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Glossary

ADB	Asian Development Bank
ANC	Antenatal Care
APIS	Annual Poverty Indicator Survey
ARI	Acute Respiratory Infection
AusAID	Australian Aid
BCG	Bacillus Camette-Guerin, vaccine for tuberculosis
BHS	Barangay Health Station
BHW	Barangay Health Worker
CCT	Conditional Cash Transfer
CVS	Compliance Verification System
DepEd	Department of Education
DOH	Department of Health
DSWD	Department of Social Welfare and Development
FDS	Family Development Session
FIES	Family Income and Expenditure Survey
FY	Fiscal Year
IE	Impact Evaluation
IP	Indigenous People
NAPC	National Anti-Poverty Commission
NDHS	National Demographic and Health Survey
NFA	National Food Authority
NHTS-PR	National Household Targeting System for Poverty Reduction
NSCB	National Statistics Coordination Board
MDGs	Millennium Development Goals
MIS	Management Information System
MNCH	Maternal, Neonatal, and Child Health
M&E	Monitoring and Evaluation
Pantawid Pamilya Pilipino Program	Philippines CCT program, the Pantawid Pamilya program formerly known as 4Ps
PhilHealth	Philippines Health Insurance Corporation
PhP	Philippine Peso
PMT	Proxy Means Test
PNC	Postnatal Care
RCT	Randomized Control Trial
RD	Regression Discontinuity
RHU	Rural Health Unit
SWS	Social Weather Stations
WB	World Bank

Executive Summary

The *Pantawid Pamilyang Pilipino Program* provides cash transfers to poor households, conditional upon investments in child education and health as well as use of maternal health services. The objective of the program is to promote investments in the education and health of children to help break the intergenerational transmission of poverty, while providing immediate financial support to the household. Poor households are identified by the National Household Targeting System for Poverty Reduction (NHTS-PR) based on a transparent poverty targeting mechanism, using a statistical model [1] to estimate income. Households with estimated income below the poverty line are classified as poor. From that database of poor households, *Pantawid Pamilya* identifies and selects eligible households who have children 0-14 years of age and/or a pregnant woman. These households then receive cash grants every two months ranging from PhP 500 to PhP 1,400 per household per month, depending on the number of eligible children.

Since its launch in 2008, *Pantawid Pamilya* has been scaled up rapidly and has become the cornerstone of the Government's social protection efforts. This conditional cash transfer (CCT) program has been an important part of a renewed effort to address chronic poverty and meet the Millennium Development Goals (MDGs) to eradicate extreme poverty and hunger, achieve universal primary education, promote gender equality, reduce child mortality, and improve maternal health (DSWD, 2009). By May 2012, the program covered approximately 3 million households. It accounted for half of the Government's expenditures on national social protection programs in 2011.

The specific objectives of the program are to: (i) keep children in school, (ii) keep children healthy, and (iii) invest in the future of children. It reflects the Government's commitment to promoting inclusive growth by investing in human capital to improve education and health outcomes for poor children and pregnant women. The program is based on the premise that poverty is not about income alone but is multi-dimensional, and factors such as access to basic social services and social environments matter.

A carefully designed, comprehensive, and rigorous impact evaluation was conducted, as the first of a three-wave evaluation study to assess the program's initial effectiveness in achieving its objectives. As part of the Government's commitment to evaluating its development programs, an impact evaluation for *Pantawid Pamilya* was designed and implemented from the very initial stages of program planning. The study was designed to represent the first implementation phase (known as Set 1 which took place between June 2008 and April 2009) of the program, since the program's scale-up plan was not yet in place at the time of study design.

This report presents the findings from an analysis that assessed program impact by comparing outcomes in areas that received *Pantawid Pamilya* with outcomes in areas that did not receive the program. The impact evaluation applied two analytical methods: (i) Randomized Control Trial (RCT), which compared randomly assigned program areas and non-

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[1] Known as Proxy Means Testing (PMT).

program areas to assess program impact, and (ii) Regression Discontinuity Design, which compared the outcomes of poor households who received the program with similar poor households just above the poverty line. This report presents the findings from the RCT component only. It should be noted that although 2.5 years of program implementation is generally considered enough time to observe impacts on short-term outcomes, it is not long enough to assess impacts on long-term outcome measures.

The findings of the impact evaluation support administrative and other assessments[2] that have found that *Pantawid Pamilya* is reaching most of its key objectives. The impacts found through this study are comparable to the levels of impact found in other CCT programs around the world at this stage of program maturity, particularly in terms of the program's achievements in improved health service use and school enrollment.

Findings of the study indicate that, overall, the program is meeting its objective of helping to keep poor children in school, by increasing enrollment among younger children (3-11 years old) and increasing attendance among 6-17 year olds. The study found higher rates of school enrollment among children 3-11 years of age in the beneficiary households (by 10 percentage points for 3-5 year olds and by 4.5 percentage points for 6-11 year olds), compared to poor households who did not receive the program. In particular, the program has been successful in boosting the enrollment of primary-aged children (6-11 years old), helping to bring about near universal enrollment of 98 percent enrolled in school among this age group[3]. Considering that this study group only includes poor children, this achievement is highly commendable. School attendance improved for all age groups across the beneficiary households, except for the youngest preschool/daycare age group.

However, the findings suggest that the program has not had a significant impact on increasing enrollment among older children aged 12-17 years old. The program was not explicitly designed to improve schooling of children above age 14, given that is the age limit for education grants. However, the program was unable to even improve enrollment of children 12-14 years of age, who are currently covered under *Pantawid Pamilya*. Thus, the program as currently designed is unable to keep older children in school, although it is also likely that subsequent waves of the impact evaluation may find improvements in school enrollment among children of 15 years old and above as the cohorts of Pantawid beneficiaries grow older. At the same time, the finding also implies that program should consider expanding coverage to older children, and also reconsider the current five year limit of program eligibility, if long term human capital investments are to be sustained.

The program was found to be meeting its objective of helping to keep poor children healthy. The program has helped improve the long-term nutritional status of younger children (6-36 months old), a positive impact not seen in other CCT impact evaluations at such an early stage of

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[2] Studies include those that looked at program impact on education by Chaudhury and Okamura (Chaudhury & Okamura, 2012) and Manasan (Manasan, 2011).

[3] In this study, school enrollment is defined by age group and not by DepEd normative age as the CCT program monitors school attendance of children 3 years old to 14 years old receiving the education grants, regardless of the level of school or grade the child is attending.

program implementation. The improvement was a 10 percentage point reduction in severe stunting [4] (which may reflect a combination of factors such as better maternal care and environment during pregnancy and after delivery as a result of increased antenatal and postnatal care) compared to barangays that did not receive the program, where 24 percent of young children (6-36 months old) were severely stunted. This improved long-term nutritional status was achieved through the program enabling parents to provide better care for their children in a consistent manner and feed their children more protein-rich food such as eggs and fish. Reduction in severe stunting among this young age group is expected to have strong long-term benefits, as stunting in the first two years of life is known to lead to irreversible damage including lower educational attainment, reduced adult income, and decreased offspring birth weight (Cesar G Victora, 2008). The program has also encouraged poor women to use maternal and child health services such as antenatal care, postnatal care, regular growth monitoring, and receipt of Vitamin A and deworming pills. In addition, it has helped increase healthcare-seeking behaviors among beneficiaries when their children become ill.

The program is also achieving its objective of enabling poor households to increase their investments in meeting the health and education needs of their children. *Pantawid Pamilya* is changing the spending patterns of poor households, with beneficiary households spending more on health and education than poor households who had not received the program. The study also found that beneficiary households spent less on adult goods such as alcohol and that the program may have contributed to increased savings among beneficiary households.

Although the study found that the cash grants were reaching beneficiaries, the study did not find an overall increase in per capita consumption among the poor benefiting from the program, although there was some evidence that poor households are saving more in certain provinces. The lack of impact on mean consumption is not unusual for CCT programs at a relatively early stage of implementation with programs finding impact on mean consumption as the program matures. The estimated per capita consumption per day reported by the sampled households was PhP 46 per day in both program and non-program barangays, while program beneficiaries in the study reported receiving PhP 5 per day (equivalent to US$ 0.11 a day)[5], representing approximately 11 percent of the households' per capita consumption. Internationally, the largest transfer amount was in Nicaragua with the transfer representing about 30 percent of consumption, Mexico about 20 percent of consumption, and Brazil about 8 percent of consumption (Fiszbein, et al., 2009). Therefore, there is a wide gap between the benefit amounts beneficiaries are eligible for—an estimated 23 percent of income, which is relatively generous—and the amounts that beneficiary households actually receive, which are relatively small compared to those in most other CCT programs around the world. This gap could be minimized by working on three areas: improving beneficiaries' compliance rates to program conditionality; regularly updating program database to reflect schools and health facilities

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[4] Measured as height-for-age <-3SD applying the WHO Child Growth Standard (http://www.who.int/childgrowth/software/en/) accessed March 9, 2012

[5] The reported amounts received from *Pantawid Pamilya* by beneficiary households are approximately the same as those reported by the program's operational process evaluation called Spot Checks (Social Weather Stations, July 2012).

beneficiaries attend to be effectively link meeting of conditionality to payments; and ensuring that all schools and health facilities report on compliance verification to the program.

The study found that *Pantawid Pamilya* has had positive impacts beyond its originally targeted objectives. For example, the program has contributed to increased coverage of the PhilHealth health insurance program. More poor households in areas that received *Pantawid Pamilya* reported that they were covered by PhilHealth, compared to their counterparts in non-*Pantawid* areas.

The findings of the impact evaluation also indicate that the program has not affected decisions to work or fertility rates. Despite the additional household income provided to poor families under *Pantawid Pamilya*, the impact evaluation did not find any evidence that beneficiary households worked less or made less effort to obtain more work. The study also found that women in the beneficiary households are not having any more children than women in non-beneficiary households.

Although the sampling was not designed to be statistically representative at the provincial level, the findings suggest that program impacts differ by province. The study found considerable differences in program impact on household socioeconomic, child health, and education outcomes across the four provinces. Across most outcomes, Negros Oriental consistently showed the most positive and strongest program impacts, while Lanao del Norte consistently showed weaker impacts than other provinces. Although there are several potential reasons for such differences such as effectiveness in program implementation, supply-side differences, and other socio-environmental factors, further research is needed to better understand the reasons behind these differences.

Although the impact evaluation found evidence of success on a broad range of outcomes, the results also revealed a number of challenges for *Pantawid Pamilya* going forward. *Pantawid Pamilya* is designed primarily to increase demand among poor families for education and health services. To achieve overall improvements in education and health outcomes, however, the study findings highlight the need to intensify efforts to improve access to and quality of health and education services for CCT beneficiaries. For example, although more children are visiting health centers to meet the program conditionality of regular growth monitoring, the study did not find an increase in childhood immunization coverage—although not uncommon in impact evaluations around the world—which suggests that health providers are not yet able to fully capitalize on the opportunities to provide basic child health services to CCT families.

The study findings point to a number of policy implications:

- To improve educational outcomes for older children, additional measures such as expanding the age of coverage of *Pantawid Pamilya*, increasing the grant amount for older children, and parallel supply-side interventions in the education sector are required;

- Currently households can be enrolled in the program for a maximum of five years. Expanding the duration of coverage will not only help to keep children in school longer, it will also help to increase household consumption;

- Linkages and coordination with health service providers need to be strengthened to ensure that beneficiary mothers and children receive the services they require and to ensure a continuum of care;

- It is important to consider ways in which other social programs that may have a long-term impact on the welfare of the poor could take advantage of *Pantawid Pamilya*'s strong and effective social mobilization structure; and

- To ensure more efficient program implementation, the reasons for differences in program impact across geographical areas must be better identified and understood.

Introduction

Background

1.   **Despite a modicum of economic growth (average 4 percent) over the past decade, the Philippines has not seen a reduction in the poverty rate.** In this regard, the Philippines is an outlier in the region, which has experienced a rapid decline in poverty. According to the latest available poverty data from the 2009 poverty estimates from the Family Income and Expenditure Survey (FIES), the Philippines is home to around 23.1 million poor people.[6] This figure is equivalent to over a quarter of the country's total population.

2.   **The Philippines also lags in progress toward key Millennium Development Goal (MDG) targets, primarily due to large inequalities in health and education outcomes between income groups and across regions.** Although the Philippines is currently on target to achieve the child mortality MDG, the poverty, universal primary education, and maternal and reproductive health goals are not likely to be achieved by 2015. In education, almost one-fifth of school-aged children in the lowest income quintile are not in school, compared to only 2 percent for the highest income quintile. Evidence also indicates that the geographic inequity observed in the 1990s has persisted into the 2000s and possibly worsened (World Bank; AusAID, 2012). Similarly, large income-related disparities can be seen in health. The skilled birth attendance rate among the highest income quintile is 94 percent, with 84 percent occurring in a health facility, compared to only 25 percent and 13 percent, respectively, among the lowest income quintile. Coverage of childhood immunization is only 70 percent among the lowest quintile, compared to 84 percent for the highest quintile (World Bank, 2011).

3.   **To help address these issues, the Government launched a conditional cash transfer (CCT) program called the *Pantawid Pamilyang Pilipino Program* (or *Pantawid Pamilya*), which has become the cornerstone of the Government's social protection efforts**. The program provides cash transfers to supplement the income of poor households in selected municipalities, subject to their compliance with conditionality related to education and health. The program was launched in February 2008 with 6,000 household beneficiaries in four pilot municipalities and two cities. Since then, the program has been scaled up rapidly, covering approximately 3 million households by May 2012. As of 2011, *Pantawid Pamilya* accounted for half of the Government's expenditures on national social protection programs, equivalent to 1.64 percent of total government spending net of debt financing (World Bank, forthcoming).

