Issues in Clinical Child Psychology

Derek D. Reed
Florence D. DiGennaro Reed
James K. Luiselli
*Editors*

Handbook of

# Crisis Intervention and Developmental Disabilities

Springer

## Issues in Clinical Child Psychology

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# Handbook of Crisis Intervention and Developmental Disabilities

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# Preface

According to the Centers for Disease Control and Prevention (2011), approximately 14 % of 18-year-old children or younger in the United States are diagnosed with a developmental disability. Developmental disabilities include a number of different disorders or impairments including vision or hearing disabilities, intellectual disability, autism spectrum disorders, and others. Estimates suggest that between 5 % and 16 % of individuals with developmental disabilities engage in some form of self-injurious behavior (e.g., slapping or biting, head hitting, eye poking, and others; Schroeder, Rojahn, & Oldenquist, 1991), with some studies reporting this number to be as high as 50 % (Baghdadli, Pascal, Grisi, & Aussilloux, 2003). Numbers for aggressive behaviors (e.g., hitting, kicking, biting, scratching directed toward others) are equally staggering, with prevalence estimates ranging upwards of 20 % for children (Hartley, Sikora, & McCoy, 2008) and 50 % for adults (Matson & Rivet, 2008). Given the severity of these challenging behaviors, many individuals with developmental disabilities require intensive behavioral and psychological services. In about 7 % of this population, problem behaviors are so severe that out-of-home residential services are necessary (Larson, Lakin, Salmik, Scott, & Webster, 2010). Thus, it is not surprising that the estimated per capita annual costs associated with treating developmental disabilities exceed $3.2 million in the United States alone (Ganz, 2007).

Recent research into the etiology of severe problem behavior of individuals with disabilities suggests a combination of biological and environmental precipitants (Iwata, Roscoe, Zarcone, & Richman, 2002). Given the difficulties associated with isolating such precipitants, as well as the dynamic nature of the environment, some individuals' behaviors quickly, and seemingly mysteriously, evolve into clinical crises that spiral outside of the scope of their current educational or clinical programming. Such crisis situations are often frightening, dangerous, and require immediate intervention. Unfortunately, the only resources available for professionals to consult in such times are (a) peer-reviewed scientific articles (often exclusively focusing on one treatment type or crisis scenario), (b) various web-based recommendations (many of which may come from unqualified contributors or based upon anecdotes or opinions), or (c) advice from colleagues. In our personal clinical experiences providing services to children with developmental disabilities and comorbid behavior disorders experiencing a behavioral crisis, the task of providing clinical recommendations (e.g., how to train staff or educators to implement

the treatment, whether to utilize protective equipment such as a helmet for self-injury, whether a transition to more restrictive and intensive placement is necessary) can be daunting.

The purpose of this handbook is to provide a compilation and analysis of the most recent research in crisis intervention for individuals with developmental disabilities, from the foremost experts in severe problem behavior and crisis management. Much research has been done on individual treatment components for addressing behavioral crises in individuals with developmental disabilities. This handbook synthesizes the relevant literature and integrates its findings into a comprehensive review of the continuum of services. In addition, the handbook serves as an accessible resource for researchers, scientist-practitioners, and graduate students interested in crisis intervention for individuals with developmental disabilities.

As scientist-practitioners, we have experienced a myriad of complications and decisions associated with behavioral crisis management. We have worked with families as they made difficult and emotional decisions regarding clinical services for their loved ones. We have served as the clinicians providing therapeutic services to individuals exhibiting behavioral crises and have consulted with staff and caregivers regarding how best to proceed with service delivery. Finally, we have each served as trainers to both parents and staff to best prepare them to address the complex needs of their clients and loved ones when behavioral crises emerge. This book is dedicated to the many clients, families, staff, and colleagues with whom we have worked who sparked our interest in compiling this volume.

Dr. Reed acknowledges Dr. Karla Doepke for introducing him to behavior analytic interventions for children with autism and inspiring him to embark on this career. I thank Dr. Brian Martens and Dr. Laura Lee McIntyre for shaping me to think like a scientist while providing clinical services and consultation to families. While working with Dr. Gary Pace, I learned the importance of creating a collegial atmosphere and finding the joys in even the most incremental of improvements in the data. I was privileged to work with wonderful clinicians like Richard Azulay, Dr. Hannah Rue, and Dr. James Chok; many of the conversations we had influenced the content of this handbook. Finally, I owe my biggest thanks to Dr. Florence DiGennaro Reed and Dr. James Luiselli for being tireless supporters and incredible collaborators, not only on this project, but for everything I do. Flo and Jim continue to amaze me with their clinical scholarship. It is an absolute honor to consider them my colleagues.

Dr. DiGennaro Reed would like to express warm appreciation to her many mentors over the years: Dr. Raymond G. Romanczyk who—without knowing—single-handedly shaped my desire to enter this profession; Dr. Mary E. McDonald for giving me many unique and wonderful professional development opportunities as a young and inexperienced clinician; Dr. Brian K. Martens for introducing me to the joys of The Far Side® when I needed it most; and Dr. James K. Luiselli for raising the bar and challenging me to reach it. I would also like to acknowledge the support of my family who have been my greatest cheerleaders and devoted fans for decades. A special thank you to our Jack Russell terriers, Bella and Watson, is warranted; they patiently tolerated long hours in our home office, abbreviated walks, and our diverted attention without holding any grudges. I would like to extend warm appreciation for the numerous

families with whom I have worked and have learned a great deal about life, love, and advocacy. Finally, and perhaps most importantly, I would like to express my deepest appreciation to and admiration of my life partner and best friend. This has been, and will continue to be, an amazing journey!

