Financial fluency: demystifying accounting and business planning for the reproductive medicine specialist

Mindy S. Christianson, M.D.,[a] Linnea R. Goodman, M.D.,[b] Rachel Booth, D.O.,[c] Steven R. Lindheim, M.D., M.M.M.,[d,e] and Ricardo Azziz, M.D., M.P.H., M.B.A.[f,g,h]

[a] Johns Hopkins University School of Medicine; Baltimore, Maryland; [b] Department of Obstetrics and Gynecology, UNC Fertility, University of North Carolina, Chapel Hill, Raleigh, North Carolina; [c] Department of Obstetrics and Gynecology, Boonshoft School of Medicine, Wright State University, Dayton, Ohio; [d] Department of Obstetrics and Gynecology, Boonshoft School of Medicine, Wright State University, Dayton, Ohio; [e] Department of Reproductive Services, School of Medicine, Shanghai Jiaotong University, Shanghai, People's Republic of China; [f] Department of Health Policy, Management, and Behavior, School of Public Health, University at Albany, State University of New York, Albany, New York; [g] Department of Obstetrics and Gynecology, University of Alabama at Birmingham, Birmingham, Alabama; [h] Department of Obstetrics and Gynecology, David Geffen School of Medicine, University of California-Los Angeles, Los Angeles, California

In today's ever-changing business climate, reproductive health specialists are realizing that financial fluency is key to growing and maintaining a successful practice. Although financial fundamentals such as accounting may seem complex, both academic and private practice reproductive specialists who understand these topics can benefit in making business decisions for their practices. We describe the key financial fundamentals that reproductive health specialists should know, including basic concepts of finance and accounting, payments and receivables, capital budgeting, and business planning, and interpreting balance sheets, income statements, and cash-flow statements. (Fertil Steril® 2020;■:■–■. ©2020 by American Society for Reproductive Medicine.)

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You are meeting with your department chair and business manager to request the hire of an advanced practice provider. Their response is to "put together a business plan." You have no clue where to start.

During a quarterly meeting a balance sheet is reviewed. You are asked to comment. Beads of sweat form on your brow as you realize that accounting and finance were not taught in medical school.

The preceding scenarios epitomize a popular adage regarding health care and business: healing is an art, medicine is a profession, but health care is a business. Today, reproductive health care providers are realizing more and more that financial fluency is key to a successful practice. In fact, a growing number of physicians are pursuing masters of business administration (MBA) or master of medical management (MMM) degrees to obtain the business acumen they did not learn in either medical school and postgraduate medical training (1).

There are multiple scenarios in which the contemporary reproductive health provider may be asked to develop patient care service lines in a cost-effective manner (2). As we continue to develop cutting-edge technologies to treat infertility, innovative approaches to care and enhancing access to care will require a financial critique. For instance, an EmbryoScope sounds like a great addition to your laboratory, but is it a sound financial investment? How do we reduce overhead and produce a more affordable treatment cycle?

Physicians may also play a role in key aspects of capital or operations budgeting, so they should be fluent in the language of finance and accounting (3). To obtain new equipment or hire additional personnel, approval from an institution or corporate leadership may be required. Thus, it is critical to effectively communicate with administrators in the language of business. Administrators often lack the medical knowledge to assess the value of an investment or clinical program; conversely, physicians may be unaware of the underlying business mission and principles. To garner support,

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Reprint requests: Mindy S. Christianson, M.D., Johns Hopkins University School of Medicine; Lutherville, Maryland 21093 (E-mail: mchris21@jhmi.edu).

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physicians need to know how to speak/articulate an administrator's language of business (4).

An assisted reproductive technology (ART) practice is a commercial enterprise where different business models to optimize revenue can be used, regardless of an academic or private practice model (5, 6). Reproductive specialists who understand financial basics can create positive and impactful change in their practices. We will convey the key financial fundamentals that every reproductive health specialist should be knowledgeable about, including basic concepts of finance and accounting, payments and receivables, capital budgeting, and business planning.