4.   **The overall objective of this CCT program is to help poor households with short-term consumption needs, while promoting investments in the education and health of their children to help break the intergenerational transmission of poverty.** The specific objectives of the program are to: (i) keep children in school, (ii) keep children healthy, and (iii) invest in the future of children. The program has been an important part of a renewed effort to address chronic poverty and meet the MDGs to eradicate extreme poverty and hunger, achieve universal primary

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[6] National Statistical Coordination Board website http://www.nscb.gov.ph/poverty/2009/table_7.asp (accessed December 5, 2012)

education, promote gender equality, reduce child mortality, and improve maternal health (DSWD, 2009), with the premise that poverty is multidimensional and not just about income alone. It embodies the Government's commitment to promoting inclusive growth by investing in human capital to improve education and health outcomes for poor children and pregnant women.

5.   **A rigorous impact evaluation was conducted to assess the program's effectiveness in achieving the program's specific objectives to date.** This study aims to address the question: is *Pantawid Pamilya* enabling poor households to (i) keep their children in school; (ii) keep their children healthy; and (iii) increase investments in their children? As part of the Government's commitment to evaluating its development programs, a three-wave impact evaluation for *Pantawid Pamilya* was designed and implemented from the very initial stages of program planning. The impact evaluation applies two analytical methods: Randomized Control Trials (RCT) and Regression Discontinuity Design. This report presents the findings from the RCT component of the study, which compared outcomes in areas that received *Pantawid Pamilya* with outcomes in areas that did not receive the program.[7]

Overview of the *Pantawid Pamilya* Program

Beneficiary Selection

6.   **Beneficiaries for *Pantawid Pamilya* are selected through a combination of geographical targeting and the proxy means testing (PMT) method, known as the National Household Targeting System for Poverty Reduction (NHTS-PR)**. Once program municipalities are defined, beneficiary households are selected through the PMT. The PMT, centrally designed in 2007 and implemented starting in 2008 by DSWD, predicts household income using observable and verifiable variables that are highly correlated with household income. Relevant variables for the PMT model were selected based on an analysis of two household surveys in the Philippines, the Family Income and Expenditure Survey (FIES) and Labor Force Survey (LFS) of 2003. Through NHTS-PR, households are categorized as poor if the predicted income is below the official provincial poverty threshold (Fernandez, 2012). Among the poor households in program areas, eligible households—those with a pregnant mother at the time of the Household Assessment by NHTS-PR and/or children between 0-14 years of age—are invited to enroll in the program by attending the community assembly.

Conditionality and Transfers

7.   **Beneficiary households must comply with specific health and education conditionalities in order to receive cash transfers through the program.** The conditionality, applicable to poor households with children 0-14 years of age or pregnant women, as well as the corresponding transfers are as follows:

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[7] The RD study covered an additional 4,156 households in five provinces and 23 municipalities, with the view that RD will be the main analytical method applied for *Pantawid Pamilya* in the future. The findings of the RD study will be presented separately.

8.   *Health Grants.* The health grant is aimed at promoting healthy practices, improving the nutritional status of young children, and increasing the use of health services. Poor households with children 0-14 years old and/or pregnant women receive a lump sum amount of PhP 500 (about US$ 11) per household per month. Households must fulfill the following conditions for the health transfer: (i) all children under the age of five follow the Department of Health (DOH) protocol by visiting the health center or rural health unit regularly; (ii) pregnant women attend the health center or rural health unit according to DOH protocol; (iii) all school-aged children (6-14 years old) comply with the de-worming protocol at schools; and (iv) for households with children 0-14 years old, the household grantee (mother) and/or spouse shall attend Family Development Sessions at least once a month.

9.   *Education Grants.* The education grant is aimed at improving school attendance of children 6-14 years old living in poor households in selected areas. The education transfer is PhP 300 (about US$ 6.50) per child per month (for a period of 10 months/year), for up to a maximum of three children. Beneficiary households receive the education transfer for each child as long as they are enrolled in primary or secondary school and attend 85 percent of the school days every month.[8]

10.   **Benefit levels for *Pantawid Pamilya* are relatively generous compared to those of other CCT programs around the world**. If a beneficiary household meets all the program conditions, the maximum amount of monthly household grants to which they are entitled is PhP 1,400 (US$ 32), estimated to be about 23 percent of the beneficiaries' income. Whether the beneficiaries will receive the full entitled amount is contingent on three factors: on the beneficiaries' meeting of program conditionalities; on schools and health facilities reporting their compliance; and on the program's ability to effectively capture the information through regularly updating the program database. The benefit levels of CCT programs in Latin America range from 5 percent of household income for Brazil's *Bolsa Familia* program in 2004 to 29 percent for Nicaragua's *Red de Protección Sosial* in 2000. The *Pantawid Pamilya*'s 23 percent level is similar to that of Mexico's *Opportunidades* Program in 2004 (Grosh, Ninno, Tesliuc, & A., 2008).

11.   **Once compliance with program conditions is verified, cash grants are distributed on a bimonthly basis through different modes of payment.** The disbursement of the cash subsidy depends on compliance with program conditions as verified through the Compliance Verification System (CVS). On a bimonthly basis, CVS forms are distributed to schools and health facilities where beneficiary children and mothers are enrolled and registered with the program. Schoolteachers and health facilities identify beneficiary mothers and children who have *not* complied with the conditionality for the reporting period. These forms are collected, then data is entered at the regional level and submitted to the national office where it is linked with the payment system. As of July 2011, in areas covered by the impact evaluation study, 43 percent of beneficiaries received their cash grants through ATM cash cards; 30 percent through Globe G-Remit merchants; 18 percent through Rural Bank; and 9 percent through over-the-counter payments at Land Bank branches.[9]

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[8] This translates into no more than three days of unjustified school absence per month.
[9] Social Welfare Development Reform Project, Aide Memoire, November 2011

Evaluation Methodology[10]

Evaluation Design

12.   **The *Pantawid Pamilya* was purposely designed to facilitate impact evaluation**. Given the centrality of *Pantawid Pamilya* as the pioneer social safety net intervention for the Philippines, it is critical to have rigorous empirical evidence on the causal impacts of the program on key outcomes. Monitoring and evaluation (M&E) has been embedded in the fabric of the CCT program in order to monitor the process regularly and improve the quality of program implementation. With the impact evaluation in mind, program intervention was rolled out in phases (Sets), and in some priority areas, intervention was postponed purposely so they could serve as "control" areas for the study. Several rounds of surveys were planned to allow for a rigorous impact evaluation.

13.   **The *Pantawid Pamilya* used the Randomized Control Trials (RCT) evaluation approach, which is considered to be the "gold standard" of evaluation methods.[11]** For social programs like *Pantawid Pamilya*, the most rigorous approach to impact evaluation assigns treatment/control status on a randomized basis. [12] An RCT estimates program impact by comparing outcomes among eligible households in the "treatment" localities—meaning those that received the program—with outcomes among households in the "control" localities who would have been eligible if the program had been in operation there. A prior statistical assessment ensured that the evaluation study included enough households to assess the impact of the program effectively (see Annex 2: Sample Size Estimation).

14.   **This evaluation examines the impact of *Pantawid Pamilya* on implementation sites in the first phase of the program, known as "Set 1" areas**. The Set 1 areas (see Annex 1: Sample Areas), which targeted about 376,000 households in 148 municipalities and 12 cities in 34 provinces, were among the first municipalities where *Pantawid Pamilya* was scaled up in 2008 and 2009.[13]

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[10] A more detailed description of the evaluation methodology used is provided in Annex 3: Evaluation Methodology.

[11] The targeting design of *Pantawid Pamilya* also enabled the use of another evaluation method known as Regression Discontinuity (RD), which could be applied to a wider population than the RCT localities. As mentioned above, this report presents the findings from the RCT method only, and the findings of the RD analysis are presented in a separate report (forthcoming).

[12] Rigorous evaluation demands that change in outcomes observed in study units (households, communities, or regions) that receive the program must be compared with a valid counterfactual that represents the status of the program beneficiaries had they not received the program. Randomization in the case of this evaluation ensured that all barangays in the study had equal chance of control or treatment status; therefore, the control barangays satisfied the conditions of a valid counterfactual comparison.

[13] Set 1 municipalities included the poorest municipalities according to the Small Area Estimates (2000) in the poorest provinces, according to poverty incidence estimated based on 2006 FIES data.

Survey Design and Implementation

15.   **The RCT impact evaluation survey was conducted in eight municipalities, covering a total of 3,742 households**. Households were selected based on four Sample Groups, according to their eligibility status. The four Sample Groups were defined using the NHTS-PR database as follows:

- 1,418 **Sample Group 1** households that were the poor households (below the PMT score) with children aged 0-14 or a pregnant mother at the time of the household assessment (the eligible group for *Pantawid Pamilya*);
- 1,137 **Sample Group 2** households that were the non-poor households (above the PMT score) with children aged 0-14 or a pregnant mother;
- 556 **Sample Group 3** households that were the poor households without children aged 0-14 or a pregnant mother; and
- 631 **Sample Group 4** households that were the non-poor without children aged 0-14 or a pregnant mother.

16.   **Sample Group 1 served as the main sample of households, designed to represent the poor eligible group for the program in the eight municipalities studied**. It was determined that a sample of 10 eligible households per barangay would provide enough statistical power to detect program impact (see Annex 2: Sample Size Estimation). Therefore, a sample size of 1,300 households was planned for the main RCT analysis. Sample Groups 2, 3, and 4 were sampled in the RCT areas to identify unexpected effects of the program among the non-target population living in program areas.[14]

17.   **The findings from Sample Group 1 shed light on the impact of *Pantawid Pamilya* on equally poor eligible households**. The only difference among these households is that some received the program because they happened to live in treatment areas, while some did not receive the program because they happened to live in control areas. Although no baseline survey was conducted, the randomization was successful as evidenced by roughly equal household characteristics as measured in the Household Assessment data collected in 2008 (Table 1).

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[14] The analysis of Sample Groups 2, 3, and 4 was also important for assessing the effectiveness of RDD as the analytical method for future evaluation rounds of the program. The households sampled in RCT areas therefore were sampled so that RDD analysis could also be conducted in addition to this RCT analysis. The impact evaluation also collected an additional sample of 4,156 households in five provinces for the specific purpose of conducting the RDD analysis. The findings of these analyses will be presented in a separate report (forthcoming).

Table 1: Characteristics of the Sampled Households at the Time of the Household Assessment in 2008 (Sample Group 1)

	Treatment Barangays	*Control Barangays*
# of households	704	714
Average # of household members	5.79	5.78
% of agricultural households	73.2	69.3
Average # of 0-5 year olds	1.18	1.10
Average # of 6-14 year olds	1.68	1.71
Average # of 15-18 year olds	0.50	0.54
Average estimated income (in log form) based on PMT in 2008	Php 9,141 (9.07)	Php 9,382 (9.09)

18.   **The distribution of sample households by province depended purely on the number of barangays in each of the eight municipalities (Table 2).** Of the 3,742 households sampled, 37 percent were in Lanao del Norte, 31 percent in Negros Oriental, 18 percent in Occidental Mindoro, and 13 percent in Mountain Province.

Table 2: Households Sampled, by Sample Group and by Province

Province	*Sample 1* *(Poor with eligible children)*	*Sample 2* *(Non-poor with eligible children)*	*Sample 3* *(Poor with no eligible children)*	*Sample 4* *(Non-poor with no eligible children)*	*Total*
Lanao Del Norte	559	367	236	233	1,395
Mountain Province	184	171	62	86	503
Negros Oriental	431	365	174	190	1,160
Occidental Mindoro	244	234	84	122	684
TOTAL	**1,418**	**1,137**	**556**	**631**	**3,742**

19.   **For each study site, key informants were also selected to provide information on the local environment and on the health and education services to which the study population had access**. In each municipality visited, the mayor's office, a Rural Health Unit, and up to three public high schools were surveyed. In each barangay visited, one barangay captain, one public elementary school, and one midwife were interviewed. In total, the key informants included representatives from 8 Rural Health Units, 149 schools, 130 midwives, 8 mayor's offices, and 130 barangay captains in the study sites. A summary of findings from information collected through these key informants is presented in Annex 7: Environmental and Supply-Side Factors in the Study Areas.

20.   **The study followed an ideal implementation schedule which allowed the treatment sites to be "exposed" to the program for 2.5 years.** The barangays were randomized into treatment and control groups in 2008, program implementation in the treatment barangays started in 2009, and the impact evaluation study was conducted in October/November 2011. This duration is generally considered to be enough time to see program impacts on short-term outcome measures but not enough time to show impacts on long-term outcome measures.

21.   **The "control group", poor localities where the CCT program was purposefully withheld for the purpose of this evaluation, started receiving the program immediately following the study in 2011.** This randomized rationing of phasing in the program was justified on the grounds that the available resources and administrative capacity were insufficient for reaching every eligible poor household in the Philippines at the same time. This is the reality in most countries, which have to phase in targeted social programs under resource/capacity constraints. The program designers/administrators were forward-looking in their ability to transform a constraint into a learning opportunity that could inform improvements to program implementation going forward.

