

# The positive deviance approach: Challenges and opportunities for the future

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## Abstract

The positive deviance (PD) approach offers an alternative to needs-based approaches for development. The “traditional” application of the PD approach for childhood malnutrition involves studying children who grow well despite adversity, identifying uncommon, model practices among PD families, and designing an intervention to transfer these behaviors to the mothers of malnourished children. A common intervention for child malnutrition, the so-called “hearth,” brings mothers together to practice new feeding and caring behaviors under the encouragement of a village volunteer. Hearths probably work because they modify unmeasured behavioral determinants and unmonitored behaviors, which, in turn, result in better child growth. Some health outcomes require a better understanding of behavioral determinants and are not best served by hearth-like facilitated group skills-building. We propose testing “booster PD inquiries” during implementation to confirm behavioral determinants and efficiently focus interventions. We share early experience with the PD approach for HIV/AIDS and food security. The attributable benefit of the PD approach within a program has not been quantified, but we suspect that it is a catalyst that accelerates change through the processes of community attention getting, awareness raising, problem-solving, motivating for behavior change, advocacy, and actual adopting new behaviors. Program-learners should consider identifying and explicitly attempting to modify the determinants

of critical behavior(s), even if the desired outcome is a change in health status that depends on multiple behaviors; measure and maintain program quality, especially at scale; and creatively expand and test additional roles for PD within a given program.

**Key words:** positive deviance, asset-based development, behavioral determinants, program quality, program scale

## Introduction

Community health programs frequently have a “needs-based” approach, which relies on scientific methods or dialogue to identify what a community lacks (or needs) for better health. Interventions based on the findings of needs-based inquiry can fail because local populations are unable to obtain or maintain what has been identified as missing. The growing awareness of the limitations of needs-based approaches to improve people’s health and well-being has sent the development community in search of new models.

“Assets-based” approaches like positive deviance (PD) offer an alternative. Related methods, strategies, and approaches include appreciative inquiry [1] and assets-based community development [2, 3]\*, among others. As a group, they capitalize on a type of “resilience” [4, 5]—not necessarily “bouncing back from hardship” [6] or “growing stronger through disruption” [7], but thriving “in a hostile environment [8].” The key advantage of assets-based approaches is that they focus on *what resources the communities or families already have* that can be leveraged to improve health, rather than what they do not have. Non-governmental

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\* Mathie A, Cunningham G. From clients to citizens: asset-based community development as a strategy for community-driven projects. Occasional paper, [synergos.org/globalphilanthropy/02/abcdoverview.htm](http://synergos.org/globalphilanthropy/02/abcdoverview.htm).

organizations,\* USAID cooperating agencies\*\* [9], and corporations [10, 11], among others, have shown interest in the PD approach as a promising innovation that capitalizes on solutions that already exist.

**What is positive deviance?**

Positive deviance in health and development means that some people exhibit good outcomes “against the odds.” Within the international health community, the PD approach has been most commonly applied to “the study of children who demonstrate above-average growth in impoverished environments” [12]. Over the past decade, programmers have integrated PD-informed programs into a number of large-scale multifaceted interventions [13, 14]. Save the Children’s (SC) community empowerment and nutrition program (CENP) in Viet Nam [15] is one example of these.

The PD approach defies simple classification. It guides formative research through the positive deviance inquiry (PDI), mobilizes communities through active participation, reflection, and planning, and changes behavior through the transfer of skills through encouraging target audiences to model PD practices.

\* Nutrition Working Group, Child Survival Collaborations and Resources Group (CORE). Positive deviance/hearth: a resource guide for sustainably rehabilitating malnourished children. Washington, D.C.: in preparation for publication.

\*\* The use of the positive deviance approach in community nutrition, Arlington, Va., USA and Hanoi, Viet Nam: the BASICS-II Project and Save the Children Federation/US, 2002 (orientation videotape).