BASIC CONCEPTS OF FINANCE AND ACCOUNTING

The word CliffsNotes entered the language as a shorthand for shortcut courtesy of Clifton Hillegass in 1958, when he and his wife started a notes business in their basement. The term has often been used in a way that implies a lack of nuance or thorough understanding. The detractors of CliffNotes claimed they encouraged students to bypass reading their assigned literature; similarly, our finance and accounting primer is not meant to be a substitute for more comprehensive pieces and courses on this topic (7).

Accounting is the process of collection, compilation, and systematic recording of business transactions, showing how your business records, organizes, and understands its financial information. Its purpose is to report on cash flows, performance, and financial position so that this information can be used to make decisions about how to best manage, invest, or lend money to a business or your practice (8). Although finance and accounting are not always a natural interest to health care providers, knowledge of and ability to read a financial statement have become increasingly critical for understanding the cash flow and profitability within a practice.

Accounting was not always a defined profession with regulating bodies. The origin of accounting came from a need for bookkeeping; archeologists of both the Egyptian and Babylonian empires have identified records from thousands of years ago that document accounting principles accompanying the onset of trade. Luke Pacioli, an Italian who lived in the Renaissance Era, is credited as the Father of Accounting for capturing the ideology of double-entry bookkeeping. Over time this skill set grew in complexity; by the mid-1800s, accounting had become a distinguished profession in Scotland due to the mathematical and legal knowledge it took to perform. As the profession has continued to evolve, the Generally Accepted Accounting Principles (GAAP) were developed by a governing body called the Federal Accounting Standard Board. From these guidelines, health care organizations today perform accounting by generating financial statements that summarize accounting information into three main types of financial statements: the balance sheet, the income statement, and the cash-flow statement (9).

Key basic finance and accounting vocabulary include assets (what your practice owns), liabilities (what your practice owes), and net equity, defined as the difference between the fair market value of a business's assets and its liabilities (10). The general ledger of a company represents the record-keeping system for the company's financial data, providing a record of each and every financial transaction of the company. Transactions are separated into assets, liabilities, owners' equity, revenues, and expenses. It is this information that is used to prepare the company's financial statements (8). They are also key to understanding what is conveyed in balance sheets, income, and cash-flow statements. A final skill needed is to understand how accounting statements provide information on four important elements of financial success: liquidity, solvency, profitability, and cash position (8). Key accounting terms are highlighted in Table 1.

BALANCE SHEET

A balance sheet does exactly what it says: it balances what the practice owns (assets) to what it owes (liabilities) plus equity. It provides a snapshot of your practice's financial position, can give a comparison to another point in time, and forms a basis for evaluating financial success (8).

TABLE 1

Accounting key definitions.

Term	Definition
Assets	What a company owns
Liabilities	What a company owes
Net equity	Difference between the fair market value of a business's assets and its liabilities
Balance sheet	Balancing assets to liabilities plus equity, providing a snapshot of a company's financial position
Depreciation	Estimated reduction in the value of an asset with the passage of time due to wear and tear and obsolescence
Solvency	Ability of an enterprise to meet its long-term financial obligations and continue to operate into the future
Liquidity	Ability of a company to pay off its short-term (current) liabilities with the current assets
Income statements	Report on a practice's revenues and expenses during a specified period; also known as "profit and loss" or "revenue and expense" report
Net income	Net income = (Total revenue + Gains) − (Total expenses + Losses)
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation, and amortization
Accrual accounting	Revenues and expenses recorded when they are actually accrued or incurred, regardless of when they are received or paid for
Cash accounting	Recording financial transactions when money is received or spent
Cash-flow statement	The cash position of the company at any one time