Main Findings

22.   **This section summarizes the main findings of the RCT impact evaluation.** First, it describes the impacts of *Pantawid Pamilya* on the program's targeted education, health, and socioeconomic indicators. It then summarizes some of the impacts of *Pantawid Pamilya* beyond its directly targeted outcomes. In addition, the differential impacts of the program across geographical areas and various groups of interest are discussed.

Program Impact on Targeted Indicators
Is the Program Keeping Children in School? - Program Impact on Targeted Education Indicators

23.   **The study found that *Pantawid Pamilya* has a strong impact in school enrollment for young children[15].** Among preschool- and daycare-aged children (3-5 years old), enrollment was 10.3 percentage points higher among poor children in *Pantawid* barangays compared to the baseline of 65 percent in non-*Pantawid* barangays (Table 17 in Annex 8 and Figure 1). Similarly, school enrolment among elementary school-aged children (6-11 years old) in *Pantawid* barangays was 4.5 percentage points higher than the control group baseline rate of 93 percent (Table 18 and Figure 1). *Given the high elementary school enrollment rate already achieved at baseline, the increase in school enrollment achieved for this age group suggests that the program has been able to reach near universal enrollment among this age group*. These findings are consistent with the higher school completion rates and lower dropout rates reported by the 120 elementary schools in the study sites.

Figure 1: Percentage of Children Enrolled in School by Age Group

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[15] In this study, school enrollment is defined by age group and not by DepEd normative age as the CCT program monitors school attendance of children 3 years old to 14 years old receiving the education grants, regardless of the level of school or grade the child is attending.
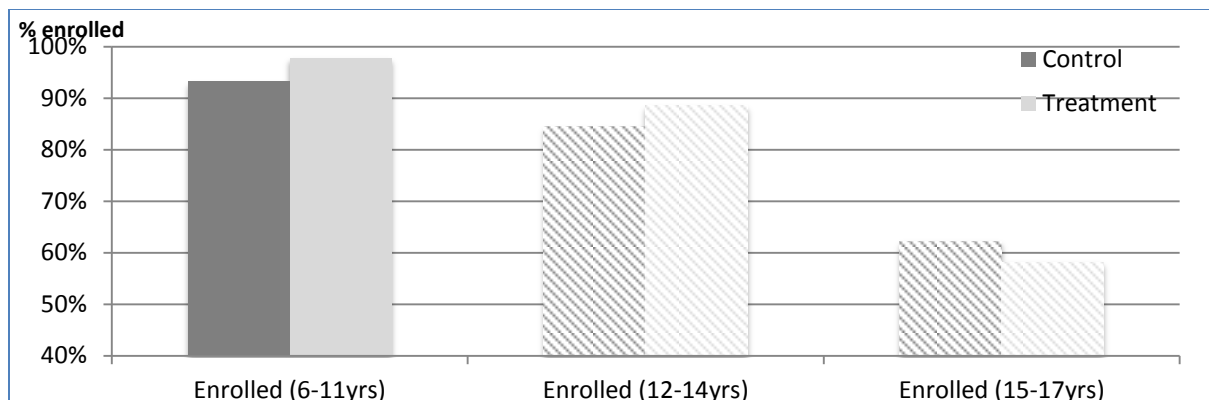
Note: Darker bars are statistically significant.

24. **Increased school attendance, which was found across all school-aged groups except for very young preschool-aged children, also suggests that *Pantawid Pamilya* is meeting the objective of keeping poor children in school**. Improvement in attendance was measured as over 85 percent attendance in school among children enrolled in school, in the two weeks prior to the survey. Compared to non-*Pantawid* barangays, the study found that school attendance in *Pantawid* barangays was 3.8 percentage points higher among 6-11 year olds, 4.9 percentage points higher among 12-14 year olds, and 7.6 percentage points higher among 15-17 year olds (Table 18 in Annex 8). The only age group in which improved attendance was not observed was the preschool/daycare group (Table 17).

25. **However, the program as currently designed has not improved levels of school enrollment for older children in *Pantawid* barangays.** On average, among children in control barangays, 85 percent of children 12-14 years of age (eligible for the education grant) reported being enrolled in school, while 62 percent of children 15-17 years of age (no longer eligible for the education grant) reported being enrolled in school. These rates were roughly the same in *Pantawid* barangays (Table 18 in Annex 8).

Figure 2: Percentage of Children Regularly Attending School by Age Group
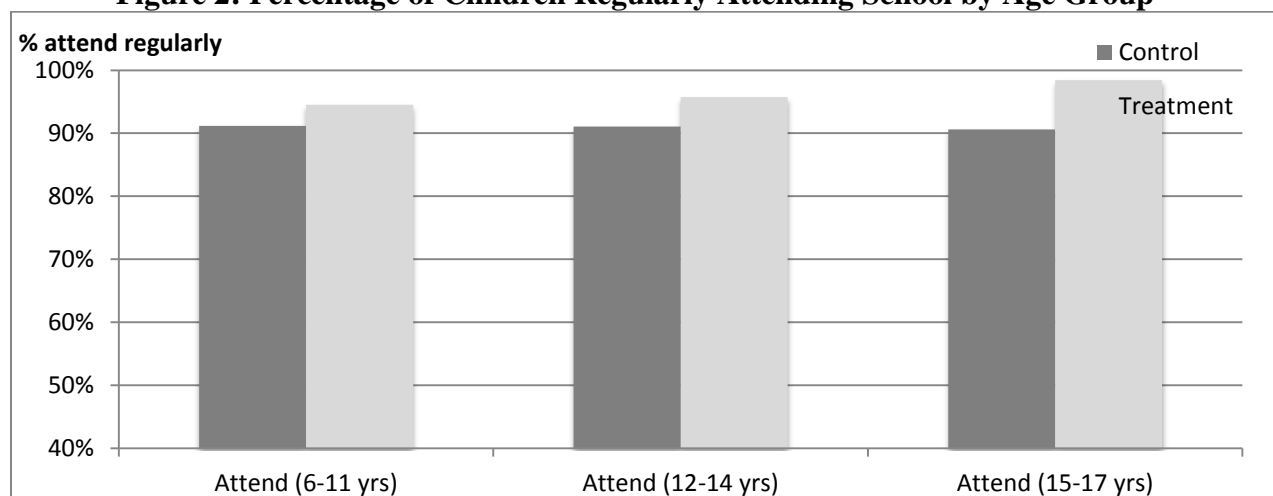
Note: Darker bars are statistically significant.

26.   **The age at which children dropped out of school started at 10 years old in non-*Pantawid* barangays and 11 years old in *Pantawid* barangays**. In the non-*Pantawid* barangays, fewer children were enrolling at early ages, with a peak in enrollment at age 10 and steep drops in enrollment at age 11, age 13, and age 15 (Figure 3). The level of school enrollment for children in *Pantawid* barangays was statistically significantly higher than in non-*Pantawid* barangays until age 11, after which children started dropping out at a similar pace with children in the non-*Pantawid* barangays. Although not statistically significant, at age 15, children in program areas appear to have a higher rate of dropout than those in the control areas, probably due to the cut-off age of the program's education grant.

Figure 3: Percentage of Children Enrolled in School by Age
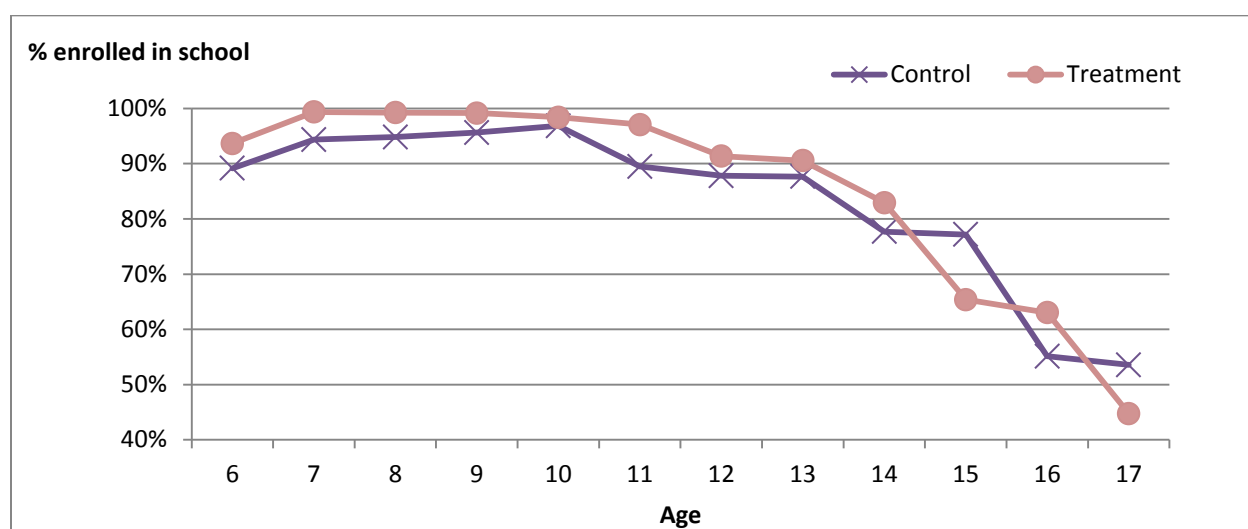
27.   **Another challenge potentially undermining the efficacy of the program in addressing school enrollment of older children could be that the direct costs and opportunity costs of schooling may be considerably higher for older children**. The program's standardized 300 peso per month education grant may not provide a strong enough incentive to keep those children in school. The average schooling expenditure per child for those who were currently enrolled as reported by study households provides some insights, with household spending of PhP 4,010 per school year for children 12-14 years old and PhP 4,562 for children 15-17 years old in non-*Pantawid* barangays. In comparison, the cost of schooling for children 6-11 years old in the same barangays was only PhP2,247. Furthermore, children above age 14 are no longer eligible for the education cash grant due to the age limit (14 years old) set by the program. The finding that the program helped boost enrollment for younger children/lower grades but was unable to keep older children/higher grades in school is consistent with a previous impact evaluation study (Chaudhury & Okamura, 2012).

Maternal Health

28.   **The study found that *Pantawid Pamilya* is largely achieving its program objective of ensuring basic health services for poor mothers, with poor pregnant women in *Pantawid* barangays meeting conditionalities by attending antenatal and postnatal care.** The study found that more poor mothers living in *Pantawid* barangays were receiving antenatal care (ANC) services (by 10.5 percentage points for a minimum of four ANC visits during the pregnancy). The study also found that they were making ANC visits more frequently (by 0.6 times) compared to mothers in non-*Pantawid* barangays. Similarly, the use of postnatal care (PNC) at home within 24 hours after delivery in *Pantawid* barangays was higher (by 10 percentage points) than in non-*Pantawid* barangays (Table 19 in Annex 8). Figure 4: summarizes these differences in utilization of health services across the *Pantawid* and non-*Pantawid* communities.

Figure 4: Proportion of Poor Mothers Using Antenatal and Postnatal Care
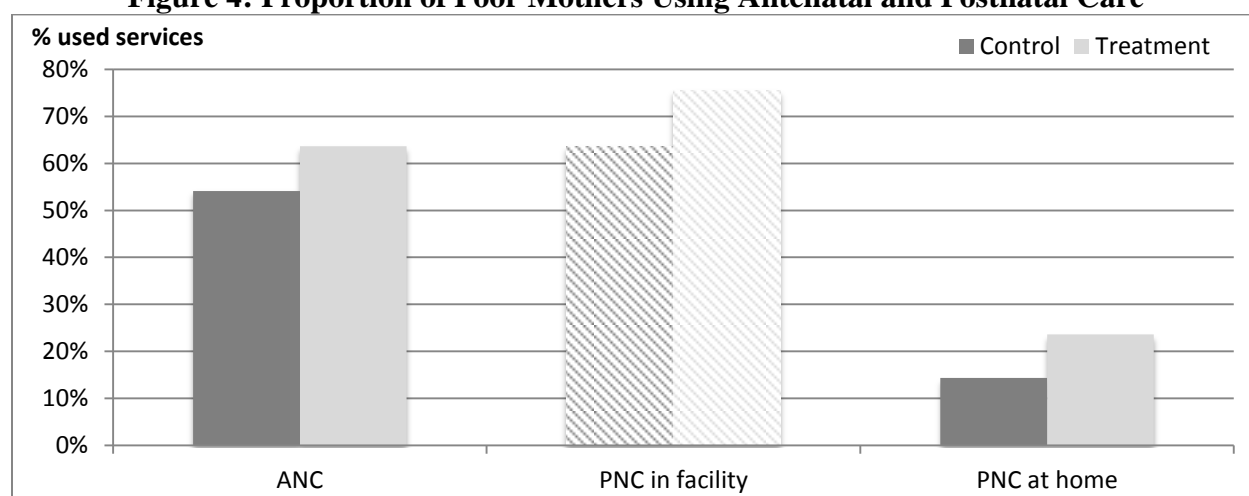
Note: Darker bars are statistically significant.