Traditionally, the objective of the PDI has been to identify the specific practices that, in spite of harsh conditions (e.g., poverty), allowed one group (i.e., the positive deviants) to have better outcomes than the majority. These practices may be well-known “emphasis” behaviors [16] (i.e., exclusive breastfeeding) or local adaptations of key behaviors (i.e., pureed shrimps and crabs for 9 to 12 month old children as high-quality complementary foods). In the next section we describe the importance of clearly defining the outcomes and mechanisms when using the PD approach and show how these may differ when the PD approach is applied to new areas outside of child growth.

Three sequential groups of determinants describe the causal pathway to desired health: risk factors, enablers, and behaviors (fig. 1). Risk factors, the most common underlying determinants, are often socioeconomic conditions that are not easily or quickly modifiable. Enablers are determinants of behavior, such as knowledge, skills, confidence, norms, or availability of time or necessary commodities. Behaviors are evidence-based practices associated with better health and survival. Health status is usually measured by indicators of morbidity, mortality, or fertility. Few programs have attempted to measure all of the steps in this causal pathway. For example, SC found that PD-informed interventions improved child nutritional status even though the program did not monitor or evaluate behavior change [17–19]. This “traditional” application of PD (fig. 1, row 1) involved identifying low socioeconomic status families with well-nourished children (i.e., “PD families”), conducting PDIs to determine the

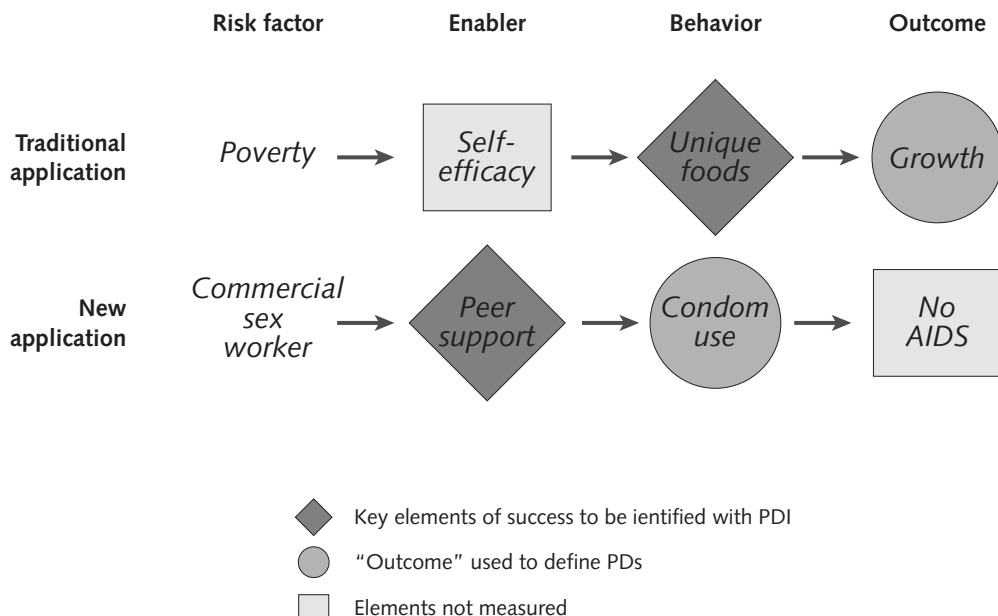


FIG. 1. Illustrative comparison of “traditional” and new positive deviance applications

likely behaviors responsible for the child's good growth, using these behaviors to inform behavior change interventions that included skills transfer, and monitoring the growth of the community children. This approach neither assessed enablers nor monitored behaviors.

### Beyond nutrition

The encouraging results in applying the PD approach to child growth [17–20] have prompted applications of PD to other programming contexts, including newborn care in Pakistan [21], breastfeeding in Viet Nam [22], and birth outcomes in Egypt [23]. The potential to apply PD to areas outside of nutrition has prompted a review of the method to better understand what the PD approach is, what it does, and how it works. If PD is to be used successfully in other health and non-health settings, the development community should strengthen the conceptual underpinnings of the approach, particularly by looking at not only outcomes, but also at behaviors and what influences them, examine issues related to quality at scale in PD program replication, and clarify and possibly expand the role of PD within programs. The purpose of this paper is to begin to address these issues and provide a glimpse into fresh PD applications.