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According to GAAP, on the balance sheet assets are listed at the top, with liabilities and equity below (Fig. 1). Assets are further listed in order of liquidity, with those assets easiest to liquidate (convert to cash) at the top and those hardest at the bottom. At the top it begins with cash assets—what the practice owns that can be sold or converted into cash within 1 year, including cash on hand and cash in bank accounts. Accounts receivable are payments you expect to receive for services rendered, although you are allowed to subtract the accounts (in dollar amounts) that you are unlikely to collect (an allowance for bad debt). Then come the assets that are prepaid expenses, such as insurance and office-medical supply inventory. In medical practices, including ART programs, the latter are rarely listed unless there is enough inventory to merit its inclusion on the balance sheet (e.g., you dispense medications). Long-term assets are those that have lasting power, mostly capital (i.e., tangible things), which can include property such as buildings, office furniture, computers, and medical equipment that the practice owns or leases with a useful life that extends beyond 1 year.

In asset calculation you also need to subtract accumulated depreciation, which is an estimated reduction in the value of an asset with the passage of time due to wear and tear and obsolescence. Depreciation is spread over the estimated useful life of the asset. Some items, such as commercial buildings and nonresidential property, have depreciable lives of 39 years, meaning they are depreciated over 39 years. Others have shorter deductible lives: for office furniture it is 7 years, and for computers, office equipment, leased vehicles, and appliances it is 5 years.

There are multiple ways to calculate depreciation, including straight-line depreciation, where you spread the cost evenly across the asset's expected lifespan; accelerated depreciation, where you can deduct a higher percentage of the property's total cost during the first few years after purchasing and then take smaller deductions in later years; or total cost deduction, where according to section 179 of the tax code you can sometimes (with certain conditions and limitations) deduct the total cost of an asset in the same year you buy it. The choice of how to calculate depreciation should be determined by the tax code, and as such you should consult an experienced tax accountant or lawyer. Thus, net long-term assets would be long-term assets minus accumulated depreciation. Finally, other assets are listed, including investments and security deposits for rent. The sum total of each of these five line-items is termed Total assets.

Liabilities, just as assets, are listed from current (at the top) to long term (at the bottom). Current liabilities are anything that need to be paid within the next 12 months, including wages, retirement contributions, payroll taxes, and accounts payable (Fig. 1). Long-term liabilities refer to debt due over many years, such as a mortgage on your building or surgery center and any related loan payments.

Equity is the final major element of the balance sheet. In this setting, equity typically refers to the amount of money that would remain (or be returned to a company's shareholders) if all the assets were liquidated and all the company's liabilities were paid off; more simply, this is the difference between the fair market value of all business assets minus liabilities. For example, if the office building you own is valued at $2.5 million (listed in assets in the balance sheet) and you owe $1.75 million to the bank for its mortgage (listed in liabilities in balance sheet), the difference (i.e., $750,000) is listed under Equity. Simply put, in practice Equity = Total assets − Total liabilities (11).

Overall, the balance sheet should reflect the following equation: Total assets = Total liabilities + Equity. Of note, the balance sheet should remain fluid over time. For instance, when the practice decides to purchase a hysteroscopic unit, the payment options may include using your own personal money, cash from the practice, or a bank loan. In the case of using personal money, this would increase long-term assets; however, to keep the balance sheet balanced, equity

FIGURE 1

Assets
1. Cash on hand
2a. Accounts receivable
2b. (Minus allowance for doubtful accounts)
3. Pre-paid expenses
Total Current Assets ([lines 1+2a + 3]-2b)
4a. Long Term Assets (e.g. buildings, equipment, etc.)
4b. (Accumulated depreciation of long-term assets)
Net Long-Term Assets (lines 4a-4b)
1. Other Assets
Total Assets (lines [1+2a+4a + 5]-[2b+4b])
Liabilities
2. Wages
3. Retirement plan contributions
4. Payroll taxes
5. Accounts payable
Total Current Liabilities (lines 6+7+8+9)
6. Long-term liabilities
Total Liabilities (lines 6+7+8+9+10)
7. Equity
Total Liabilities and Equity (lines 6+7+8+9+10+11)

Line items on a typical balance sheet. Depicted are usual line items included in a typical balance sheet used to report the financial position of a business at a single point in time. Its three main sections include total assets, total liabilities, and equity: Total assets = Total liabilities + Equity.