Dr. Luiselli thanks the many people who served as his teachers, mentors, and professional role models. With a fresh undergraduate degree in hand, I was blessed to have the tutelage of Drs. Donald Anderson, Jerry Martin, Paul Touchette, and Andy Wheeler. Dr. Van Westervelt was another influence, an ally, tennis partner, and coauthor on my first peer-reviewed publication. In graduate school and beyond, I was privileged to learn from Drs. David Marholin II, Henry Marcucella, David Mostofsky, Warren Steinman, and Ron Taylor. Dr. Michel Hersen and Dr. Nirbhay Singh set the occasion for many career goals and accomplishments—I am forever indebted to them. And what a joy it is to collaborate with Dr. Flo DiGennaro Reed and Dr. Derek Reed, two rising stars I am able to call colleagues and friends. Finally, my wife, Dr. Tracy Evans Luiselli, and our children, Gabrielle and Thomas, have taught me the life lessons you do not find in textbooks and inspired in ways that only a family understands.

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# Introduction

1

Derek D. Reed

## Introduction

This handbook describes the various challenges associated with behavioral crises for individuals with developmental disabilities and details the continuum of service options available for treatment. But what constitutes a behavioral crisis? The word *crisis* is defined by the Oxford English Dictionary as "a time of intense difficulty, trouble, or danger" (http://www.oxforddictionaries.com). Indeed, behavioral crises are intense, difficult, troublesome, and in many situations, dangerous. When individuals with existing special needs begin to exhibit signs of behavioral crises, it becomes imperative to quickly act with informed decisions. Given the complex needs of individuals diagnosed with developmental disabilities (e.g., behavioral excesses, communication deficits, health/medical needs, intellectual disabilities), behavioral crises may be especially disconcerting, warranting complex solutions and procedures.

The concept for this handbook evolved from numerous conversations amongst the editors about (a) what constituted a *behavioral crisis*, (b) what resources were available to guide clinicians when a client began to exhibit a behavioral crisis, and (c) how one should describe service delivery options and approaches to caregivers. Over many conversations, it became clear that there was relatively little consensus about each of these points. Nuanced literatures were available on highly specific concerns (e.g., functional analysis, self-injurious behavior (SIB), residential programming), but we could find no compendium that presented the continuum of topics necessary for staff or caregivers to use as a resource when difficult decisions must be made. Unfortunately, behavioral crises are not the time for teams of individuals to go digging for research or recommendations on what to do next. Behavioral crises demand quick, informed decisions and recommendations so precious time is not wasted. Turning to our colleagues for recommendations on such resources, we were typically told something along the lines of "Hmm. Good question. I don't know of anything, but if you find a resource, let me know! Someone should definitely write a book on this," thus spawned the premise for this handbook.

What constitutes a behavioral crisis is likely to vary between individuals, service delivery settings, and clinical teams. We believe that behavioral crises are best regarded as relative instances wherein a client's behavior escalates beyond baseline levels to a point that stretches the competency and abilities of the staff and resources serving that client. That is, a behavioral crisis emerges when staff can no longer rely on their

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day-to-day operations to appropriately serve the client. A behavioral crisis may be considered *emerged* when staff begins questioning whether the current clinical service delivery approaches are sufficient or caregivers begin to question whether placement should be moved to another service delivery locale.

This handbook is organized into three units: (Unit I) *Organizational Preparedness*, (Unit II) *Crisis Identification and Acknowledgement*, and (Unit III) *Navigating the Continuum of Care*. Unit I is concerned with organizational preparedness; that is, the issues and topics that agencies or institutions should evaluate when designing programs to handle behavioral crises. In Chap. 2, Dixon and Loukus provide an overview on how human service agencies should integrate concepts and ideas from behavior analysis and organizational behavior management to create an organizational model conducive for handling challenging behaviors and crisis management. By proactively designing organizational infrastructure for handling behavioral crises, many issues related to crisis management may be prevented. As a specific example of preventative organizational practices, Luiselli describes a model of peer review in Chap. 3 that should be integrated into the organizational infrastructure of human service agencies to enhance accountability for data management concerning behavioral crises. The approach described within the chapter not only improves data management, it simultaneously fosters a culture of proactive discussions and problem solving so that crises that emerge can be dealt with using the full capacity of clinical staff and experts. As decisions regarding treatment options begin to be made following peer review processes, clinical teams must rely on evidence-based practices to best address the needs of the client. In Chap. 4, Maffei-Almodovar and Sturmey provide a thorough review of the literature on effective treatments for severe challenging behaviors commonly associated with behavioral crises. The authors supplement their review with both qualitative and quantitative data on the empirical support for the treatments identified in their review. Upon identification of treatment options and formulation of intervention protocols, care providers must train therapists and staff to implement the plan to effectively service the client. Chapter 5 describes how agencies interested in providing services directed at behavioral crises for individuals with developmental disabilities can effectively prepare staff using empirically supported procedures. The authors provide a cogent argument for front-end training as an investment in agency, rather than as a reactive approach to crisis management. Unit I concludes with a discussion of restrictive procedures in Chaps. 6 and 7 that are sometimes necessary in treatment protocol for behavioral crises for individuals with developmental disabilities. The topic of protective equipment in service delivery for behavioral crises is discussed in Chap. 6, with Chap. 7 reviewing the literature on best practices associated with therapeutic restraint and protective holding.