29.   **However, the study found no evidence that the program improves the rate of facility-based delivery or assistance by a trained professional, and it appears that the use of ANC visits has not yet translated into better health outcomes for mothers and newborns**. Although one of the program conditionalities for pregnant mothers is to deliver at a health facility or, at a minimum, assisted by a trained professional (i.e. doctor or midwife), the study did not find evidence that the program improves facility-based delivery or assistance by a trained professional (Table 19 in Annex 8 and Figure 5). Delivery assisted by a trained health care professional is strongly linked to reduction in maternal mortality. Unfortunately, the Philippines has made little progress over the past decade in reducing maternal mortality rates.[18] Among mothers who gave birth in the three years preceding the survey, about 11 percent reported having suffered from night blindness (potentially caused by Vitamin A deficiency) during pregnancy, the rates for which were the same in both *Pantawid* and non-*Pantawid* barangays. The study also

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[18] Family Planning Survey 2006, National Statistics Office.

found no evidence that the program affected the perceived size of the newborn at birth reported by the mother (Table 20 in Annex 8).

Figure 5: Proportion of Poor Mothers Using Delivery Services
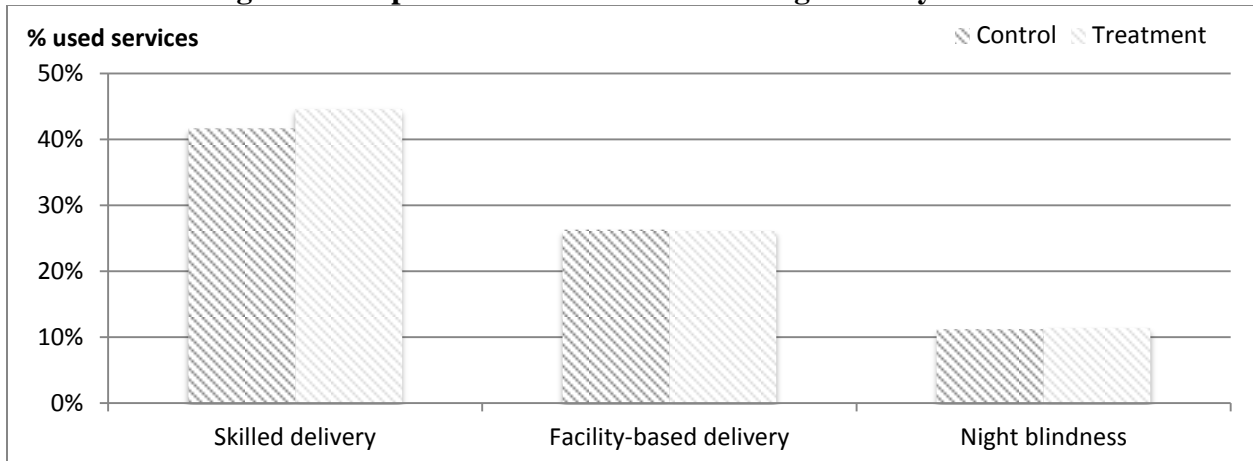
Note: Darker bars are statistically significant.

Child Health

30.   **The study found that *Pantawid Pamilya* is meeting the objective of keeping children healthy, as evidenced by a reduction in severe stunting[19] among poor children 6-36 months of age, which is expected to have long-term benefits.** Notably, impact evaluations of CCT programs around the world have not proven to reduce stunting at such early stages of program implementation, but *Pantawid Pamilya* appears to be an exception. While there was no measured impact on the mean height-for-age score or other anthropometric measures, the program lowered the rate of severe stunting among poor children 6-36 months old by 10.1 percentage points from the baseline of 24 percent in non-*Pantawid* barangays (Table 21 in Annex 8 and Figure 6). Reduction in severe stunting among this young age group is expected to have strong long-term benefits, as stunting in the first two years of life is known to lead to irreversible damage including lower educational attainment, reduced adult income, and decreased offspring birth weight (Cesar G Victoria, 2008).

31.   **The reduction in severe stunting indicates that the program is enabling families to better care for their children in a sustained and consistent manner**. With the provision of cash coupled with education on good parenting practices provided during the program's Family Development Sessions, the program improved parents' feeding practices for their children. More parents in *Pantawid* barangays were feeding their children more high-protein food including eggs and fish, leading to the improved long-term nutritional status of young children (Table 22 in Annex 8).

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[19] Measured as height-for-age <-3SD applying the WHO Child Growth Standard (http://www.who.int/childgrowth/software/en/) accessed March 9, 2012

Figure 6: Proportion of Malnourished among 6-36 Month Olds
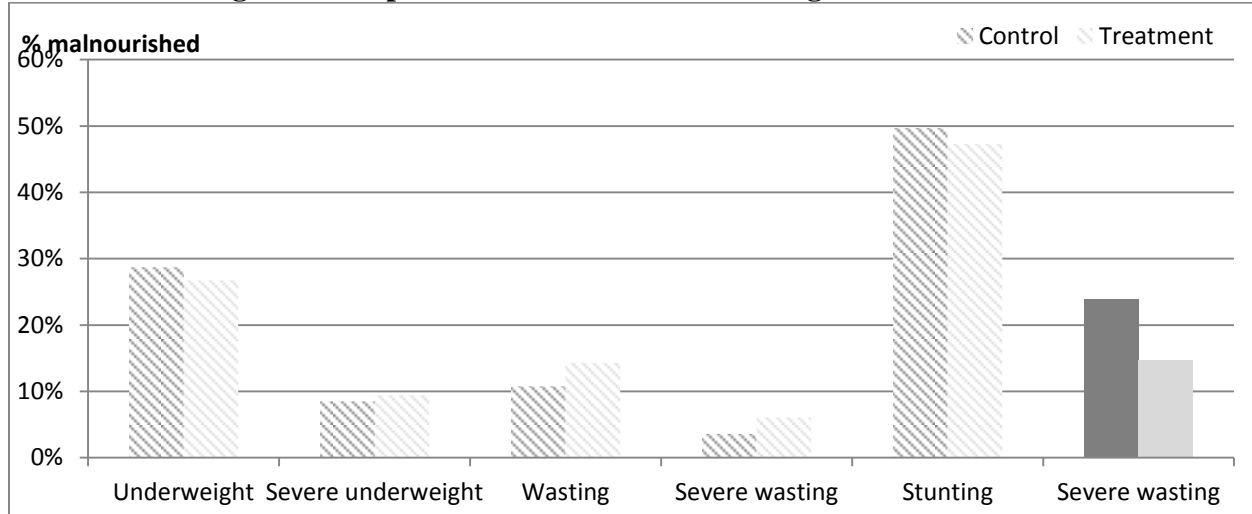
Note: Darker bars are statistically significant.

32.   **The increase in poor children in *Pantawid* barangays who received age-appropriate (ages 0-5) child health services also suggests that the program is meeting its objective of keeping children healthy**. These child health services include: regular growth monitoring (15 percentage points higher compared to their counterparts in non-*Pantawid* barangays in the six months prior to the survey), the receipt of deworming pills (6.7 percentage points higher), and Vitamin A supplementation (6.2 percentage points higher) (Figure 4: and Table 23 in Annex 8). The increase in regular growth monitoring is impressive when compared to CCT programs around the world. For example, Mexico in its early evaluation did not find impacts on health visits, while the CCT program in Nicaragua found a 6.3 percentage point increase from a baseline of 70.5 percent (Fiszbein, et al., 2009). The *Pantawid Pamilya* study also found that in addition to the improvements in beneficiary children receiving preventative health services as required by the program conditionalities, the program appears to have increased the utilization of curative care for children sick with fever and cough (Table 23 in Annex 8).

33.   **The program is also having an impact on the health of school-aged children 6-14 years old in *Pantawid* barangays by ensuring access to deworming pills.** *Pantawid Pamilya* provides health grants to poor households with school-aged children on the condition that they take deworming pills provided by the school twice a year. The study found that school-aged children in *Pantawid* barangays were more likely (by 4 percentage points) to be offered deworming pills and are also more likely to have taken at least one pill (by 5 percentage points) and more than one pill (by 9 percentage points) during the previous school year (SY2011) compared to the baseline of 80 percent for school-aged children in non-*Pantawid* barangays (Table 24 in Annex 8).

34.   **However, some challenges still remain for the program's efforts to improve child health, such as improving coverage of childhood immunization.** The study did not find a statistically significant impact on the proportion of children receiving single immunizations such

as BCG or the measles vaccine, the baselines for which were 88 percent and 80 percent, respectively (Table 23 in Annex 8).

Is the Program Increasing Investments for the Future of the Children? - Program Impact on Targeted Socio-Economic Indicators

35.   **The program is meeting the objective of increasing poor households' investments in their children, as evidenced by the shift in spending patterns of poor households in *Pantawid* barangays.** The study found that poor households in *Pantawid* barangays spent 38 percent more on education per capita and 34 percent more on medical expenses per capita than those in non-*Pantawid* barangays (Table 25 in Annex 8). Consistent with households' reporting of increased total expenditures on education, parents in *Pantawid* barangays also reported higher expenditures on schooling when asked per child per item (Table 27). Similarly, poor households reported spending 38 percent more per capita on protein-rich food such as dairy products and eggs (Table 26). This is consistent with the mothers reporting increased feeding of high-protein food such as eggs and fish for young children. This shift in spending patterns—particularly on food items—has been observed widely in CCT evaluations around the world, with CCT beneficiary households spending more on food items with higher-quality sources of nutrition, for example in Mexico, Colombia, and Nicaragua.

36.   **Interestingly, although the study found that cash grants were reaching the beneficiaries, it did not find an increase in overall levels of consumption.[20]** The estimated per capita consumption per day reported by the sampled households was PhP 46 per day (equivalent to US\$ 1 a day), both in *Pantawid* and non-*Pantawid* barangays. Among the 85 percent of poor households in the *Pantawid* barangays who reported to be beneficiaries of the program, they received an average of PhP 1,740 for the last bimonthly payment. Assuming that these households receive this grant amount six times during the year (which in fact they do not, because the education grant only covers 10 months of the year), on a per capita basis, each household beneficiary would receive PhP 5 per day (equivalent to US\$ 0.11 a day), representing approximately 11 percent of the household's per capita consumption. Internationally, the largest transfer amount was in Nicaragua with the transfer representing about 30 percent of consumption, Mexico about 20 percent of consumption, and Brazil about 8 percent of consumption (Fiszbein, et al., 2009). Further research is needed to understand the impact of *Pantawid Pamilya* on consumption. To measure aggregate consumption carefully requires detailed surveys such as FIES, with much more detailed consumption information than collected in this survey.

37.   **It appears that contrary to the design of the program in which the maximum benefit amount beneficiary households could receive is 23 percent of poor households' per capita income, in reality the beneficiaries are receiving considerably smaller amounts**. The differences in the maximum grant amount a beneficiary household can receive and the actual amount may be due to several factors. If beneficiaries do not meet the program conditionalities, their grant amounts will be smaller. If the reports on compliance from health facilities and

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[20] See Annex 6 for the items included in the household consumption module. Household consumption was measured applying the APIS consumption module, which was aggregated to estimate annual per capita consumption.

schools are not regularly submitted compliance, households may receive smaller grant amounts than the program initially intended. Lastly, if the program database is not regularly updated to reflect the schools and health facilities program beneficiary attend, their compliance will not be effectively linked to the beneficiary payroll.

38.   **Although *Pantawid* areas seemed to have higher estimated per capita incomes and lower poverty rates in 2011[21] compared to non-*Pantawid* areas, these differences were not significant** (Table 3). Using the variables collected in 2011, the analysis applied the same PMT formula used in 2008 to identify the eligible population for the program. Notably, not all CCT programs have detected impacts on poverty at the early stages of the program. For example, in Mexico, which provided grant amounts equivalent to 21 percent of per capita consumption did not find positive impacts on mean consumption in its first impact evaluation conducted in 1998, but found positive impacts on mean consumption in their follow-up evaluation studies in 1999 with moderate impacts on poverty. The Programs that had large impacts on mean consumption also had large effects on poverty, such as in Nicaragua and Colombia[22] (Fiszbein, et al., 2009).

Table 3: Program Impact on Estimated Per Capita Income and Estimated Levels of Poverty

	Average estimated per capita income in 2008	% poor in 2008	Average estimated per capita income in 2011	% poor in 2011
Pantawid	PhP 9,131	100%	PhP 10,348.16	82.5%
Control	PhP 9,382	100%	PhP 10,208.93	85.2%

Program Impact on Non-Targeted Indicators

Coverage of Other Social Protection Programs

39.   **More poor households in *Pantawid* barangays reported to be covered by the health insurance program under PhilHealth**. Reported coverage of PhilHealth social health insurance in *Pantawid* barangays was 10.8 percentage points higher than the 67 percent reported coverage rate in the non-*Pantawid* barangays (Table 28 in Annex 8). Although *Pantawid Pamilya* does not directly support the implementation of other social protection programs such as PhilHealth, considerable coordination has taken place among the relevant agencies at the national level to ensure that the same poor households receiving *Pantawid Pamilya* also receive PhilHealth. Also, a national policy was enacted recently to ensure that all poor households as identified in NHTS are automatically enrolled in the universal health care program under PhilHealth. Increased coverage of PhilHealth among the poor combined with greater awareness helps increase their financial protection against health shocks and their access to health services.

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[21] This analysis assumes that beneficiaries would have invested their cash grants into the physical assets included as proxy variables in the PMT model.

[22] The program in Nicaragua reduced the headcount index among beneficiaries by 5 to 7 percentage points, while in Colombia the reduction was about 3 percentage points.

Impact on Assets[23]

40.   **No significant program impact was found on non-financial asset accumulation, as measured by ownership of household furniture and appliances, animals, or land.** The study found no impact on asset accumulation using an index of 13 household furniture and appliance items. Similarly, no differences were observed in land ownership between poor households in *Pantawid* barangays and non-*Pantawid* barangays (Table 29 in Annex 8), nor were differences found in the total numbers (heads) of animals owned by these households in a significantly positive manner (Table 30).