### Behavioral determinants

Health status rests on behavior. Indeed, every public health intervention has one or more behavioral components. To date, traditional PD-informed programs have focused on a health status outcome, i.e., better child growth. Measuring levels of morbidity, such as the proportion of children who are malnourished, has advantages and disadvantages. Advantages include that it is the “bottom line” that will gain the attention of policy makers and donors, that it can sometimes be more confidently measured than intermediate behavioral outcomes, such as reported practices, that nutritional status, especially growth, represents the final common pathway of many, complex, inter-related phenomena, and that this utilitarian perspective does not risk discouraging useful traditional practices that programs aiming to modify specific behaviors might jeopardize.

To date, the traditional PD approach has promoted multiple behaviors, which, though not monitored, likely result in a readily measurable health status change, i.e., weight gain in a malnourished child. PD findings can support programs in various ways, including refinement of current activities, informing an intervention specifically to promote the discovered skills (i.e., hearth [9, 20, 24]<sup>B,C</sup>), or even advocacy. The PD approach for nutrition often uses a hearth activity to rehabilitate malnourished children. However, the PD

approach does not require a hearth, nor does a hearth require the PD approach. Hearth involves groups of caregivers who practice skills and master active feeding, meal planning, food preparation, food handling, and hygiene facilitated by volunteer trainers and each other. The apparent success of the PD-hearth combination [17–20] may thus be due to providing opportunities for caretakers to observe each other practice new behaviors, which actually help their children gain weight. In this way, caregivers establish new norms (e.g., “Look how much my baby can actually eat, I didn’t think his stomach was that big!”), boost each other’s confidence through directly observing improved child mood and growth, and gain new skills and knowledge. Hearths may have succeeded in part because the children received more food, but the sustained impact [19] that has been found with these programs suggests that caretakers continued to practice improved behaviors even after the formal gatherings ceased.

Disadvantages of focusing solely on growth, morbidity, or mortality outcomes, however, include unhealthy practices may be over-looked or even affirmed (i.e., the well-nourished infant who has yet to fall ill despite bottle and cassava feeding), morbidity may be more difficult to reliably measure than behavior, some inevitable health outcomes (e.g., AIDS-related illness or death) may not be immediately evident despite years of unhealthy behavior and missed opportunities for intervention, and some programs for extremely high risk individuals (e.g., low birthweight newborns) will lose credibility given the inevitable death of some despite optimal practices.

The rationale to focus on behaviors rather than health status as the outcome of interest is, thus, strong. This approach varies from the traditional PD application in that it involves identifying high-risk individuals who practice certain behavior(s) (and perhaps high-risk individuals who do not), conducting in-depth PDIs to learn what enables these “doers” to practice optimal behavior(s) (and possibly what barriers impede their “non-doer” counterparts), and using these insights to develop interventions (often hearths) that help their neighbors adopt the new behavior(s); and monitoring levels of reported behavior(s) (fig. 1).

The hearth approach, however, is not feasible or ideal for all health outcomes. On one hand, their facilitated group-learning format is a powerful means to simultaneously modify likely determinants of several non-sensitive behaviors that caregivers will practice repetitively at home. On the other hand, it may not apply to brief “demographic moments” (i.e., the immediate newborn care period), to one-time behaviors (i.e., timely vaccination), or to sensitive topics (i.e., family planning). For many non-nutrition PD applications, practitioners must better understand behavioral determinants and consider a range of program design options. For exam-

ple, PD as applied to condom use (fig. 1, row 2) seeks behavioral results, assuming an association between improved behavior and better health status.