Unit II focuses on crisis identification and acknowledgement and details unique constellations of behaviors associated with behavioral crises, along with approaches to assessment, ways to involve families during treatment decision making, and ethical and legal considerations that must be made when a student is deemed to be in a behavioral crisis. The unit begins with a review of problem behavior assessment procedures in Chap. 8, with discussions ranging from standardized assessment tools (e.g., scales) to descriptive assessments using observational technical (e.g., time sampling). Chapter 9 continues the discussion of measurement of behavioral crises by focusing exclusively on functional analysis procedures that are becoming the gold standard in problem behavior assessment. In Chap. 10, Patel describes unique challenges associated with the assessment of feeding problems often associated with behavioral crises in individuals with developmental disabilities. Chapter 11 provides a similar discussion of assessment and treatment concerns associated with Prader-Willi syndrome (PWS), such as hyperphagia and self-injury. SIB—a very serious and challenging component of behavioral crises for individuals with developmental disabilities—is discussed in Chap. 12. Specifically, McComas and Symons review classic discussions of the kinds of events or

consequences that maintain self-injury in individuals with developmental disabilities. Beyond the unique needs of PWS or SIB, Chap. 13 describes various comorbid disorders commonly observed in individuals with intellectual disability and developmental disabilities. Ricciardi provides a comprehensive detail of the various methods to assess comorbid conditions and provides advice for ways to integrate these considerations into individualized treatment plans when intervening on behavioral crises. In Chap. 14, McIntyre and Brown describe a three-tier model of prevention that integrates family involvement and consultation. This model is aimed at improving home supports that ultimately improve outcomes for the client with developmental disabilities or intellectual disability. Unit II concludes with Chap. 15 by Sheldon and Sheldon-Sheldon that describes the legal and ethical rights afforded to clients with developmental disabilities. The authors provide the reader with information on proactive approaches to ensuring that service delivery providers operate in a legally and ethically appropriate manner.

Unit III rounds out the handbook by offering a description of the continuum of services available to individuals with developmental disabilities that are facing behavioral crises. The unit begins with Chap. 16 by Yell and Drasgow. This chapter describes the process of determining whether a client's current placement setting can appropriately serve his/her unique needs associated with behavioral crises, as well as the legal requirements associated with such decisions. In addition to planning placement and programming, the clinical team must make complicated and tough decisions regarding the use of pharmacological treatment in severe cases of behavior problems. Chapter 17 walks the reader through the decision-making process associated with the evaluation of pharmacological treatments paired with behavioral interventions—a common scenario in service delivery for behavioral crises when less restrictive interventions fail to produce positive outcomes. Following Chaps. 16 and 17, Unit II progresses to detailed descriptions and reviews of various care models associated with behavioral crisis management, ranging from how placement decisions are made and intake evaluations are completed to thorough reviews and discussions of various components within the care models. Chapter 18 begins this dialogue by describing consultation models in public school settings. Because many individuals with developmental disabilities may first exhibit signs of behavioral crises in such settings, DiGennaro Reed and Jenkins outline the consultative process wherein educational and/or behavioral staff may first attempt to manage emerging problem behaviors. This chapter concludes with a discussion of how the consultation process may inform decisions regarding transitioning the client out of the public school to more restrictive placements. In Chap. 19, Tarbox, Persicke, and Kenzer review various models of home-based services for individuals with developmental disabilities, including considerations for early intensive behavioral intervention (EIBI), parent training, and problem behavior management. When consultative supports fail to address behavioral crises in a student's public school setting and need to surpass what may be handled using home-based services, personnel may recommend placement in a private school setting. Fienup, Baranek, Derderian, Knox, and Pace author Chap. 20, which outlines various system supports integrated into comprehensive private school programs serving children and adolescents exhibiting behavioral crises. Chapter 21 describes a variation on private school programs wherein clients are placed in an intensive day-treatment setting that focuses specifically on reduction of severe problem behaviors that have evolved to crisis levels. This model differs from private school placement in that it does not address academic skill acquisition. As the authors describe, intensive day-treatment programs may best be conceptualized as partial hospitalization that permits the client to continue residing at home. In Chap. 22, Milnes and Piazza outline the best practice components associated with intensive pediatric feeding disorder treatments, often delivered in private school, intensive day-treatment, outpatient, residential, and/or hospital settings. In concert with Chap. 10 of this volume, Chap. 22 describes interdisciplinary programs that are designed to assess and

treatment issues of feeding that commonly occur during behavioral crises. Wacker, Berg, Schieltz, Romani, and Dalmau discuss another approach of service delivery to assess and treat behavioral crises within an outpatient approach to treatment in Chap. 23. Chapter 24 describes more intensive outpatient units wherein behavior disorders are closely monitored and intensely treated for very short periods of time. This model is considered more intensive than the standard model of outpatient services described in Chap. 23. When outpatient models fail to address clients' needs during behavioral crises, the final option is to transition the client to a residential program where services are provided 24 h a day, 7 days a week. As the anchor at the most intensive and restrictive end of the continuum of care, residential programs provide around the clock services, including nutritional, educational, health, behavioral, and psychological/psychiatric programs. Residential placement involves moving out of one's home into a new home or facility directed and managed by care providers. The handbook ends with an example of one agency's approach to residential services in Chap. 25. Because of the intensity of services and restrictive nature of residential placement, it is imperative that staff are provided high-quality supervision and oversight and that empirically supported approaches to staff training and clinical services be adopted at the organizational level. Strouse, Sherman, and Sheldon describe how decisions regarding behavioral crises can be made within residential programs and offer examples of such decisions that have led to development of successful models and systems.

In sum, our goal for this handbook is to provide the reader with a comprehensive review of considerations and options regarding the management of behavioral crises with individuals with developmental disabilities. We hope that this handbook will serve as a reference and training tool for both caregivers and clinical staff, as well as a review for readers hoping to learn more about severe problem behavior and developmental disabilities.