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would increase by the amount of the hysteroscopic purchase price. If you used cash from the practice, you would deduct the purchase price from cash on hand and add it to long-term assets. While assets would be allocated differently, your liabilities would not be affected because money was not borrowed. Alternatively, if you use a bank loan to purchase the hysteroscopic unit, the amount borrowed is added to both long-term assets and to both short-term and long-term liabilities. In each of these cases, though money moves around, the balance sheet always remains balanced.

LIQUIDITY AND SOLVENCY

Solvency is the ability of an enterprise to meet its long-term financial obligations and continue to operate into the future, financing expansion or weathering an economic downturn. This is different from liquidity, which refers to the ability of a company to pay off its short-term (current) liabilities with whatever the current assets are on hand. To stay competitive in the business environment, it is important for a company to be both adequately liquid and solvent.

Solvency is calculated using what is referred to as the debt-to-equity ratio (i.e., total liabilities/equity). Most banks prefer a debt-to-equity ratio of less than 3 to 1, meaning that for every $3 in debt, a practice has $1 in equity (owners' or shareholders' money). When a medical practice's debt-to-equity ratio gets over 3 to 1, banks typically will not lend to the company unless additional guarantees are provided, possibly including the owners' personal assets. Alternatively, if the ratio is favorable, banks will loan up to $3 for every dollar of equity. For example, if you have equity of $500,000 and total liabilities of $250,000, you could potentially carry a total liability of up $1,500,000 (Equity $\times$ 3 = $1,500,000), and the bank may be willing to lend your practice up to $1,250,000 ($1,500,000 in possible total liability minus $250,000 in actual total liability). Using the current ratio and debt-to-equity ratio a business can continually evaluate its capital structure, facilitating its current and future operations and planning for growth (10).

INCOME STATEMENTS: ACCRUAL AND CASH ACCOUNTING

The final key element of profitability is determined by the income statement (also referred to as the profit and loss or revenue and expense statement) (Fig. 2). Income statements report on a practice's revenues and expenses during a specified period. Income statements report on a number of useful measures of financial performance. These include net income (i.e., Net income = [Total revenue + Gains] − [Total expenses + Losses]), EBIT (earnings before interest and taxes), and EBITDA (earnings before interest, taxes, depreciation, and amortization) (10). Health care income statements typically report two types of profitability: profits from patient care (operating activities) and profits from all activities (net income) (11).

Although not allowed to be included in the income statement under GAAP, EBIT and EBITDA are often used as rough earning metrics ("Just how much money does the company operations produce?"), most often by outside analysts. EBIT provides an estimate of operating income and can be used to analyze the performance of a company's core operations without the costs of the capital structure and tax expenses impacting profit. EBITDA is more often used for company valuation or comparison of profitability among companies, particularly in the analysis of capital-intensive firms or those amortizing large amounts of intangible assets (amortization refers to the spreading out loan payments over time; when referring to an asset, amortization is similar to depreciation). Other measures used by analysts are EBIDA (earnings before interest, depreciation, and amortization) and EBITA (earnings before interest, taxes, and amortization).

Income statements can be either accrual or cash based. The main difference is the timing of when the revenues and expenses are recognized on the accounting books. In general, most small practices use cash-based accounting, and public institutions, larger practices, health care organizations, and multicenter programs use accrual-based accounting (11, 12).

Accrual Accounting

When using accrual accounting, revenues and expenses are recorded when they are accrued or incurred, regardless of when they are received or paid for. For example, you have bought a new hysteroscopic unit and will be paying it over time, via monthly quotas. Under accrual accounting, you would record the full price of the unit today as an expense in the income statement (and as a current liability in the balance sheet). As the quotas are paid, the practice will credit its liability account and debit its cash account on its balance sheet. Likewise, if services are provided today and payment has not been made (as are most medical services, which are often paid many months later by whatever payor is responsible). In this situation, revenues are recorded today in the income statement as though you were going to be paid in full, and they are added to the assets section of the balance sheet. As payments are received accounts receivables will be credited while the cash account will be debited on the balance sheet (10).