41.   **It also appears that *Pantawid Pamilya* has not improved access to financial institutions thus far.** In both *Pantawid* and non-*Pantawid* barangays, only about 10 percent of households reported having a bank account (Table 31 in Annex 8). However, more poor households in Pantawid barangays reported savings in all provinces other than Lanao del Norte (Table 32).

Impacts on Beneficiary Behavior

42.   **Countering concerns that the program might create mendicancy and dependency among the beneficiary population, the study found that the introduction of *Pantawid Pamilya* did <u>not</u> encourage households to work less or make less effort to obtain more work**. In the households surveyed in *Pantawid* and non-*Pantawid* barangays, 62 percent of adults 17-60 years old reported to have worked at least one hour in the previous one week. Among these adults, no program impacts were found in: reported number of hours worked for his/her main job, average number of hours worked for his/her main job in the last one week (41.4 hours), as well as average total hours worked including his/her additional jobs (42.4 hours). Similarly, no significant difference was found in the proportion of adults seeking work (in addition to their main work if they already had one) in *Pantawid* and non-*Pantawid* barangays (Table 33 in Annex 8).

43.   **Also contrary to concerns regarding potential increases in beneficiary household spending on adult goods, the study found that spending on alcohol by poor households in *Pantawid* barangays was lower compared to their counterparts in non-*Pantawid* barangays**. On average, poor households in *Pantawid* barangays spent 39 percent less on alcohol than equally poor households in non-*Pantawid* barangays did. Furthermore, no evidence was found of households spending more on gambling in program barangays (Table 25 in Annex 8).

44.   **The study findings also dispelled concerns raised at the time of program design over the potential impact on fertility rates**. The study found no evidence to conclude that women in *Pantawid* barangays had higher fertility rates than women in non-*Pantawid* barangays (Table 34 in Annex 8). To avoid incentives for families to have more children, *Pantawid Pamilya* does not

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[23]   According to SWS field supervisors, questions on assets were among the most difficult for interviewers to obtain accurate answers, and they suspected that households in both *Pantawid* barangays and non-*Pantawid* barangays were under-reporting their assets.

provide grants for newborns into the program except for newborns resulting from pregnancies enumerated at the time of the household assessment.

Differential Impacts

45.   **This section describes some of the differences in program impact across various beneficiary groups**. It is important to bear in mind that the sampling for this study was done to represent average impacts for Set 1 beneficiaries, so sampling was not done to be representative by province or sub-group (e.g., Indigenous Peoples). The findings presented below are meant to be for illustrative purposes, recognizing that no social program anywhere in the world has the same impact across time and space. The variations by location and circumstance need to be explored more rigorously in further studies. With this caveat, this study examined heterogeneities such as: provincial heterogeneities, relative poverty, Indigenous Peoples (IP) status, relative remoteness of the barangays, and gender of the beneficiaries.

Regional/Provincial Differences

46.   **Heterogeneity was most pronounced across geographical areas (by province), indicating that the program has been more effective in some provinces than others**. The study found considerable differences in program impact on household socioeconomic (Table 35 and Table 36 in Annex 8), child health (Table 37), and education outcomes (Table 38) across the four provinces. Across most outcomes, Negros Oriental consistently showed the most positive and strongest program impacts, while Lanao del Norte consistently showed weaker impacts compared to other provinces. Figure 7 below is a summary of child health service use indicators by *Pantawid* and non-*Pantawid* areas by province. Although not necessarily statistically significant, the bars for the *Pantawid* areas generally are higher than those for non-*Pantawid* areas which indicates positive impact, except for Lanao del Norte.

Figure 7: Proportion Used Child Health Services by Province
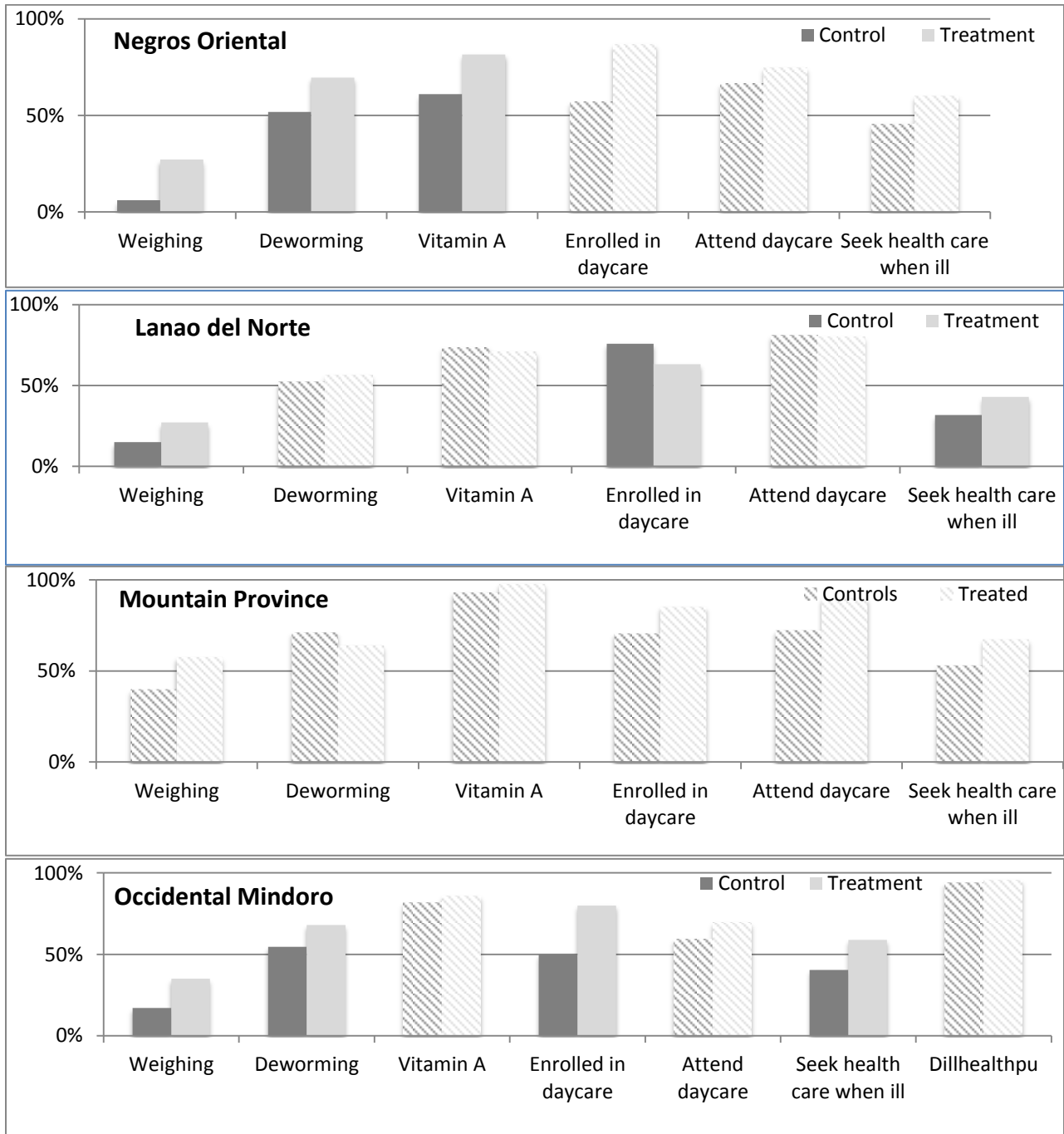
(Note: darker bars are statistically significant)

47.   **Potential causes of regional heterogeneity in program impact include differences in access to health and education services and other supply-side issues, socio-cultural and environmental factors including security, as well as differences in the effectiveness of program implementation.** Key informant interviews pointed to considerable variation in supply-side factors for both education and health. Based on levels of access to health and education facilities at the barangay level as well as reports from health facilities and schools,

service provision seemed most problematic in Lanao del Norte (see Annex 7: Environmental and Supply-Side Factors in the Study Areas). Lanao del Norte had the lowest average number of elementary schools and high schools in which the children in the village were enrolled. Similarly, health service providers in Lanao del Norte were by far the most stretched, which may partially explain the lack of program impact on health indicators in this province. Further studies need to be conducted to better understand the potential differences in program implementation.

Población versus Non-*Población*

48. **In general, program impacts were similar for those living in the *población* (capital of the municipality, where most rural health facilities and schools are located) and those outside the *población*, although some key outcomes suggest that program impact was stronger for those in non-*población* areas.** The study findings indicate that the program was more effective for relatively remote areas (i.e. non-*Población*) in improving: access to a bank account (Table 39 in Annex 8), maternal health services such as post-natal care, health and education of poor children 0-5 years old, and attendance among school-aged children (6-14 years old). Differences in program impact seem to be due to the fact that for most indicators, the baseline (control group) means were lower for non-*población* areas than in the *población* where most health centers and schools are located.

Relative Poverty, Indigenous Peoples Status, and Gender

49. **In general, few differences were found in program impact across the other groupings studied.** Among those identified as poor, the program was found to be equally effective for households who were relatively poorer and those who were relatively less poor. Likewise, few differences were found between households who identified themselves as having IP status and those who did not. The program also appeared to be equally effective for boys and girls, with no gender differences found in program impacts on outcomes related to education and health service use.

Summary of Conclusions and Policy Implications

50. **After more than two years of program implementation in the study areas, evidence indicates that in general, *Pantawid Pamilya* is meeting most of its program objectives.** To summarize, the program impacts observed include:

- **In education, the program is helping to keep younger children in school.** Improvements in school enrollment were found among the younger age groups (3-11 years old), while school attendance improved for all age groups except for the youngest pre-school/daycare age group.

- **In health, the program is meeting its objective of helping to keep children healthy.** The program has helped improve the long-term nutritional status of younger children (6-36 months old). It has also encouraged poor households to use maternal and child health services such as antenatal care, postnatal care, regular growth monitoring, and receipt of Vitamin A and deworming pills, as well as increased healthcare-seeking behaviors among beneficiaries when their children become ill.

- **The program is also achieving its objectives by allowing households to invest more in meeting the health and education needs of their children.** *Pantawid Pamilya* is changing the spending patterns of poor households, with beneficiary households spending more on health and education and less on adult goods such as alcohol.

- **However, the study was unable to identify a program impact on aggregate consumption/expenditures, even though expenditures on education and health increased and results from some areas suggest an increase in savings.** Further studies, which will require collection of detailed consumption data, are required to develop a deeper understanding of the impact of *Pantawid Pamilya* on consumption and poverty.

- **The program has improved the effectiveness of other government programs for the poor, as evidenced by the increased reported coverage of PhilHealth.** This impact is probably owing to greater awareness and access to information among poor households with the program, leading to better access to social services for the poor.

51. **The findings from this study also highlight certain policy implications going forward**. The challenges include:

- **To improve educational outcomes for older children, additional measures such as expanding the age of coverage of *Pantawid Pamilya*, increasing the period of coverage per family from the current five years, increasing the grant amount for older children, and parallel supply-side interventions in the education sector should be explored.** The program as currently designed does not improve school enrollment of older children (age 12 and above), which is key to sustaining the benefits reaped from investments made in human capital and breaking the inter-generational poverty trap. To address barriers that older children face in staying in school, many CCT programs such as the Female Secondary School Stipend Program (FSSP) in Bangladesh, Opportunidades in Mexico, Familias en Accion in Colombia, the Social Risk Mitigation Project (SRMP) in Turkey, and Jamaica's Program of Advancement through Health and Education (PATH) provide larger benefit amounts for children in secondary school than for elementary school children, recognizing that older children have higher opportunity costs and higher costs of schooling. Many CCT programs also have parallel supply-side interventions such as construction of schools and classrooms (e.g., in Honduras, Jamaica, Mexico, Bangladesh), provision of teacher materials (Jamaica), and grants to teachers (Mexico and Nicaragua) (Fiszbein, et al., 2009).

- **Linkages and coordination with health service providers need to be strengthened to ensure that beneficiary mothers and children receive the services they require and to ensure a continuum of care.** The study found that although *Pantawid Pamilya* has helped increase use of antenatal care by pregnant mothers, these initial contacts with the service providers are not yet translating into increased facility-based delivery and/or skilled delivery, the services most needed to address the high maternal mortality rates effectively. Similarly, although children five years old and younger are regularly attending health checkups and growth monitoring, this is not yet translating into

increased immunization coverage. Stronger coordination between *Pantawid Pamilya* on the ground and local health service providers may improve the continuum of care to ensure that mothers and children receive the basic health services that the program is designed to increase.

- **It is important to consider ways in which other social programs that may have a long-term impact on the welfare of the poor could take advantage of *Pantawid Pamilya*'s strong and effective social mobilization structure.** As found with the increased coverage (and awareness) of PhilHealth among program beneficiaries, *Pantawid Pamilya*, when centrally coordinated, has strong potential to raise a poor household's awareness of other social programs and help expand coverage and access through the program's organizational structures and the monthly discussions at the Family Development Sessions (FDS). The FDS offers a potentially powerful platform for providing education on good parenting practices (e.g., exclusive breastfeeding, good feeding practices, remedies for children with diarrhea), improving financial literacy and access to bank accounts, and promoting access to and use of other social services. The FDS also could be used as an avenue to empower and facilitate the poor to voice demands for more and improved social service delivery. This would not only benefit the program through improved health and education services, but it could also plant seeds for a more organized venue for the poor to voice their needs.