# Part I

# Organizational Preparedness

# Importance of Organizational Infrastructure

2

Mark R. Dixon and Amy K. Loukus

In human services, all resources are valuable, and hence should be utilized with care. Budgets can be tight, funding often cut, and workers transient. When crises arise, consultants are typically called upon to provide a solution, yet their outcomes can be questionable. Taking an outsider perspective can result in seeing disconnects in optimal infrastructure; however, the lack of understanding of the subtleties of the organization can mitigate success. Given the complexity of human services and the need for individualized intervention plans, consultant promises may be deemed unrealistic and essentially turned down by the administrators. In contrast, others may naively trust the consultant, as crisis often breeds dependence and vulnerability on the part of the agency. Administrators and service providers in general should come to understand that within human service settings, there is little that can be fully controlled, and there are few interventions that can solve every problem in one swift application. Instead, they should assume some level of control could be found in the immediate environment, and with the help of a solid systems infrastructure, the vision of "control" may be actualized despite relative mishaps or, worse, crises. To do so requires a mutual understanding at the administrative and consumer level, and is of primary interest in the relationship shared between all parties. In many ways, behavior of these individuals becomes the input in the human service organization, and likewise affects the behavior of clients and consumer families.

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## Organizational Infrastructure

Organizational infrastructure is a term most appropriately utilized to describe a systematic framework comprised of specific features and expectations. Infrastructure provides a basis of support by means of strategic planning of service execution by administrators and employees within an organizational hierarchy (Townsend, 2006). Organizational growth is directly influenced by the presence or non-presence of a solid, thoroughly planned infrastructure, responsible for incorporating the missions, goals, and expectations for any entity, which stems from the initial phases of development. Every successful organization, no matter the current size or consumer impact factor, began with a single idea. Ideas may have been constructed in remote environments of the day-to-day life of their originator. They are developed with careful consideration as they became shaped to represent realistic outcomes, and some ideas flourish to provide some insurmountable influence on consumers. Some of the most successful contemporary organizations in the realms of consumer products (Apple computers) and human services

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(e.g., The United Way; Goodwill Industries International, Inc. [Goodwill]) began as a result of one person or a small group of people. Ideas that helped establish these successful organizations were likely sparked by a passion for better circumstances in products or services. For Steve Jobs, a goal of easier access to information and increased socialization abilities comprised the solid foundations for his enterprise (Isaacson, 2011). United Way and Goodwill shared the goal of prosperity for those not currently able to provide for themselves and their families (United Way, 2011; Goodwill, 2011). This led to the establishment and attainment of various goals and eventual realities of affordable, effective, quality services for underserved populations provided by these and other human service giants.

The imminent necessity of thorough planning, and the influence early action plays as the organization matures, suggest that early stages of development should be conducted with careful consideration and future outcomes in mind. Definite activities, people, and goals should be linked with accuracy through thoroughly planned systems and processes. To better ensure such outcomes, careful planning must be committed to designing an insurmountable infrastructure upon which foundations for consumer services may reside (Townsend, 2006).

## Infrastructure in Human Services

Like other organizations, human services were founded as a means to improve the lives of those affected in various ways, but in this arena of consumer interest, the concept of infrastructure becomes of utmost importance—not for the sake of profit alone, but for the sake of health and life quality. Over two decades ago, the assertion was made that human services would touch the lives of all Americans at some point (Riley & Frederikson, 1984). Today one may confirm such a notion, as the influence increases and impacts all, from the normal functioning adult to the adult or child with mental or physical disabilities. Infrastructure plays a major role in adaptation and building a foundation upon which effectiveness, cost, and productivity lie, with ongoing interventions devised to help "pound out the kinks" in the day-to-day processes. This may be especially true of those who specialize in caring for individuals with developmental disabilities, whose lives depend on the stable, effective provision of services by skilled professionals working with this population.

Consumers of disability services often begin their relationship with an agency due to an unfortunate life event or bodily condition requiring their fight in a constant battle against exacerbated challenges in daily living. Challenges and resulting behavior likely influence every decision the individual forms. Features of such decisions are commonly both sensitive and life-altering in terms of resulting functional deficiencies present in various aspects of the consumer's everyday experience (Falvo, 2009). Proper management of detrimental behavior warrants the need for human service professionals to step in and influence the change for the better, though requires intensive treatment and an ongoing, effective approach (Phillips, 1998; Sturmey, 1998; Sulzer-Azaroff & Mayer, 1992).

In today's world, advancing technologies and high demand for additional services resulting from an increase in diagnoses lead to increased expectations for quality (Falvo, 2009; Wilk, 2009). Consequently, costs accrued by organizations to better meet consumer needs and provide a competitive edge against other agencies who offer similar services necessary to maintain operations are at an all-time high (Wilk). Service delivery, affordability, facility appearance, and even amenities offered during a routine visit have all become relevant factors upon which consumers determine permanent health care providers, thus instilling a sense of urgency by small business or low-income providers to increase profits, increase services, and increase the quality of experience to even compete with high-income providers.

