

Calculating patient lifetime value

As healthcare becomes more competitive, increasing patient loyalty is more important than ever. Calculating the lifetime value of your patients can help you make the business case for investing in improvements that keep patients coming back year after year. While the one-year revenue per patient may not look very impressive, when you project five, 10, or 25 years into the future, you begin to see the true lifetime value of each patient.

How to determine the patient lifetime value

1. Gather the following numbers

Average revenue per patient per year

Factors that affect this amount include utilization (which is affected by population size, system growth, and patient loyalty) and reimbursements.

Service costs per patient per year

This includes care delivery costs and non-care delivery costs, like a contact center. To reduce these costs, reduce redundancies and service bottlenecks for more efficiency.

Patient acquisition costs

Costs include marketing campaigns or community outreach. This can be lowered with higher patient satisfaction and retention rates.

2. Calculate gross margin per patient

Average Revenue Per Patient (\$) X Average Operating Margin Rate (%) = Gross Margin per Patient

For example, let's assume the following for your organization:

Average revenue per patient per year

\$20,000

Average operating margin rate

2.92%

Gross margin per patient

\$584

Acquisition cost per patient

\$400

With an acquisition cost per patient of \$400, the net revenue per patient for 1 year would be:

(1 year x \$584) – \$400 = \$184

3. Calculate the patient lifetime value

The formula for calculating patient lifetime value is simple:

$$\text{(Years of Patient Relationship x Gross Margin per Year) - Cost of Acquisition} = \text{Patient Lifetime Value}^1$$

However, calculating the actual lifetime value is complicated because the dollar value increases over time to account for inflation and other future financial benefits. As a result, you need to calculate the **present value** of the patient over time.

Use the following Excel formula² to find the present value:

$$= -1 * PV(\text{RATE}, \text{NPER}, \text{PMT}, 0, 1) - \text{Acquisition Cost}$$

Interest rate (RATE)	10%
Years of patient relationship (NPER)	25
Gross margin per patient (PMT)	\$584
Acquisition cost per patient	\$400

RATE = interest rate per period

NPER = number of payment periods (in this case, years)

PMT = amount paid each year

[FV] = when calculating with a PMT value, the FV or future value of the investment is omitted, so the value is 0

[TYPE] = payments are assumed to be made at the beginning of the period, so the value is 1

As a result, the lifetime value for one patient over 25 years would be:

$$-1 * PV(.10, 25, 584, 0, 1) - 400 = \$5,431.09$$

When you multiply by the number of patients, the value is even more impressive!



By fostering long-term patient relationships, you're not only keeping patients healthy, but you're also improving the financial health of your organization.

CHG Healthcare can help you find the physicians and advanced practice providers your organization needs to create a great patient experience. Call 866.588.5996 or email ecs.contact@chghealthcare.com for a consultation.

1. Patient lifetime value formula courtesy of [Qualtrics](#).

2. Present Value (PV): What Is It and How to Calculate PV in Excel. Investopedia.
<https://www.investopedia.com/ask/answers/040315/how-do-you-calculate-present-value-excel.asp>