- **Further effort is needed to ensure that beneficiaries receive the full grant amounts to which they are entitled.** Although the program benefits are designed to be generous at approximately 23 percent of household per capita income of the poor, the beneficiaries in the study were receiving only 11 percent of household per capita consumption. The gap may be minimized by working on three areas: (i) improving the levels of compliance with program conditionalities, maximizing the grant transfer amounts to program beneficiaries; (ii) regularly update the program beneficiary database to reflect the new schools and health facilities that beneficiary children are attending, to ensure that compliance with conditionalities by beneficiary children are effectively reflected in the Compliance Verification process; and (iii) ensuring that health facilities and schools report compliance with conditionalities regularly and in a timely manner through the Compliance Verification process.

- **The reasons for heterogeneity of program impacts across geographical areas must be better identified and understood to ensure more efficient program implementation.** The study found consistently weaker impacts in Lanao Del Norte than in other provinces in the study. The causes behind these weaker impacts may be related to program implementation issues in the province, supply-side factors, or due to variation in local level political/social structure. The causes of this regional heterogeneity cannot be fully explained through this impact evaluation alone, and further research—including an in-depth qualitative study—is required to better understand and help improve program effectiveness.

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Annexes

Annex 1: Sample Areas

Table 4: Comparison of Proportion of Poor Households in Set 1 Areas according to PMT and RCT Sample Areas

REGION	CITY/MUNICIPALITY	Sum of Encoded HH	Sum of Poor HH	Sum of Potential HH	% of Poor PMT
ARMM [Autonomous Region in Muslim Mindanao]		23,408	11,542	7473	**49**
CAR [Cordillera Administrative Region]		41,197	17,833	16136	**43**
NCR [National Capital Region]		36,833	18,246	16364	**50**
REGION I [Ilocos Region]		27,912	12,815	11869	**46**
REGION II [Cagayan Valley]		12,666	6,377	5915	**50**
REGION III [Central Luzon]		21,184	9,490	8362	**45**
REGION IV-A [CALABARZON]		29,651	19,197	17177	**65**
REGION IV-B [MIMAROPA]		82,661	47,135	42236	**57**
REGION IX [Zamboanga Peninsula]		72,324	52,047	42286	**72**
REGION V [Bicol Region]		62,922	42,915	37921	**68**
REGION VI [Western Visayas]		31,499	14,639	13517	**46**
REGION VII [Central Visayas]		66,814	29,216	25721	**44**
REGION VIII [Eastern Visayas]		37,217	21,593	19199	**58**
REGION X [Northern Mindanao]		87,764	53,034	44618	**60**
REGION XI [Davao Region]		19,002	10,283	9336	**54**
REGION XII [Soccsksargen]		16,205	9,149	8317	**56**
REGION XIII [Caraga]		80,242	55,317	46742	**69**
Grand Total		749,501	430,828	373,189	**57**
RCT sites					
CAR [Cordillera Administrative Region]	PARACELIS	3338	1713	1625	51
	SADANGA	1464	603	574	41
REGION IV-B [MIMAROPA]	PALUAN	2341	1127	1050	48
	SANTA CRUZ	12720	6886	6351	54
REGION VII [Central Visayas]	JIMALALUD	5752	3394	3036	59
	BASAY	4724	2422	2271	51
REGION X [Northern Mindanao]	LALA	13077	8471	7067	65
	SALVADOR	4281	3351	2694	78
		47697	27967	24668	**59**

Table 5: Randomized Evaluation Areas

Macro area	Region	Province	Municipality name (Census 07)	Total nr. Barangays	Nr. Control barangays	Poverty Incidence (SAE 2003) [*]	Population (Census 2007) [*]
Luzon	CAR	Mountain Province	Paracelis	9	5	59.91	24705
			Sadanga	8	4	63.53	9706
Luzon	Region IV-B	Occidental Mindoro	Paluan	12	6	58.4	13718
			Santa Cruz	11	6	53.99	30402
Visayas	Region VII	Negros Oriental	Jimalalud	28	13	65.67	27728
			Basay	10	5	63.45	22713
Mindanao	Region X	Lanao del Norte	Lala	27	14	59.79	58395
			Salvador	25	12	73.67	23222

Nr. Provinces: 4
Nr. municipalities: 8
Nr. barangays: 130
Nr. Control barangays: 65
Nr. Treatment barangays: 65

PROVINCE: Mountain Province
MUNICIPALITY: Paracelis

Barangay_code	Barangay name	Treatment/Controls
144406002	Bacarni	T
144406005	Butigue	T
144406007	Buringal	T
144406009	Poblacion	T
144406001	Anonat	C
144406003	Bananao	C
144406004	Bantay	C
144406006	Bunot	C
144406008	Palitod	C

PROVINCE: Mountain Province
MUNICIPALITY: Sadanga

Barangay_code	Barangay name	Treatment/Controls
144408001	Anabel	T
144408002	Belwang	T
144408005	Poblacion	T
144408008	Demang	T

144408003	Betwagan	C
144408004	Bekigan	C
144408006	Sacasacan	C
144408007	Saclit	C

PROVINCE: Occidental Mindoro
MUNICIPALITY: Paluan

Barangay_code	Barangay name	Treatment/Controls
175107002	Harrison	T
175107003	Lumangbayan	T
175107008	Silahis Ng Pag-Asa Pob. (Bgy 3)	T
175107009	Pag-Asa Ng Bayan Pob. (Bgy 4)	T
175107010	Bagong Silang Pob. (Bgy 5)	T
175107012	Tubili	T
175107001	Alipaoy	C
175107004	Mananao	C
175107005	Marikit	C
175107006	Mapalad Pob. (Bgy 1)	C
175107007	Handang Tumulong Pob. (Bgy 2)	C
175107011	San Jose Pob. (Bgy 6)	C

PROVINCE: Occidental Mindoro
MUNICIPALITY: Santa Cruz

Barangay_code	Barangay name	treatment
175111001	Alacaak	T
175111008	Pinagturilan (San Pedro)	T
175111009	Poblacion I (Barangay 1)	T
175111010	San Vicente	T
175111012	Kurtinganan	T
175111002	Barahan	C
175111003	Casague	C
175111004	Dayap	C
175111006	Lumangbayan	C
175111007	Mulawin	C
175111011	Poblacion II (Barangay 2)	C

PROVINCE: Negros Oriental
MUNICIPALITY: Basay

Barangay_code	Barangay name	Treatment/Controls
74605002	Bal-os	T
74605004	Cabalayongan	T
74605005	Cabatuanan	T
74605007	Maglinao	T
74605009	Olandao	T
74605001	Actin	C
74605003	Bongalonan	C
74605006	Linantayan	C
74605008	Nagbo-alao	C
74605010	Poblacion	C

PROVINCE: Negros Oriental
MUNICIPALITY: Jimalalud

Barangay_code	Barangay name	Treatment/Controls
74612004	Bae	T
74612005	Bala-as	T
74612007	Banog	T
74612010	Camandayon	T
74612011	Cangharay	T
74612012	Canlahao	T
74612013	Dayoyo	T
74612015	Lacaon	T
74612017	Malabago	T
74612019	Mongpong	T
74612020	Owacan	T
74612022	Panglaya-an	T
74612025	Polopantao	T
74612026	Sampiniton	T
74612027	Talamban	T
74612001	Aglahug	C
74612002	Agutayon	C
74612003	Apanangon	C
74612006	Bangcal	C
74612008	Buto	C
74612009	Cabang	C

Barangay_code	Barangay name	Treatment/Controls
74612014	Eli	C
74612016	Mahanlud	C
74612018	Mambaid	C
74612021	Pacuan	C
74612023	North Poblacion	C
74612024	South Poblacion	C
74612028	Tamao	C

PROVINCE: Lanao del Norte
MUNICIPALITY: Lala

Barangay_code	Barangay name	Treatment/Controls
103509002	Andil	T
103509005	Cabasagan	T
103509008	Darumawang Ilaya	T
103509010	Gumagamot	T
103509013	Lanipao	T
103509015	Maranding	T
103509018	Pendolonan	T
103509019	Pinoyak	T
103509021	Rebe	T
103509022	San Isidro Lower	T
103509026	Santa Cruz Upper	T
103509027	Simpak	T
103509029	Tuna-an	T
103509001	Abaga	C
103509003	Matampay Bucana	C
103509004	Darumawang Bucana	C
103509006	Camalan	C
103509009	El Salvador	C
103509012	Lala Proper (Pob.)	C
103509014	Magpatao	C
103509016	Matampay Ilaya	C
103509017	Pacita	C
103509020	Raw-an	C
103509023	San Isidro Upper	C
103509024	San Manuel	C
103509025	Santa Cruz Lower	C
103509028	Tenazas	C

PROVINCE: Lanao del Norte
MUNICIPALITY: Salvador

Barangay_code	Barangay name	Treatment/Controls
103518001	Barandia	T
103518002	Bulacon	T
103518003	Buntong	T
103518004	Calimodan	T
103518006	Curva-Miagao	T
103518010	Madaya	T
103518011	Mamaanon	T
103518012	Mapantao	T
103518013	Mindalano	T
103518015	Pagalongan	T
103518016	Pagayawan	T
103518017	Panaliwad-on	T
103518019	Pansor	T
103518005	Camp III	C
103518007	Daligdigan	C
103518008	Kilala	C
103518009	Mabatao	C
103518014	Padianan	C
103518018	Pangantapan	C
103518020	Patidon	C
103518021	Pawak	C
103518022	Poblacion	C
103518023	Saumay	C
103518024	Sudlon	C
103518025	Inasagan	C

Annex 2: Sample Size Estimation

Table 6: Estimated Power for Selected Outcomes in the RCT Subcomponent

Outcome	Number of eligible households per cluster	Number of units per household	Baseline value	Standard deviation	Hypothesized effect (increase)	Standardized effect size	Estimated ICC	Significance level*	Power
Household PCE	10	1.00	400010	97253	40000	0.41	0.21	0.01	0.979
School participation, 6-14 years	10	2.07	0.87	0.33	0.07	0.21	0.12	0.05	0.848
Health facility visit, 0-5 years	10	1.20	0.21	0.41	0.07	0.25	0.25	0.05	0.813
134 enumeration areas; 30 total households per enumeration area, 10 eligible households per enumeration area									
Total study size: 3900 households in RCT area									
Ten households without children under age 15 will be sampled – five with scores above the PMT cut-off and five with scores below									
* Significance level for a one-sided hypothesis test									

Annex 3: Evaluation Methodology

52.   **This Annex discusses the design of the *Pantawid Pamilya* impact evaluation and describes the design and implementation of the evaluation survey.** This discussion focuses on the randomized control trials (RCT) methodology that was used for the impact evaluation. Details on the regression discontinuity (RD) methodology that was also applied can be found in a separate report (forthcoming).

A. Evaluation Design

53.   **Rigorous evaluation—one that estimates true causal effect—demands that any observed change in outcomes in study units (households, communities, or regions) that receive the program must be compared with a valid counterfactual**. The counterfactual represents the course of events that would have occurred in the treated unit in the absence of the intervention. Various methodological approaches can be used to construct a valid counterfactual. The most rigorous approach is an experimental design in which treatment/control status is assigned to study units on a randomized basis.

54.   **Randomization ensures that all units have an equal chance of control or treatment status, and it satisfies the conditions of a valid counterfactual comparison**. These conditions are: (i) all relevant pre-intervention factors/characteristics will be, on average, equal across the treatment and control groups, and (ii) the only difference in observed outcomes is due to the intervention and not to any other observed or unobserved factors. The main component of the *Pantawid Pamilya* impact evaluation utilized this randomized treatment/control design to estimate the causal impact of the program on priority outcomes and beneficiary behavior. Barangays in Set 1 Batch 4 (see Annex 1: Sample Areas) were randomized into "treatment" and "control" groups, enabling a randomized control trials (RCT) approach to evaluation for this population. Due to ethical considerations of withholding the program from poor households in the control barangays, the agreement was that once released, the households in the control group would receive the program for five years, the same number of years as for those in the treatment group.

55.   **An RCT estimates program impact by comparing the mean among eligible households in the treatment localities with the mean among "eligible" (i.e. who would have been eligible if the program had been in operation) in the control localities**. Figure 1 illustrates this RCT approach to impact evaluation. The left panel shows outcomes for each household in a *control* locality plotted against the proxy means test score that was used to determine eligibility (the "index"). The right panel shows outcomes for households in a *treatment* locality. Since control and treatment localities are selected randomly, they should have the same mean outcome in the absence of the program. Therefore, program impact is estimated by comparing the means of the points in each of the boxes in Figure 1. The analysis can be refined by comparing the means among ineligible households in each of the localities. If the randomization is perfect, then the means between these two groups should be the same. If they are not the same, this difference can be used to adjust the estimate to account for differences across the localities.

56.   **In addition, the *Pantawid Pamilya* implementation enables alternative quasi-experimental evaluation methods that can be used on a wider population than the RCT barangays**. These alternative methods will be utilized in conjunction with non-experimentally designated barangays in order to (a) investigate the robustness of any findings, (b) extrapolate to the wider national context, and (c) potentially establish a baseline impact with which to compare future results based on this method (i.e. after the RCT method is no longer feasible because the "control" group has been incorporated into the program). Specifically, the proxy means test criterion of benefit receipt suggests the application of a regression discontinuity (RD) evaluation design. As mentioned above, this report presents the findings from the RCT method only, and the findings of the RD analysis are presented in a separate report (forthcoming).