Leaders of organizations deemed most successful given the market today, likely spend a considerable amount of time and preparation in devising a solid infrastructure, and will have

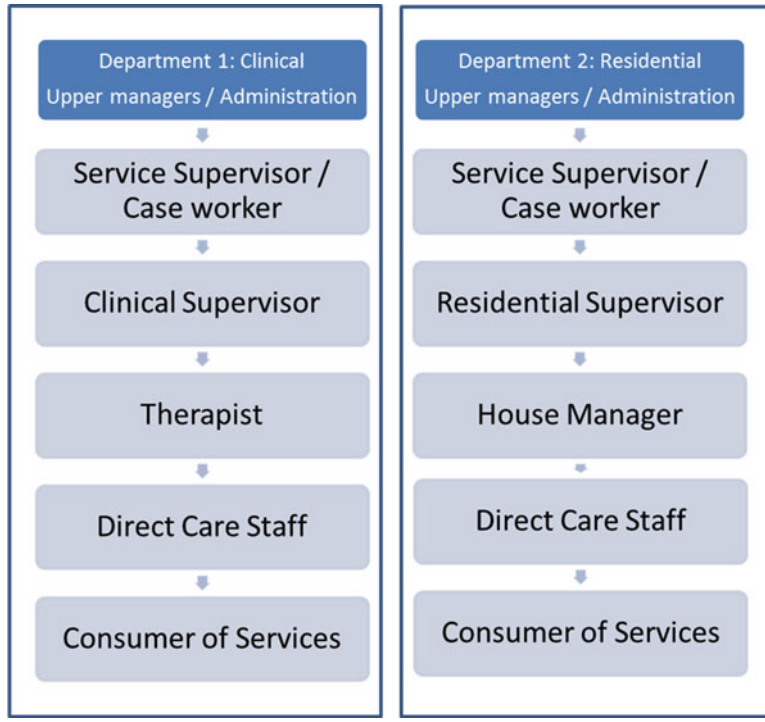


**Fig. 2.1** Visual depiction of a vertical hierarchy that may exist in human service organizations

already factored such performance and service advancements in their overall guarantee to consumers they serve. These factors lie amongst the additional, essential process factors required to adequately habilitate those in need, often designed with the consideration of limited resources (Sturmey, 1998). In such analyses of infrastructure components, organizational goals are identified and directly related to the processes and people expected to help attain them (Townsend, 2006).

## The Vertical Organizational Hierarchy

Like other organizations, human service organizations have a definite hierarchy, or assumed "chain of command" followed with regards to people of authority and process of services. As many hierarchies are founded, organizations have an almost cliché, vertical hierarchy that is known and followed (sometimes referred to in the organizational literature as a "silo" effect on hierarchical planning; Rummler & Brache, 1995). In vertical hierarchies, upper management lies at the very top of command, with middle managers and clinicians lying somewhere in the middle, who then supervise the direct employees that provide care to the consumer. In the case of residential facilities, these refer to the direct care staff, or in the case of school settings, the paraprofessionals and volunteers who assist clients and are responsible for implementing treatment in any given day. Figure 2.1 illustrates the vertical hierarchy as seen in most human service agencies.

In organizations that use a vertical infrastructure, middle managers may serve as liaisons to manage the gap and translate expectations from upper management or administration to front-line employees, and as a result, interaction between top management and direct care staff is essentially nonexistent. Rummler and Brache (1995) describe this as a silo effect for many reasons, but mainly because it seems there is a clear linear command chain that is followed by all in the agency, which promotes altercation

when low-level employees attempt to address leaders above their immediate supervisors. Further, the linear model is constructed within organizations which may have various departments (e.g., residential, clinical), so communication rarely occurs between middle managers across such departments, and issues that involve more than one department involve only top managers who really have other things they should be working on, that perhaps, middle managers below them could devote time to solving. Oftentimes, organizational "silos" breed competition between departments, and blame is passed from one to the next with upper management frustrated and jumping through hoops to solve the issues. Incidentally, these issues may simply be miniscule process issues that should not pose much effort in resolving, and require little technical knowledge of the process whatsoever (e.g., mishandled/misfiled paperwork). Information is said to be lost between the cracks, or, as their book title suggests, "within the whitespace" of the organization, often not formally managed by anyone. Rummler and Brache state, "an organization behaves as a system regardless of whether it is being managed as a system…if you put a good performer against a bad system, the system will win every time" (p. 13, 1995).

## An Alternative Approach: A Horizontal Matrix or Adapting *Across* Performance Levels

The vertical approach to infrastructure was successful in industrialized America. However, as the country moved from a "stuff" producing market to a "service" delivery market, the top-down approach tended to not work as well. The beauty of the vertical approach was that each worker was boxed into a small set of responsibilities and skills. It resulted in highly skilled, yet narrowly defined workers. When "stuff" is being produced, high precision is needed. Yet, the dynamic nature of service delivery tended not to fit such a mold. Instead, services that involved interaction with people appeared to need more variability in delivery. Today's human service organizations grew out of the antiquated model of state-operated facilities for persons with mental retardation or mental illness. In addition to the variety of human rights issues that resulted in a cascading of closures to state facilities, the entire vertical management model was brought into question. Furthermore, stakeholders across the country wondered, could more be done with less? The answer to this question is an encouraging "yes," and great strides have been made utilizing the principles of behavior analysis in human service settings.

Organizational behavior management (OBM), as a subfield of applied behavior analysis (ABA), directs its focus on large-scale behavior change, in organizations just described. OBM professionals serve as consultants, both internal and external to organizations, and provide insight to processes and performance likely to allow an organization to develop and meet outlined goals and missions to the degree necessary to provide a competitive edge in the consumer market (Bucklin, Alvero, Dickinson, Austin, & Jackson, 2000; Geller, 2003). Recent advancements in organizational research, and a stated need for improved quality of organizational management, have led the way for behavior analysts and organizational managers to influence the human services sector (see Phillips, 1998; Sturmey, 1998, for literature reviews of OBM's influence in human services). Just as applied behavior analysts effectively improve the behavioral repertoires of individuals, OBM professionals strive to identify causal variables likely to produce and maintain desirable performance at three distinct levels within any organizational system: level of the performer, the department, and organization (Austin, Carr, & Agnew, 1999; Malott, 2003; Rummler & Brache, 1995).