Accrual accounting is very useful to allow a firm to clearly understand its financial position at any moment in time because companies never receive cash payments for all revenues they make at the same time they are earned, or make cash payments for all expenses they incur at the time when they are made. Overall, accrual accounting is considered the standard accounting practice for most companies, although it is somewhat more complex to set up than cash accounting. Additionally, you can end up paying taxes on money that has yet to be collected (10, 12).

Cash Accounting

In contrast to accrual accounting, cash-based accounting only recognizes financial transactions when money is received or spent. Many smaller businesses, including some physician practices, prefer to use cash-based accounting given its simplicity and ease of implementation. The Internal Revenue Service (IRS) allows qualifying small businesses, generally those that generate less than $25 million in annual

FIGURE 2

Income Statement

Fertility Center ABC

	2019 (in thousands)	2018 (in thousands)
Net service revenues	$3,993	$2,557
Cost of service revenues	2,938	1,923
Gross profit	$1,055	$ 634
General and administrative expenses	908	599
Depreciation	22	16
Total operating expenses	$ 930	$ 615
Operating income	$ 125	$ 19
Interest income	88	85
Interest expense	15	17
Total interest income, net	$ 73	$ 68
Income before taxes	$ 198	$ 87
Income tax expense	38	16
Net income	$ 160	$ 71

Example of a fertility center income statement. The fertility center's income statement (also known as a profit–loss statement) reports business operations over a set period, typically a year.

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revenues, to choose their preferred method. Additionally, the option to use cash accounting is supported by the fact that some physician practices are set up as personal service corporations (PSCs). Although PSCs are taxed by the IRS at 35% on the first $50,000 of income earned, compared with 15% for other types of corporations, the taxes are only due when accounts receivable are collected. Additionally, practices operating as PSCs may have less taxable income at year-end if they strive to pay as many of their expenses (e.g., salaries) in the same year (10).

Despite the ease of use and simplicity of cash-based accounting, and its value in helping to track cash flow, it can also be deceiving. Revenue and expense transactions may occur at different times, and the amount of cash on hand can vary significantly and rapidly. Further, cash accounting can provide misleading information about a practice's financial performance. Additionally, cash accounting does not encourage longer term planning and does not help prepare practices for economic downturns or for capital growth opportunities (8).

Overall, being familiar with balance sheets and income statements allows practices to interpret financial statements and their financial success. The balance sheet provides a measure of your ability to pay your bills (liquidity) and a measure of your borrowing power to finance economic expansion or to weather an economic downturn (solvency). Income statements (cash and accrual based) provide a measure of your profitability (11).

CASH-FLOW STATEMENTS

Cash-flow analysis is key to making sure that cash supplies remain available for expenses (13). The cash-flow statement is used to indicate the cash position of the company (i.e., how much cash do they have at any one time) and where the company spends its cash (outflows) and from where it receives its cash (inflows) (see Fig. 3). The cash-flow statement will include all monetary inflows a company receives from its operations and external investments, and all cash outflows that are used to pay for its operational activities and

FIGURE 3

Cash Flow Statement

Fertility Center ABC

Month Ended December 31, 2019

Cash Flow from Operations	
Net Income	$2,000,000
Additions to Cash	
Depreciation	$20,000
Increase in Accounts Payable	$10,000
Increase in Accounts Receivable	$15,000
Subtractions from Cash	
Increase in Inventory	($30,000)
Net Cash from Operations	$2,015,000
Cash Flow from Investing	
Equipment	($500,000)
Cash Flow from Financing	
Notes Payable	$10,000
Cash Flow for Fiscal Year Ended 12/31/18	**$1,525,000**

Example fertility center cash-flow statement. The fertility center's cash-flow statement presents the current period's flow by taking the accrual basis statements and converting them to a cash flow for the period of interest, and reconciling adjustments that account for the noncash amounts.

