maps in a fully automated way

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Capacity Cost Rate

Calculate the cost per unit of time for each resource type

- Consider all the annual costs associated with having each resource available to treat patients
- Consider the available capacity (in minutes) that each resource has for treating and caring for patients

Calculate the cost per unit of time for each resource type

- The resource available capacity is the number of days a year a person shows up and is available for clinical work
- It is the number of minutes available for patient-related work. It is net of breaks, training or education

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$$\text{Capacity cost rate } (\$/\text{minute}) = \frac{\text{Resource cost}}{\text{Resource available capacity}}$$

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In addition to costing, what else is TDABC good for?

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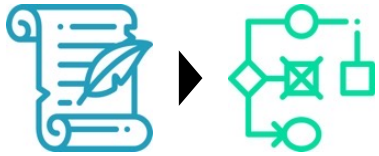
In addition to costing, what else is TDABC good for?

Mapping clinical processes enables us to see if there are any process steps and variations that do not contribute to improving the patient's outcomes.
We often find many redundancies in the processes, that have accumulated over the years

In addition to costing, what else is TDABC good for?



Mapping clinical processes is an opportunity to streamline the processes and eliminate waste and idle time.

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In addition to costing, what else is TDABC good for?

Mapping clinical processes and having an in-depth knowledge of the different steps that comprise them offer numerous opportunities for improving efficiency because it enables us to reflect on the processes and adjust if necessary.

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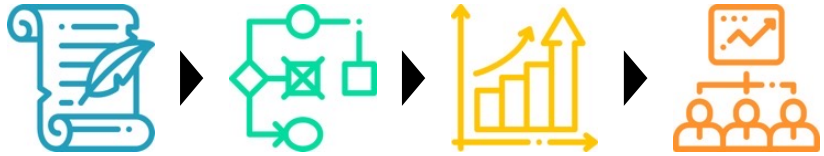
In addition to costing, what else is TDABC good for?



There are a lot of opportunities to optimize processes over the complete cycle of care. For instance, a consultation of a few more minutes, which will additionally cost a few tens of $, can save thousands of $ by avoiding future complications.

In addition to costing, what else is TDABC good for?

There are also opportunities for improving efficiency by redistributing tasks (when medically appropriate) to ensure the cheapest combination of factors of production to produce the treatment.

In addition to costing, what else is TDABC good for?

-20%

- Some authors say that the first time this exercise is done of truly understanding the cost of treating patients throughout the care cycle of the medical condition, if it is not possible to get at least 20% out of the cost of treating patients, we just weren't focused enough

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In addition to costing, what else is TDABC good for?

- TDABC enables us to predict annual resource utilization

- Hospital budgets must be built from the bottom up

- It also enables us to understand how profitable it is to treat a clinical condition per patient

In addition to costing, what else is TDABC good for?

- It helps us define our pricing strategy

- Understanding costs over the full care cycle is required to prepare for bundled payment contracts

- It is also useful for value-based payments to manufacturers


Thank you
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