Two approaches to program design are possible. One can provide direct opportunities to develop self-efficacy [25], a key determinant of behavior, or one can identify specific determinants and tailor an intervention. The former approach rests on the observation that at least three conditions promote self-efficacy (personal communication, P. Engle, 2001): persuasion that one can perform a behavior, vicarious experience of success, and positive feedback for performance. The PDI discovers examples of vicarious success. If the follow-on program capitalizes on this by providing more success plus gentle persuasion and positive feedback, this may suffice for achieving many health outcomes. Acting one-self into a new way of thinking may be easier than thinking one-self into a new way of acting.

The second program design approach calls for a detailed understanding of enablers to design an effective intervention. This could be accomplished through more in-depth PDIs that compare doers and non-doers among the same high-risk group perhaps using “elicitation procedures” [26, 27] or through “booster PDIs,” (see below) currently being pilot-tested by SC in Pakistan for newborn care.

In traditional applications of PD, there is just one PDI—during the initial program design. Programs focusing on a specific behavior as the end-point may benefit from repeating the PDI. These so-called “booster PDIs” are on-going inquiries into the enabling factors that allowed individuals participating in a PD-informed program to change their behavior. The primary aims of booster PDIs are to confirm the enablers, identify new enablers, and increase the efficiency of interventions by supporting the most relevant enablers. Programmers must be realistic, however. Booster PDIs could become labor-intensive, requiring not only on-going PDIs but also home visits and behavioral surveillance to identify new adopters of the behavior. On the other hand, informal identification (i.e., not surveillance-based) of a few new adopters (i.e., over a brief time period in a limited location) may suffice.

## Quality at scale

Another area to strengthen is the monitoring of PD-informed program quality. Prospective studies of the CENP in Viet Nam documented uneven implementation quality [28, 29]. A quality monitoring system with data gathering, review, and response would have led to stronger hearth sessions and probably even better program outcomes in the studied program.

Defining “quality indicators” is clearly a critical step for scaling up any model since quality is often jeopard-

ized as scale increases. Recently, the BASICS II project evaluated the scaled-up PD nutrition program in Viet Nam [30]. Overall, the program was deemed a success in terms of reaching over two million people, but the evaluation showed that the quality of interventions decreased as the program expanded beyond the initial districts. The review noted one gap in particular: “lack of a mechanism, including indicators, to assess training quality, the central function of the scaling-up process.” Assessing both the cost-efficacy of the original PD model and the cost-effectiveness of scaled-up models is important. The latter ratio may change unpredictably due to offsetting trends in both costs and effects. For example, some local program costs will rise in proportion to the number of beneficiaries, while other costs will rise less rapidly due to economies of scale (a trained district management team can oversee implementation in additional communes without retraining). Although program effectiveness risks attenuation due to the challenge of assuring program quality at scale, it may, in fact, be more effective once a critical mass (a “tipping point” perhaps) of the population has adopted a new behavior. An important cost determinant in all such calculations is the ideal quantity of labor-intensive activities such as the PDI, booster PDI, PD-informed behavior change events, and PD-informed community mobilization sessions. On nearly untapped application for the PD approach, advocacy, can potentially reach many at low cost (see below).

## Role of positive deviance

No paper in this supplement isolated the contribution of PD to programmatic outcomes. We are unaware of any evaluations designed to compare near identical projects, one with and one without the PD component. Thus, the quantitative attributable benefit of the PD-related activities remains unknown. However, anecdotes from advisors, managers, field workers, and beneficiaries insist that PD “works.”

One can comment, however, on aspects of the role of PD-related activities within the ViSION project [28]. An evaluation [29] of the quality of the CENP implementation revealed that training for the PD inquiry was complete in theory, but its implementation was imperfect in applying household selection criteria, duration, and data gathering methods. Moreover, delivery of health messages informed by the PDIs was low, but time spent demonstrating, as opposed to talking about, behaviors was most likely well spent [28]. On balance, the full potential of PD was unlikely achieved in this iteration.