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investments during a given period of time, generally monthly or quarterly (13).

The cash-flow statement has three main parts: cash flow from operations (e.g., items such as accounts receivable, accounts payable, and taxes payable), cash flow from investing (i.e., sales and purchases of long-term investments), and cash flow from financing (e.g., payment of dividends or the repurchase or sale of stocks). As for the income statement, cash-flow statements can be recorded using an accrual or cash basis. While methodologies vary, a company's cash position can be generally be best defined by the net cash provided by operating activities or net operating cash (13).

Cash-flow statements can be constructed using the direct or indirect method. The direct method is simpler, requiring adding up all the various types of cash payments and receipts in a given period. However, it takes more effort because all actual transactions need to be tracked and considered. Alternatively, the indirect method estimates cash flow indirectly, from entries in the income statements. The indirect method presents the statement of cash flows beginning with net income or loss, with subsequent additions to or deductions from that amount for noncash revenue and expense items (e.g., depreciation). The indirect method allows for an estimate of cash position even when the income statement uses an accrual basis. It should be noted that disclosure of noncash activities should always be included when cash-flow statements are prepared to meet GAAP requirements (14).

Cash-flow analysis allows you to see what your cash position is at any one time and to prepare (by seeking loans, etc.) if there will be insufficient cash to meet immediate obligations. There are a number of useful measures that are provided by the cash-flow statement, including the operations/net sales ratio, free cash flow, and comprehensive free cash-

flow coverage, although their calculation and use is beyond the scope of this review (8).

BUDGETING

Budgeting is defined as an estimation of revenue and expenses over a specified future period of time. Although budgets serve as an important guide to operations and to assessing ongoing performance, they should be reassessed periodically as circumstances change. Budgeting is the tool that medical practices use to monitor performance goals and monitor operations to ensure those goals are met. Budgets are often considered an accounting tool, but they are best considered a managerial tool that can be used to allocate resources (14). There are at least two types of budgets generated by companies: operating budget and capital budget. Key budgeting terms are highlighted in Table 2.

There are two main budget approaches to operational budgeting. In the bottom-up approach, budgets originate at the division or unit-level (i.e., the subunits of a business may be divided into for budgeting purposes, such as surgical center, administration, billing, facility management, IVF laboratory, information technology, etc.) and are then "rolled up" into a single company budget, which is then approved by senior management. In contrast, in the top-down approach unit-level budgets originate at the senior management level and are then sent to lower levels for implementation. Smaller medical practices usually use a top-down budgeting approach, while many of the larger enterprises use a bottom-up or mixed approach to the budget process (15).

There are also two types of starting points for the development of budgets. In incremental budgeting, the previous year's budget is used as a starting point for setting minimum costs and revenues. Almost all health care practices employ an incremental approach. In zero-based budgeting, each yearly budget starts as a clean slate and all costs and revenues must be justified (15). Zero-based budgeting, albeit more cumbersome to implement than incremental budgeting, is useful when management feels they do not have a clear handle on the budget, such as when costs have incrementally increased over time without clear justification (15).

Several types of budgets are used by health care practices. The revenue budget is a listing of the expected revenues, both operating and nonoperating, of a practice, on a monthly, quarterly, or annual basis, broken down by payer. The expense budget is a listing of the expected expenses of a practice, broken down by components such as facilities, labor, and supplies. The operating budget uses prior data such as volume and workforce requirements to forecast future revenues and expenses. Because operating budgets focus on the key financial indicator of profitability, they are a primary tool in the budget process. Once a budget is approved, actual (or realized) revenues and expenses are monitored against the budgeted estimates. A variance is the difference between an actual and the budgeted values at any one point in time (15).