### Performer Level

At the level of the performer, common issues include productivity, quality, and consistency in work produced or outcomes achieved. Clearly specified expectations, individualized feedback on performance, and necessary reinforcement/correction for desired behavior

increase the abilities of the performer and provide a means by which employees can advance within the organizational hierarchy (Malott, 2003; Rummler & Brache, 1995).

In human service agencies, oftentimes direct care providers represent the performer described here. Following an initial training, ongoing performance monitoring allows for individuals to succeed in accomplishing the assigned work tasks and consumer goals. With continuous monitoring, ongoing, in situ training will allow performers to constantly evaluate and improve upon individual performance. In OBM, behavioral skills training or the application of a four-component package intervention consisting of instructions, modeling, guided practice, and performance feedback, plus reinforcement for correct performance (Komaki, Barwick, & Scott, 1978; Sulzer-Azaroff & Mayer, 1991), offers a concise, consistent, and empirically validated method for implementing such training, with repeatedly demonstrated outcomes of success associated with the use of training with human service direct care providers. All four components comprise the training model, but in some cases, single components or combinations of single components are often utilized with other methods as alternative package interventions to address issues when more immediate adaptation is necessary. Most often, feedback is commonly targeted as a standalone intervention for improving individual and group performance (Austin, Kessler, Riccobono, & Bailey, 1996; Balcazar, Hopkins, & Suarez, 1986). Beyond training, however, other factors must be considered and addressed to ensure success within any human service agency.

### Maintaining Motivation

Performance of employees in human service agencies greatly benefit from behavioral skills training procedures, with quality of service and expected outcomes for consumers especially impacted. Over time, without constant supervision of a supervisor, it is likely that employees will drift away from procedures on which they were initially trained and cut corners to make tasks more efficient and less aversive or cumbersome. To maintain desired performance in the everyday environment, care must be taken to ensure motivation or the demonstrated desire (Malott, 1993; Reid & Parsons, 2006) of direct care providers to work toward client goals and objectives (Reid & Parsons). Plainly stated, the nature of human service employees (e.g., socioeconomic status, education, motivation) and, further, the nature of human service tasks (e.g., laborious duties, long work hours) determine the level of motivation an employee is likely to possess independent of supervisory intervention (Reid & Parsons). In the OBM literature, employees demonstrate what is termed "Discretionary Effort" (Daniels & Daniels, 2006), when one exhibits performance above and beyond expectations of the employers or the status quo. Employers often attribute the traits identified by employees as originating within the skin of the performer and often utilize theories of unobservable phenomenon to account for the often described, "motherly nurturing" demonstrated by employees toward the consumers.

What employers fail to recognize, however, are the various aspects of the job that allow the employee to contact intrinsic reinforcement, whether by means of small personal successes in the clients with whom they work or feelings of accomplishment associated with the completion of tasks identified as crucial to the success of the organization or position. In human services, residential and unit supervisors assume the task of enhancing Discretionary Effort® of direct care providers by motivating employees to *want to* perform, with difficulties often exceeding simple delivery of praise and tangible rewards to employees who exhibit this trait (Daniels & Daniels, 2006; Reid & Parsons, 2006). Specialized OBM-based analyses and implementation of contingencies of reinforcement provide a reference point for supervisors that are relatively easy to implement, but all must begin with an infrastructure designed to allow for adaptation to new situations, not always part of the employee's expectations.

### Department Level

At the job or departmental level, contingencies must be developed and implemented that expose

members of a group to opportunities that may result in success of all members, with feedback and reinforcement used as small-scale methods of contingency arrangement responsible for shaping and maintaining desirable outcomes which meet the mission of the department and contribute somewhat to the overall mission of the organization (Brethower & Smalley, 1998; Rummler & Brache, 1995). In human services, interdisciplinary teams comprised of direct care providers (e.g., family, guardian, and support personnel), residential supervisors, and clinicians may advance specific skills of a consumer. Each of these groups of people should be provided with specified group goals to strive to accomplish that further the outcomes and enhance the likelihood of consumer success over time. Ideally, these goals and outcomes should be stated at the start of the team member's role in caregiving position. Again, OBM interventions have been developed and utilized which allow for such influence, with performance-based lotteries (Cook & Dixon, 2006), and preference assessments for reinforcing employee behavior (Wilder, Rost, & McMahon, 2007; Wilder, Harris, Casella, Wine, & Postma, 2011) easily implemented and utilized within departments and across groups of individuals.

### Organizational Level

Goals and mission statements are constructed in an attempt to define the purpose of an organizational system (Malott, 1993; Daniels & Daniels, 2006). Frequent analyses of whether such goals are being met, or are met to the degree in which they support the organization's mission, signify necessary components of any evaluation of the infrastructure's effectiveness during implementation. Missions are brief statements of accomplishments that can be expected from an agency, with clearly defined outcomes and measures of outcomes indicated (Daniels & Daniels). Organization administrators create a mission statement as a means to convey a sense of purpose and desired outcomes for the consumers they serve, as a broad depiction of company initiatives (Malott, 2003). Performance of the organization is affected by the discrete actions shaped and maintained by individuals on the department and performer levels discussed previously. When problems arise and behavior fails to exceed expectations at the performer or departmental analysis, total systems analyses (Brethower & Smalley, 1998; Rummler & Brache, 1995) can be conducted to allow administration to determine where exactly in the process disconnects occur. Once identified, further analysis of the issue may better inform management on variables maintaining the issue, and intervention can allow for resolve.