Figure 8: Illustration of RCT Approach to Impact Evaluation
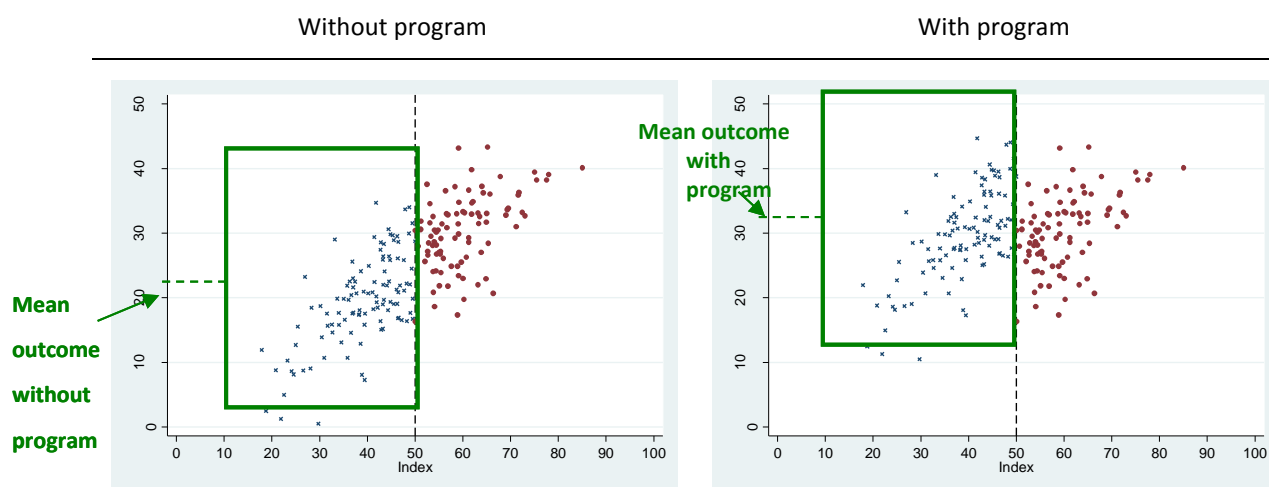
Note: Vertical dashed line at an index value of 50 shows the hypothetical cutoff for program eligibility.

57.   **Another critical consideration in the design of an impact study is the external validity of the evaluation results—that is, the extent to which the results are relevant for the potential population as a whole**. Combining the RCT and RD approaches, the impact evaluation covers interventions implemented on a broad scale—in 16 municipalities in 8 provinces around the country—and within existing government capabilities. Therefore, external validity is achieved by the design for Set 1 expansion phase.

B. Survey Design and Implementation

Sample Size and Sample Selection

58.   **Since the main evaluation of *Pantawid Pamilya* is a cluster randomized trial with treatment assignation at the cluster (barangay) level, a power analysis to determine adequacy of study size was estimated using three main outcomes of interest**. The main outcomes considered were: monthly per capita household consumption, school participation of 6-14 year olds, and health facility visits of 0-5 year olds. Either the 2007 Annual Poverty Indicator Survey (APIS) dataset or 2003 National Demographic and Health Survey (NDHS) dataset was

used to proxy for outcome mean and variance in the comparison population, which is defined here as rural households in Set 1 Batch 4 provinces.[24]

59.   **The study size resulted in a relatively well-powered RCT study**. The parameters of the study are summarized in Table 6 in Annex 2: Sample Size Estimation. The analysis suggested an RCT study size of 3,900 households randomly selected from 130 barangays: 65 barangays from the population of *Pantawid Pamilya* experimental treatment barangays and 65 control barangays. In each of the study barangays, 10 households were selected from the households eligible for *Pantawid Pamilya* (i.e. with scores below the eligibility cutoff), and 10 households were selected from the sample of ineligible households (i.e. with scores above the proxy means eligibility cutoff). In the RCT study, this basic sample design was augmented by a sample of households that were non-eligible due to their household structure. In the future, this will allow an analysis of the potential program spillovers to households without children under age 14. This subsample was comprised of five households per barangay with a score below the eligibility criterion and five households with a score above the eligibility criterion.

60.   **In addition, key informants were interviewed to provide information on the local environment and on the health and education services to which the study population had access.** The groups of key informants are described below.

Rural Health Units (RHU) and Midwives
61.   **All of the RHUs in the sample municipalities were interviewed for the study**. As there was no sampling framework for RHUs and midwives that could be obtained at the central level, sampling was conducted by the field supervisors. Although the teams were instructed to interview up to two RHUs in every municipality, none of the sample municipalities had more than one RHU.

62.   **From the list of midwives who work and report to the RHU, the survey sampled midwives who provided services at each of the sampled barangays**. In case there was no health facility at the sampled barangay, a midwife providing outreach services at that barangay was sampled. If the sample barangay had more than one midwife providing services, one midwife was randomly selected based on lottery. In some cases where a midwife provided services in multiple barangays, the same midwife was interviewed multiple times to ensure that questions regarding health service provision in each of the sampled barangays were asked.

Schools

63.   **One public elementary school per barangay and up to three public high schools per municipality were sampled for interviews**. The field supervisors also conducted sampling of these schools. Based on the list of elementary schools attended by children living in the barangay (not necessarily schools located in the barangay) obtained in the Barangay Captain Questionnaire, one school was randomly sampled for each sampled barangay. For high schools, up to three public high schools were sampled based on a list of all public high schools provided by the

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[24] In order to maintain sufficient sample sizes, all observations in these provinces (not just those in the RCT barangays) were included in the estimates of means and variances that informed the power analysis.

mayor's office. If a municipality had more than three public high schools, three were randomly selected using a lottery.

Mayor's Office and Barangay Captains

64. **The mayor was interviewed in each municipality sampled**. One barangay captain for each barangay was also included in the sample.

Timeframe of the Study

65. **Preparation for the study commenced in 2008**. The set of provinces and municipalities for the RCT was selected jointly by DSWD and the World Bank, and randomization was carried out in October 2008. The sample for the impact evaluation was selected in three stages. First, provinces in which the program had not yet been introduced in some of the eligible municipalities as of October 2008 were selected, which is known as the expansion phase Set 1 Batch 4 (see Table 4 for comparison of sampled municipalities versus other Set 1 regions). Out of the 11 provinces available, 3 provinces were excluded due to security concerns. From the remaining 8 provinces, 4 provinces were chosen to span all three macro areas of the country (North, Visayas, and Mindanao). Second, among the selected four provinces, municipalities were randomly chosen to represent the average poverty level of areas covered by the program. Third, within each of the municipalities selected in the evaluation sample, barangays were randomly selected into treatment and control groups. Data for the Household Assessment Form (HAF) to run the proxy means test for beneficiary selection was fielded in the eight RCT municipalities between October 2008 and January 2009. This was followed by the implementation of *Panwatid Pamilya* in the treatment barangays, with the first payment of cash grants commencing in April 2009.

66. **Implementation of the impact evaluation survey began in 2011**. Implementation was originally planned for September/October 2010 but was delayed by one year due to the administrative processes of procurement of the data collection firm. Social Weather Stations (SWS), a local organization known for its regular opinion surveys, was selected to conduct the data collection and data entry. Data collection in the RCT areas was conducted during October to November 2011 by 4 teams consisting of 11 supervisors and 164 trained field interviewers. Data encoding was conducted centrally in Manila, and all the data collected from households was entered twice by different data encoders and validated to ensure quality control. SWS completed the data encoding by March 2012.

67. **The control group was released after data collection**. Immediately after the survey teams left the municipalities after data collection, community assemblies were called to enroll the eligible beneficiaries in control barangays. Implementation of *Pantawid Pamilya* in control barangays started in December 2011, with the first payment commencing in February 2012.

Annex 4: Description of the RCT Analysis and Sample

68. **This Annex discusses the randomized control trials (RCT) analysis that was conducted for the *Pantawid Pamilya* impact evaluation and describes the survey sample.** A description of the regression discontinuity (RD) analysis that was also conducted is provided in a separate report (forthcoming).

Statistical Specifications

69. **The impact evaluation compared outcomes between barangays within the sample framework that were randomly assigned to receive *Pantawid Pamilya* and barangays assigned to be controls**. For the RCT sample, based on households eligible for *Pantawid Pamilya* benefits in treatment and control barangays, the following linear regression form is specified:

$$y_{ij} = \alpha + \beta T_j + \gamma X_{ij} + \eta_{ij} \qquad \text{(a)}$$

70. Where:

> y denotes the outcome in household (or individual) i in barangay j
> α, β, γ are fixed parameters
> *TT* is the binary variable which is equal to 1 if the household (or the individual) is in a treatment barangay and 0 if in a control barangay
> η is the random error term
> X is the age dummy added for all child-level variables, where appropriate

71. Based on this simple specification, the outcome for an eligible household living in the treatment barangay is obtained by:

$$E(y_{ij} \mid T=1) = \alpha + \beta + \gamma X_{ij} \qquad \text{(b)}$$

72. The outcome for an eligible household living in the control barangay is similarly obtained by:

$$E(y_{ij} \mid T=0) = \alpha + \gamma X_{ij} \qquad \text{(c)}$$

73. The difference between the conditional expectation for y_{ij} between eligible households in *Pantawid Pamilya* treatment barangays and control barangays is therefore summarized by the estimate of the parameter β, which can be considered as the mean intended treatment effect of the program:

$$E(y_{ij} \mid T=1) - E(y_{ij} \mid T=0) = \beta \qquad \text{(d)}$$

74.   Taking into consideration regional factors—including province-specific eligibility cutoffs[25]—and the clustered nature of the sample, municipality fixed effects regressions are included as well as all standard errors clustered at the barangay level.

Balance Test

75.   **As the study did not have a full baseline aside from the data collected to estimate the PMT scores, a balance test to assess the successfulness of the randomization was conducted using this data (the Household Assessment data collected for the NHTS-PR).** Analysis of NHTS-PR data collected prior to the implementation of *Pantawid Pamilya* in 2008 indicates that the treatment and control groups were similar in 2008. Barangay-level averages for a range of indicators (population, poverty incidence, household composition, asset ownership, housing amenities, education achievements, school enrollment, visits to health centers) were computed (Table **7**). Distributions of these indicators for the treatment and control groups were compared using both t-test and Kolmogorov-Smirnov tests, both indicating that the treatment and control groups were well-balanced.

Table 7: Balance Test Household Characteristics

Baseline survey variables	Sample Mean	Control Mean	Treatment Mean	Difference (p-value)	Kolmogorov (p-value)
Household composition:					
Household size	5.68	5.69	5.66	0.74	0.92
Children 5 years old and below	1.09	1.10	1.08	0.52	0.04
Children between 6 and 14 years old	1.65	1.64	1.65	0.86	0.64
Primary occupation: Farming and livestock	71.25	69.37	73.14	0.33	0.80
Highest educational attainment of the household heads:					
No grade completed	8.99	8.49	9.49	0.64	0.80
Some elementary school	40.99	41.97	40.00	0.42	0.35
Completed elementary school	21.76	21.77	21.75	0.99	0.92
Some high school	11.99	12.78	11.20	0.21	0.64
High school graduate	11.14	10.43	11.85	0.28	0.80
Some college	3.68	3.34	4.02	0.37	0.80
College graduate	1.84	1.74	1.94	0.64	0.92
Attendance to school:					
Attendance of children 6 to 11 years old	0.94	0.94	0.94	0.98	0.92
Attendance of children 12 to 14 years old	0.41	0.40	0.42	0.39	0.25
Housing Amenities:					
Strong roof materials	26.73	27.04	26.42	0.89	0.49
Strong wall materials	16.41	16.89	15.93	0.81	0.98
Light roof materials	53.99	52.68	55.31	0.54	0.92
Light wall materials	47.16	45.96	48.36	0.59	0.64

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[25] Provincial poverty lines were used to identify the poor through the PMT. As such, the eligibility cutoff for the program differs by province.

Owns a house and lot	32.22	32.94	31.50	0.71	0.17
House has no toilet	42.38	43.33	41.42	0.62	0.80
Household Assets:					
Electricity in house	41.00	39.62	42.38	0.54	0.49
Owns a television	17.56	17.69	17.42	0.90	0.64
Owns a Stereo/CD player	10.06	10.54	9.58	0.47	0.80
Has a telephone/cellphone	6.06	5.76	6.35	0.56	0.98
Owns a motorcycle	1.96	2.18	1.74	0.30	0.92

*** p<0.01, ** p<0.05, * p<0.1

Robustness of Results

76.   **This report presents the analysis based on Intention to Treat (ITT), found to be robust compared to program impacts assessed based on Treatment on Treated (ToT) analysis.** The ITT analysis includes all potential beneficiaries in the treatment barangays as program beneficiaries and all potential beneficiaries in the control groups as not receiving the program benefits, regardless of their actual program beneficiary status. The ToT analysis assesses the program impacts on those who are actual program beneficiaries. This complementary ToT analysis takes into account that household participation in *Pantawid Pamilya* is voluntary and that program take-up, while high, is less than universal. To assess the program impact through ToT, regressions were run using the random assignment of barangays into treatment and control as the instrumental variable (IV) on program participation. Two data sources for program participation were used: (i) data from the program's beneficiary database and (ii) self-reporting of program beneficiary status by household survey respondents. Main regressions were run using both data sources, and as seen in Table 40 to Table 45 the directions as well as the magnitude of the program impacts on all variables based on ITT and ToT were consistent, although the magnitudes of impact were slightly higher using ToT. This report focuses on the ITT results as they are arguably the more policy-relevant parameter estimate, although the consistency of results given by the average treatment effect on the treated should be noted.