Moreover, the CENP was designed with only a modest role for PD from the outset, limited to PDIs at the commune level to identify model behaviors that

informed (along with other UNICEF messages) health behavior change activities. If PD is truly a dynamo of change, more ambitious roles seem justified. These could include more baseline PDIs, PDIs exploring behavioral determinants [26], PDIs with larger samples [22], more creative use of PD individuals, culture permitting, booster PDIs to study new adopters, and advocacy, among others. Admittedly, PDIs are relatively expensive in time, but one wonders how generalizable a given PDI is. More inquiries and/or contact with model PD families and caretakers would likely both improve the quality of the findings and mobilize more community members. Some cultural groups discourage individual recognition either positively or negatively. When appropriate, programs should explore PD individuals or families playing public roles to encourage the adoption of model behavior. Short of enlisting the individuals themselves, specific case histories could prove motivating. The booster PDI has been elaborated above.

An underutilized role for the PD approach is advocacy by the PD individuals themselves. The Center for Population and Development Activities (CEDPA) used this approach for experimental work against female genital cutting (FGC) in Egypt. They reported a 100% increase in advocacy skills among 40 members of partner non-governmental organizations, identification of over 100 PD individuals (fathers, mothers, girls, and clergy), and most importantly the eradication of the practice in two villages over the following two years.\* Moreover, most PD individuals initiated advocacy activities in their neighborhoods through peer education or presenting their testimony at community awareness meetings. Two factors together enabled PD adults to refrain from FGC: the negative psychological impact of the practice (i.e., the daughter's sense of betrayal and loss of trust in parents) and the successful search for validation of personal conviction by medical or religious figures. This advocacy effort ultimately reached a national audience when a young circumcised PD girl told, on national television in 2000, how she successfully implored her mother not to circumcise her younger sister and urged her girlfriends to do likewise.

Thus, the role of PD in social and behavior change remains incompletely exploited and understood only in part. The best opportunities to study the PD-informed program might occur where the role of PD is creatively pushed, where the implementation is strengthened (i.e., an efficacy, not an effectiveness, study [31]), and where multiple roles can be assessed. Such PD roles could include, among others, gathering information through the PDI, catalyzing and focusing community

attention through its novel premise, stimulating self-reliant problem-solving, changing behavior, interpersonal and community advocacy, and mobilizing communities in a sustained way through the preceding plus demonstrable results.

## New contexts

In addition to the nutrition and newborn applications of PD reported in this supplement, SC is expanding PD work in other new technical areas.

## HIV/AIDS

In Viet Nam, SC/US and a local non-governmental partner conducted a workshop in Lang Son in January 2002 to train 11 peer educators and to conduct a PDI to inform HIV/AIDS programming [32]. Of the 11 peer educators, some living with HIV/AIDS, six had been or currently were commercial sex workers (CSW), and five had been or currently were injecting drug users (IDU). The CSW peer educators identified PD behaviors from five CSWs, such as successfully negotiating condom use by telling clients that she was concerned about the customer's family getting ill, and if no condom were readily available, telling the customer that she wanted to put on something more attractive for him, while requesting that a co-worker go to the pharmacy and buy condoms. IDU peer educators also identified PD behaviors from six IDUs including: bending the needle after use to prevent re-use and sniffing the drug rather than injecting if no clean syringe were available. Both groups agreed that these behaviors could be shared with and adopted by their larger communities. The IDU peer educators agreed to follow-on group meetings, and CSW peer educators stated that they would share the PD strategies and behaviors through role play with others. Although preliminary, this initial PDI suggests that the approach applies to this programmatic context because there are successful behaviors to control HIV/AIDS that already exist within high-risk groups, and persons at risk could profit if given an opportunity to practice the requisite skills.

This example illustrates a modification of stratification by risk, in that programmers did not seek "high-risk individuals." Rather, they assumed that every member of the CSW and IDU communities was vulnerable. The aim was not to identify practices from these communities that could be transferred to low risk settings as in PD for nutrition where practices from worse off PD families can, in theory, be easily adopted by better off neighbors. Indeed, illicit drug practices are unlikely relevant to low-risk groups. On the other hand, strategies for consistent condom use might have wider applicability although crafting an acceptable strategy for low-risk groups using insights from CSWs gives one

\* Final end of project report from Prowid (promoting women in development), CEDPA, Cairo, 1999.



pause. Importantly, although this pilot PDI identified helpful strategies and confirmed that model practices do occur among these groups, *enablers* of the given behaviors remain incompletely understood.