### Process Mapping

The concept of "process mapping" has gained popularity in recent years as a procedure that allows an outsider to observe how materials and resources invested as inputs into an agency can lead to effective outputs (e.g., products and services that benefit organizational consumers). First utilized in the area of business administration (Brethower & Smalley, 1998; Rummler & Brache, 1995), and later introduced as one of a few crucial first steps of the consultation procedures (Rummler & Brache), process mapping ensures that individual contribution is accounted for and all inputs are used to their potential. Further, process mapping ensures that inputs and processes result as expected, in a definite product that either moves on to a separate system or department, or rather, results in a terminal link or final product of consumption. Throughout the procedure, individual relations may come to be identified that were previously overlooked and included as variables that surround individual performance and influence terminal success.

Process mapping, or this means of adopting a horizontal organizational hierarchical viewpoint, can be a complex endeavor, however may be especially useful in human service agencies. Here, various employees serve to produce a variety of services deemed necessary requisites to other employees or as final products in the lives of consumers who utilize them. To illustrate, consider the following example of a residential facility that serves individuals with severe developmental disabilities. Administration and case managers produce means by which the fund-

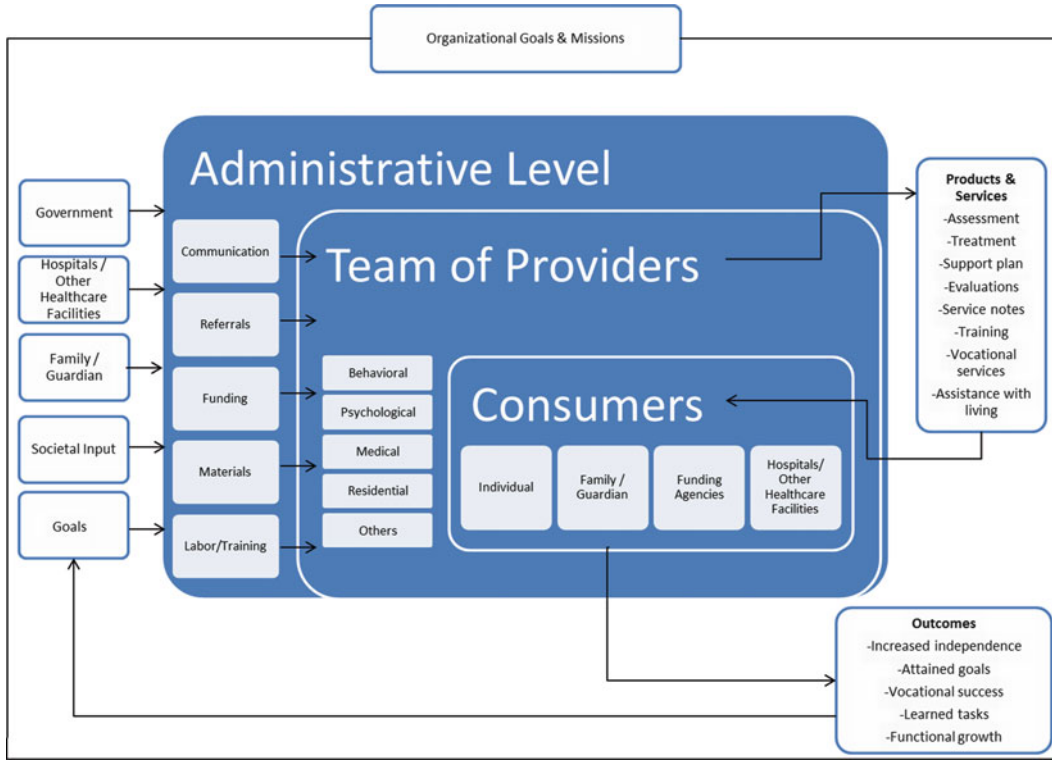


**Fig. 2.2** Visual representation of the interworking components of a human service agency from a systems standpoint

ing and services may be afforded to the clients by completing essential paperwork and contacting various representatives responsible for releasing funds to consumers. Funds produced by administration and case managers serve as input resources to clinicians who specialize in providing evaluation and treatment to the various individuals. These services may also be observed in the form of various therapies provided depending on the clinician's role within the interdisciplinary team described previously (medical, behavioral, psychological, physical, occupational, speech, etc.). Evaluation and therapies delivered can be seen as a product by which consumers immediately benefit and also may produce some form of internally based, informational resources (service reports, behavior support plans, etc.) by which procedures for emergency responding may be outlined and explained at a level that is understandable to direct care providers within the residence or on residential units. Reports, then, serve as internally supplied input to the direct care providers, who utilize the information as guidance for providing definite outcomes (e.g., attained goals, increased independence) to consumers in the form of effective service delivery (terminal output). Refer to Fig. 2.2 for a visual depiction of this process, and notice the cyclical or bidirectional nature of processes as they impact all levels of the organization.

The illustration just provided outlines a very basic overview of input/output exchange amongst employees at varying levels of expertise. More often, however, thorough analysis of this same procedure will surmount to a tangled web of exchange with difficulties likely in the initial establishment. The final product of comprehensive service delivery, however, is then possible to be carefully outlined and explained using process mapping that is easy for administrators and consumers to comprehend. Once constructed, any disconnect in services rendered by consumers or members within the organizational hierarchy are easily identified, and interventions may

be implemented to remedy the variables causing the stopped progression of services. Performance and process management are likely to benefit those in areas where disconnects occur and may lead to an increase in future consumer progress.

### Total Systems Analysis

Like process mapping, total systems analysis relies on the identification of resources that serve as necessary inputs to maintain successful operation of any agency but also provide a more thorough analysis of interworkings between agencies or departments of a single agency. Total systems analysis implies that every single input and, likewise, every single output is accounted for, with clearly specified links identified between each component. This means that the roles of each employee are thoroughly analyzed, with direct links between process and outputs blatantly identified and evaluated for effectiveness. In the illustration depicting process mapping, a total systems analysis would include all information of the process map, but with specific detail addressing the bidirectional influences of various employees, departments, and organizations, all serving the individual consumer of developmental training and services.