Capital budgeting is the process by which decision-makers determine whether to invest in (or accept buying) proposed fixed tangible assets (defined generally as those items with a longer life expectancy, such as equipment whose useful life may last many years, real estate, buildings, etc.) (14). It is important to recognize that fixed assets often come with associated maintenance and upkeep costs. Capital expenditures (often called CapEx) are the monies needed or used by a company to acquire, upgrade, and maintain physical assets. The reason that capital expenditures are dealt with separately from operating expenses (often called OpEx) by companies is because they usually involve larger amounts of investments, come with longer term obligations, and are often treated differently with respect to taxation (14).

The two most utilized tools for assessing these potential investments include the net present value (NPV) and internal rate of return (IRR). For both, the investment is only considered on the basis of future revenue streams. The NPV calculates the dollar value of an investment based on the opportunity cost of capital. For instance, if a $1,000 investment is projected to return $1,200 over 1 year but the return on an alternative investment of the same cost is 5%, then the NPV of the investment is $1,200/(1.05) − $1,000 = $142 (15, 16). A NPV of zero means the investment breaks even and meets the opportunity cost and no more (15). The IRR measures the percentage of profit the investment will earn over its life. Decision makers will typically compare the investment's IRR to a predetermined threshold. For instance, if a $1,000 investment is expected to return $1,200 after 1 year, then the IRR is ($1,200 − $1,000)/($1,000) = 20% (17). The challenge for health care is that it is often difficult

TABLE 2

Key budgeting terms.

Term	Definition
Operating budget	Prior data such as volume and workforce requirements used to forecast future revenues and expenses
Capital budgeting	Process by which decision-makers determine whether to invest in (or accept buying) proposed fixed tangible assets
Incremental budget	Previous year's budget used as a starting point for setting minimum costs and revenues
Zero-based budgeting	Each yearly budget starting as a clean slate with all costs and revenues justified
Revenue budget	Listing of the expected revenues, both operating and nonoperating, of a practice on a monthly, quarterly, or annual basis, broken down by payor
Expense budget	Listing of the expected expenses of a practice, broken down by components such as facilities, labor, and supplies
Net present value (NPV)	Calculation of the dollar value of an investment based on the opportunity cost of capital
Internal rate of return (IRR)	Measurement of the percentage of profit the investment will earn over its life

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to put a value on increased quality of care and somehow translating it into a financial number (18).

THE BUSINESS PLAN

Health care providers may frequently find themselves in a position in which they are asked to write a business plan. Examples include developing a new program or service line or requesting funds to purchase equipment or renovate space (19). A business plan is a standardized instrument to help align the vision of the reproductive physician with the greater institution's mission to demonstrate value or profit (18, 20). Depending on the proposed clinical service or purchase, it may be useful to form a planning committee to review data, form a time line, and delegate members to work on select parts of the business plan (21).

The business plan has two primary goals: [1] to comprehensively analyze the various processes that contribute to the investment, and [2] establish value in a purposeful way. The traditional business plan consists of seven typical components: an executive summary, business concept, market analysis, business strategy, financial plan, operations plan, and implementation plan (see Fig. 4) (4).

Executive Summary

The first part of the business plan, the executive summary, provides a concise overview and offers a snapshot of the overall business plan. Many consider the executive summary to be the most important part of the business plan because it creates a first impression to engage the reader to review the remainder of the plan in detail (22). The typical executive summary is one page in length and divided into paragraphs for each subsection of the business plan (business concept, market analysis, business strategy, and implementation plan) (4).

Business concept: In the business concept, background information allows the reader to fully appreciate the clinical need and explain the potential solution that the business plan proposes. The business concept is an opportunity to highlight the strengths of your practice as an asset to the institution. Key details for the business concept include practice size, payer mix, anticipated growth, specialized services, and target market. It is critical that the business concept demonstrate that the practice cannot optimally satisfy clinical needs without the item that the business plan is requesting, such as equipment or services of select staff. The background builds the framework to then describe the unmet needs of the patient population (4, 18).