### Food security

SC will apply PD to addressing food insecurity in both Africa and Latin America. PD will inform behavior change communication strategies encompassing both nutrition and food security through examining food availability, access, and utilization. In Mozambique SC uses good nutritional status (height-for-age Z score) of children under 36 months of age to identify a food secure family. The teams use PDIs to examine intra-household food distribution, diversity of food consumption, caring and coping strategies in response to economic shocks, and practices to avoid or greatly reduce the “hungry season.” Preliminary work indicates that household behaviors can be adopted to diminish the hungry season and enhance food availability (i.e., increasing food reserves and storage techniques), to optimize food access and production (i.e., focus on drought-resistant crops), and to encourage better food utilization (i.e., adding PD foods, such as crushed peanuts and cashews, to the traditional weaning foods, like

cassava or maize porridges and banana). Challenges to using PD in this context include addressing issues of donated foods and chronic, rather than acute, malnutrition.

### Conclusion

The PD approach to improving health and development outcomes continues to gain interest and application. Our experience and that of others support the utility of PD-informed programs in new settings. As we have presented above, however, application of PD to new domains requires a clear understanding of the key conceptual elements, namely risk, enablers, behaviors, and outcomes. Before initiating a PD-informed intervention, we encourage program designers and theorists to reach agreement on how the elements of the behavior(s) and/or outcome(s) that they seek to modify fit within this framework.

We have identified a number of questions related to PD-informed programs for both programmers and researchers (table 1). These issues can be grouped according to the conceptual basis for the PD approach, role of PD in PD-informed programs, and the quality at scale. Indeed, future pilot-tests would do well to

TABLE 1. Current positive deviant (PD) issues for programmers and researchers

Programmers	Researchers
Conceptual basis of PD	
What is the desired outcome: health status or behavior? Will enablers be measured? Who will measure enablers? What comparison will be made: PD vs. “community norms” or PD vs. high-risk non-doer? Will high-risk doers be chosen from the target population (as in PD/nutrition) or will the whole target population be high-risk (as in PD/HIV)? What behavioral or other outcomes are amenable to a hearth-like approach?	How does PD differ from resiliency and other assets-based approaches to development? What is the ideal sample size for various PDI comparisons? How valid and generalizable are PDI findings? What is the relative efficiency of interventions stressing self-efficacy without a detailed understanding of behavioral determinants vs. interventions tailored to a detailed understanding of determinants?
Role of PD	
What range of roles for PD will be considered? Is a role for PD individuals or identified PD cases feasible? What intensity of PDIs is affordable? Are booster PDIs feasible? Who will do them? For repeated interventions (like hearths), how can message boredom be avoided?	Does PD work? When and under what circumstances? How does PD work? How does PD compare with other assets-based approaches in achieving various outcomes? What is the cost-effectiveness of various intensities of PDI? What criteria justify applying PD? What is the cost-effectiveness of PD-informed population-level advocacy vs. community-level interventions?
Quality and scale	
How will performance-based standards be assured? What indicators of quality will be used? What system will be devised to measure and respond to quality indicators? As the training cascade lengthens with increasing scale, what core quality approaches will be stressed?	What approaches to quality are most cost-effective? What is the association between quality and scale? What is the ideal intensity of PD activities within a homogeneous population?

continue a partnership among programmer-learners, epidemiologists, and behavioral scientists. We urge them to evaluate and document novel implementations of PD so that we may continue to learn about and strengthen this approach.

In summary, use of the PD approach remains promising. While this approach is certainly not necessary to affect behavior change, we suspect that its most important role may be that of a catalyst that initiates, or possibly accelerates, social and behavioral change through the processes of community attention getting, awareness raising, problem-solving, motivating

for behavior change, and the actual adopting new behaviors. The approach may well evolve as a standard component of effective health and development programming in the future.

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