Brethower developed and termed "Total Performance System (TPS)" (Brethower & Smalley, 1998) as a behaviorally framed total systems analysis. As the name suggests, Brethower's model allowed for a total analysis of performance as a function of the varied levels and types of resources (termed inputs) that eventually amount to products or services through organizational processes (termed outputs; see Hyten (2009) for a comprehensive discussion). A major benefit of Brethower's system was that incongruence in performance as it relates to the organizational goals could be easily identified as they occur given a thorough analysis of relevant variables and processes of turning inputs to outputs. This could be conducted at all levels of performance including the organization as a whole (regardless of its size), an individual department, or employee (Hyten). Rummler and Brache (1995) have expanded on TPS to provide a more comprehensive and efficient method for charting organizational interactions. They analyze performance at the three specific levels and consider relationships neural, or in other words, across all departments and levels within the organizational hierarchy. In their analysis, business evaluation exists for strategy, processes, and behavior, with emphasis on fundamental analyses that contribute to the system as an interacting agent, serving functions for leaders who build them, and consumers left to rely upon them for their livelihood. Processes described here and the evaluations of such provide a means by which essential growth and organizational movement may be identified and accounted for in the organizational hierarchy. Business administrators and OBM consultants provide essential examples of such processes being utilized to better the already efficient services contained within the organizational infrastructure initial quality and planning.

Since its introduction roughly three whole decades ago, behavioral systems analysis has been the subject of many conceptual and introductory research articles, and the applicability of its construction has been reviewed in an objective, critical manner by skilled behavioral psychologists and OBM consultants (Abernathy, 2009; Brethower & Smalley, 1998; Diener, McGee, & Miguel, 2009; Gilbert, 1996; Hyten, 2009; Keller, 1968; Krapfl & Gasparatto, 1982; Malott, 2003; Malott, Vunovich, Boettcher, & Groeger, 1995; Mawhinney, 2000; Williams, Di Vittorio, & Hausherr, 2003). In a more recent article, Abernathy (2009) describes a future for behavioral systems analysis and relates it to early fictional work of Skinner (1948/1976), which describes the use of contingency management in creating and maintaining a successful utopian community. Reawakening the idea of horizontal systems viewpoints and the need for systems analysis, and as a means to promote potential future contributions to the experimental analysis upon which it was based, Abernathy (2009) stresses the importance of organizational contingencies and interactive effects occurring at all levels. Though Skinner's *Walden Two* was a fictional account of behavioral technology's presumed application, the apparent applicability should not be lost in translation as foci of

research interests continue to morph into consumer behavior analysis (Foxall, 2010; Hantula & Wells, 2010) or other recent trends.

## The Nature of Human Service

Caregivers of consumers in human service agencies may consist of one person, or many people, but all share the common characteristic as someone upon whom the consumers of services inherently rely to respond appropriately given various life encounters (Riley & Frederikson, 1984). Caregivers of individuals with developmental disabilities often consist of a team of medical and clinical therapists, few or many residential direct care staff, and members of the consumer's immediate family (or a state-designated caregiver, hired by and paid for with federal or state funds) (Odom, Horner, Snell, & Blacher, 2007; Reid & Parsons, 2006). The demonstrable range of services deemed appropriate for a consumer and their family, and execution of service delivery to individuals with disabilities becomes apparent, especially when one considers the implications surrounding the fact that consumers may potentially interact with a minimum of five different caregiving individuals on any given day (potentially more if the consumer resides full time in the agency providing 24-h services). Caregivers may even diverge further according to an array of trait variables that relay crucial information to relevant others in the lives of consumers. Caregiver traits may be categorized and described in terms of experience level, knowledge of the consumer's needs, educational influence on the expected and demonstrated comprehension of caregivers, and degree to which the caregiver demonstrates motivation to provide services in the client's best interests (Odom et al., 2007; Reid & Parsons, 2006; Sulzer-Azaroff & Mayer, 1991). The nature of human services staff and the nature of human service tasks are often at fault for an unwarranted decline in service quality rendered, and outcomes for obtaining the personally identified goals become meager, unlikely to be met given such expectations (Reid & Parsons, 2006).

## Behavioral Challenges Faced by Consumers and Caregivers

Individuals with disabilities often present some level of maladaptive behavior associated with consumer-specific functional limitations impeding on consumer livelihood and expectations for habilitation throughout the course of treatment. Self-injurious behavior, aggressive behavior, impulsive decision-making, and various other maladaptive behaviors commonly exhibited by individuals with intellectual and developmental disabilities require precise definition and measurement, and further, sufficiently effective and least restrictive behavioral support plans to ensure the consumers are subjected to least potential harm, through implementation of interventions which properly address the varying issues as they arise. These and other features shared with populations served by human service agencies provide rationale for thorough support planning, regardless of the severity or frequency upon which the behaviors occur, and the organizational system must therefore demonstrate some preplanned level of preparedness upon which responding to emergencies may rely. For this reason, proper planning and support for the unexpected lay at the forefront of any operation, and the need for a solid infrastructure becomes more apparent.

## Constructing a Support Plan

One essential component of organizational preparedness includes the construction of predetermined responses to behavior as it occurs, which anyone and everyone in the consumer's life may adopt and implement. Behavioral targets may include adaptive features, identified as more likely to advance a client toward relevant goals. Contrastingly, maladaptive behaviors (self-injury, impulsive decision-making, disruptive behavior, and others) are more often identified for behavioral reduction due to the implications of engaging in such behavior for the consumer and those who interact with that individual. Behaviors that impede on the implementation of