Market Analysis

The market analysis section defines the extent of the of the unmet need and should identify the target market, such as the specific patient population (23). The market analysis

FIGURE 4

Component	Purpose
Executive summary	• Concise summary of the business plan • Creates first impression
Business concept	• Describes current program • Provides rationale for clinical need
Market analysis	• Analyzes the demand for the service line or product • Emphasizes efficiency, safety and meeting an unmet need
Business strategy	• Communicates organization's unique position and market with respect to the new service
Financial plan	• Projects revenue and expenses of the new service
Operations plan	• Demonstrates how new investment will be integrated with personnel, office space and existing equipment (if applicable)
Implementation plan	• Provides detailed timeline on delivery of new service

Business plan components. The seven primary components of a business plan.

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provides both a qualitative and quantitative appraisal of the market impacted by the business plan and reveals the potential impact that providing the unmet need will generate. The data reviewed in the business concept is applied to the target patient market. For example, a market analysis could provide market estimates on how adding a midlevel provider to a practice (who would cover urgent visits and provide services such as sonohysterograms) would allow physicians more time to see new patients to build the practice. In this setting the market analysis, among other information, should indicate that there are more new patients that the physicians could be seeing and that patients would be willing to be seen for lesser issues by the midlevel provider. When written properly, the market analysis should focus on both the financial and nonfinancial impacts of satisfying the unmet needs. To write this section, it will often be necessary for the physician writing the business plan to team up with an institution business administrator to estimate metrics (4).

Business Strategy

The business strategy can be considered the sales pitch and the opportunity to propose your solution to the unmet clinical need. This section will help explain how the proposed solution will provide objective measurements of success and demonstrate the degree of productivity that can be achieved (4).

Financial Plan

The financial plan demonstrates the income a new service or investment can be expected to generate by listing revenue sources as well as expenses associated with the plan. Typically, most business plans for medical practices will need to include projections of income and expenses, using past years' performance and projected trends (18, 24). These projections form the business plan's pro forma (from the Latin, meaning "for the sake of form" or "as a matter of form"), which presents the projected revenues and expenses for the proposed plan over a defined period of time (in medical practices these are usually for 3 to 5 years). Income-expense projections as well as cash-flow analysis are usually considered essential parts of this section, both to estimate the funds a company needs to invest and to ensure cash is not depleted (13).

Operations Plan

The operation plan details how the practice functions on a continuing basis and provides an analysis of the implications of starting the new service or hiring the new staff member (25). This section typically describes the roles of various team members as well as details the physical space and equipment. Additionally, benchmarks for measuring performance and safety should be outlined (26).

Implementation Plan

The final section, the implementation plan, is the most specific and detailed section of the business plan, converting the proposal into a focused action plan. This section will require you to consider obstacles and pitfalls in the implementation with plans made to address them. A marketing implementation plan will describe how the practice will address the responses of competitors. A key part of the implementation plan is a detailed time line of how the new service will be delivered on time and on budget (18). For instance, the implementation plan for a time-lapse EmbryoScope would include making the purchase, training staff, and projecting objective gains such as increased market share. It is also critical that the implementation plan includes a concrete time line.

It is important to keep in mind that developing a business plan is a dynamic process. The business plan will likely be revised as it is presented to various administrators and to senior management (27). Unless the proposed investment is very simple, it is unlikely that a physician will be able to write the plan alone, as specific aspects for the plan will require input from financial and/or marketing specialists (18).

CONCLUSION

Today's reproductive health specialists, including physicians, laboratory directors, and practice managers, benefit from fluency in the language of accounting, finance, and business planning. Whether your goal is to purchase a new ultrasound machine or to build a freestanding ambulatory surgery center, it is necessary to understand these key fundamentals. Enhanced knowledge in these areas provides tools you can use to create innovative and cost-effective changes to your practice.

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