The RCT Sample

77.   **In the eight municipalities selected for the impact evaluation RCT study, a total of 3,742 households were surveyed based on four Sample Groups**. The four Sample Groups were defined using the NHTS-PR database as follows (Table 8)[26]:

- 1,418 **Sample Group 1** households that were the poor households (below the PMT score) with children aged 0-14 or a pregnant mother at the time of the household assessment (the eligible group for *Pantawid Pamilya*);
- 1,137 **Sample Group 2** households that were the non-poor households (above the PMT score) with children aged 0-14 or a pregnant mother;

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[26]The sample was designed to identify spillover effects to non-beneficiary target groups, as well as to run the RD analysis on the data from RCT sample areas.

- 556 **Sample Group 3** households that were the poor households without children aged 0-14 or a pregnant mother; and
- 631 **Sample Group 4** households that were the non-poor without children aged 0-14 or a pregnant mother.

Table 8: Households Sampled, by Sample Category

Treatment	Sample 1 (Poor with eligible children)	Sample 2 (Non-poor with eligible children)	Sample 3 (Poor no eligible children)	Sample 4 (Non-poor no eligible children)
Pantawid Pamilya	714	578	291	313
Control	704	559	265	318
Total	**1418**	**1137**	**556**	**631**

78. **In this RCT study, the impact of *Pantawid Pamilya* was assessed based on comparisons of averages of indicators between Sample Group 1 households in the treatment barangays and the control barangays.** Possible impacts of the program on Sample Groups 2, 3, and 4 households will be explored in subsequent analysis that investigates the existence of program spillover effects and their effects on the design of RDD as a method for future evaluations.

Pantawid Pamilya Program Coverage in the RCT Sample

79. **Information gathered from the impact evaluation survey and information in the program Management Information System (MIS) database yielded slightly different estimates of program coverage.** Although all of the 1,418 households in Sample Group 1 were eligible to become *Pantawid Pamilya* beneficiaries in 2008, only those in treatment barangays were offered the program in 2009 by design. According to the impact evaluation survey, among the 704 households sampled in the *Pantawid* barangays, 85 percent (581) reported being beneficiaries of the program, while 1 percent (7) in the control barangays also reported being beneficiaries. According to the program MIS database, however, the control barangays did not have any beneficiary households, and 91 percent (647) of the 704 sampled households in the *Pantawid* barangays were beneficiaries of the program. Small numbers of households among Sample Groups 2, 3, and 4 (5 percent, 5 percent, and 10 percent, respectively) reported being *Pantawid Pamilya* beneficiaries, even though none of these households were program beneficiaries according to the program MIS database.

Table 9: Program Beneficiary Status Among the Poor Eligible Population

		Self Report			
		Treatment barangays		Control barangays	
		Beneficiary	Non-Beneficiary	Beneficiary	Non-Beneficiary
According to MIS database	*Beneficiary*	552 (80.8%)	78 (11.4%)	0	0
	Non Beneficiary	29 (4.2%)	24 (3.5%)	7 (1.3%)	550 (98.7%)
	TOTAL	**683**		**557**	

80. **The lower percentage of sampled households in *Pantawid Pamilya* barangays who reported being program beneficiaries may be explained in part by the fact that program participation is voluntary.** Some households identified as potential beneficiaries may have waived their right to the program. Another possibility is that through the community validation process of NHTS-PR, these households may have been taken off the list of poor households. It is

also possible that a potential beneficiary household was unaware of the community assembly where attendance is required for potential beneficiaries to sign up for the program and confirm their basic household information collected for the PMT.

81.   **Although very small in number, it is more difficult to explain why non-beneficiary households according to the program MIS reported themselves to be *Pantawid Pamilya* beneficiaries in the survey**. There is no official way for a household that was not identified as poor by the NTHS-PR to be registered as a *Pantawid Pamilya* beneficiary. It is possible that the respondents were thinking of some other program they received rather than *Pantawid Pamilya*.

82.   **Nonetheless, these results confirm that the targeting of treatment barangays was implemented as planned**. The results suggest the absence of confounding program availability in control areas and the validity of the evaluation design.

Characteristics of the Study Population

83.   **The distribution of households by province depended purely on the number of barangays in each of the eight municipalities** (Table 10). Of the 3,742 households sampled for RCT analysis, 37 percent (1,395) were in Lanao del Norte, 31 percent (1,160) in Negros Oriental, 18 percent (684) in Occidental Mindoro, and 13 percent (5.3) in Mountain Province.

Table 10: Households Sampled, by Sample Group and by Province

Province	Sample 1 (Poor with eligible children)	Sample 2 (Non-poor with eligible children)	Sample 3 (Poor with no eligible children)	Sample 4 (Non-poor with no eligible children)	Total
Lanao Del Norte	559	367	236	233	1,395
Mountain Province	184	171	62	86	503
Negros Oriental	431	365	174	190	1,160
Occidental Mindoro	244	234	84	122	684
TOTAL	**1,418**	**1,137**	**556**	**631**	**3,742**

84.   **According to the 2011 survey, the eligible group (Sample Group 1) had relatively larger households and a higher proportion of households engaged in agriculture.** These households had 6.06 household members on average, with an average of 0.85 children aged 0-5 years old, 1.7 children aged 6-14 years old, and 0.7 children aged 15-18 years old. Just over half (54 percent) of the households reported having at least one adult engaged in agriculture. All other sample group households had smaller household sizes with fewer children, with a smaller proportion of households engaged in agriculture. The proportion of Indigenous Peoples (IP) households was similar at around 13 percent for all sample groups, except for Sample 4 who were non-poor and had no children in the eligible group. A slightly higher proportion of households in the control group in all sample groups lived in the *población*, more centrally in the municipality (Table 1).

Annex 5: Description of Impact Evaluation Survey Modules

The full set of questionnaires is available for download at the DSWD website:
http://www.dswd.gov.ph

MODULES AND FORMS	MAIN RESPONDENT AND AREAS COVERED IN THE MODULE
Module A Household – Main	**PART 1:** Household head: household roster; household assessment; migration; housing characteristics; poverty and hunger; general opinions on marriage and children; social support group; labor; family agriculture and aquaculture business; engagement in fishing; family non-farm business; economic difficulties; shocks; household economy **PART 2:** Spouse of household head: household consumption; price information; exposure to banking; saving; borrowing; lending; community participation; social capital; attendance in parenting sessions; 4Ps knowledge/perceptions; governance; future expectations
Module B Household – Mother	Women younger than 50 years old and who have ever been pregnant or have ever been married or has/had a partner: reproductive history; use of prenatal, delivery and postnatal care; family planning; knowledge, aptitude, and practice; female empowerment and decision making
Module C Household – School-aged Children	PART 1: Main caregiver of the school-aged child (6-17 years old): education; expenditure for schooling PART 2: Child aged 10-17 years old: child labor; work for pay and no pay; attitudes about the future
Module D Household – Children Five Years Old	PART 1: Mother of the child and child 5 years old and below: birth registration; daycare or preschool enrollment and attendance; use of health care; feeding practices PART 2: All mother/guardian of children five years and below who takes solid food aside from breastmilk: nutritional Status; anthropometrics (for all children 5 years old and below) PART 3: Parent or guardian of the child 3 and 5 years of age: age and stages questions
Module E Service Provider – School	School Principal: school characteristics; characteristics of the principal; facilities; new student admissions; students and teachers; drop out and completion rates; national exam scores; scholarships; student attendance; teacher attendance; textbooks; schooling expenses (by parents); Parent-Teacher Committee/Association (PTA); school budget; information about Compliance Verification forms of 4Ps
Module F Service Provider – Health Facility – RHU	Rural Health Officer (Head of Rural Health Unit): facility characteristics; beds and accreditation; RHU health characteristics; list of doctors, nurses, and midwives reporting to his RHU/Health Center; fees; service hours; patients; outreach; vaccine provision and stock; basic supply; sources of funds; use of funds; information about Compliance Verification forms of 4Ps
Module G Service Provider – Barangay Health Station	Midwife in charge of the Barangay Health Station or someone who provides outreach services in the barangay: health facility characteristics; fees; patients; BHS characteristics and midwife's services; service provision at the barangay level; last three deliveries; information about Compliance Verification forms of 4Ps
Module H Service Provider – Barangay	Barangay Captain: barangay characteristics; access to transportation; availability of electricity; water and sanitation; schools; health facility; health officers; natural disasters; economic activities
Module I Local Government – Mayor	Municipal Mayor: personal characteristics; social programs; decentralization; effectiveness and efficiency; accountability; transparency; rule of law

Annex 6: Items on the Consumption Module

The Impact Evaluation used the APIS consumption module.

During the PAST SIX MONTHS, how much on the average is your actual weekly consumption on the following? (Include all food items consumed from purchases paid whether in cash or on credit, received as gifts or own-produced. Round to the nearest peso.)					
	Code	Total	In cash/ on credit	In kind	Received as gift
1. Food Consumed At Home					
a Cereal and cereal preparations (rice, corn, bread, biscuits, kur, native cakes, noodles, infant cereal, cereal-based junk foods, etc.)					
b Roots and tubers (potato, cassava, sweet potato, gabi, ubi, tugui, cassava cake, haleya, potato chips, etc.)					
c Fruits and vegetables (fresh hits, leafy veg., green/dry beans and other legumes, coconut, peanuts, fruit preparation, pickled veg., tokwa, tausi, miso, peanut, butter, etc.)					
d Meat and meat preparations (fresh chicken, fresh beef, fresh pork, corned beef, goat's meat, corned beef, luncheon meat, meat loaf, vienna sausage, longanisa, chorizo, hotdog, tocino, tapa, etc.)					
e Dairy products and eggs (milk, ice cream, butter, cheese, fresh eggs, balut, salted eggs)					
f Fish and marine products (fresh fish, shrimps, squid, shells, sardines, daing, tuyo, tinapa, bagoong, canned squid, etc.)					
g Coffee, cocoa and tea (processed, coffee beans, Milo, Ovaltine, proessed cocoa, cocoa beans, processed tea, tea leaves, etc.)					
h Non-alcoholic beverages (soft drinks, pineapple juice, orange juice, ice candy, ice drop, ice buko, etc.)					
i Food not elsewhere classified (sugar products, cooking oil, margarine, sauces, salt, other spices & seasoning, prepared meals - bought outside and eaten at home, ice, honey, etc.					
2. Food regularly consumed outside the home (meals at schools, place of work, restaurants, merienda or snacks, etc.)					
3. Alcoholic beverages (beer, tuba, basi, lambanog, brandy, whisky, rhum, etc.)					
4. Tobacco (cigarettes, cigars, betel nut, leaf and lime, chewing tobacco, leaf tobacco, etc.)					
Fuel, Transportation, Household and Personal Care Expenses During the PAST SIX MONTHS, how much on the average is your monthly expenses/consumption on the following? (Includes all expenses/consumption whether purchased or paid in cash or on credit, received as gifts or own-produced. Round to the nearest peso).					
	Code	Total	In cash/ on credit	In kind	Received as gift
1. Fuel, light and water (charcoal, firewood, LPG, kerosene/gas, electricity, candle, oils, water, etc.)					
2. Transportation and communication (bus, jeepney, tricycle, air transport fare, water transport fare, gasoline/diesel, driver's salary, telephone bills, postage stamps, telegrams, driving lesson fees, feeds for animals used for transport, etc.)					
3. Household operations (laundry soap and detergent, starch, floor wax, insect spray/mt and mosquito killer/coil, cleanser/scouring pad, air freshener/deodorizer, fluorescent/incandescent bulbs, matches, brooms, husks, battery, etc.)					
4. Personal care and effects (cleansing cream, body deodorant, lotion, baby oil, toilet/bath soap, tissue paper, toothpaste, sanitary napkin, shampoo, jewelry, handbag, wallet, wristwatch, haircut, manicure/ pedicure, etc.)					

Clothing, Education, Medicines, Taxes and Others During the PAST SIX MONTHS, how much on the average is your actual disbursements/expenditures on the following? (Include expenditures whether purchased/paid for in cash or on credit, received as gifts. Round to the nearest peso).			
Item	Code	In Cash/ In Credit	Received as Gifts
1. Clothing, footwear and other wear (clothing & ready-made apparel, footwear, sewing materials, accessories, service fees)			
2. Education (tuition fees, graduation fees, allowance for family member studying away from home, books, school supplies, etc.)			
3. Recreation (children bicycle & playcars, dolls, balls, mahjong sets, admission tickets to movies, rental of video tapes, food for pets, etc.)			
4. Medical care (drugs & medicines, hospital room charges, medical and dental charges, other medical goods & supplies, herbal medicines etc.)			
5. Non-durable furnishing (dinnerware, glassware, silverware, plastic ware, kitchen utensils/knives, mosquito net, pillow, pillow cases, etc.			
6. Durable furnishings (refrigerator, cooking range/ stove, washing machine, T.V., Cassette recorder, electric fan, etc.)			
7. Taxes (income tax, real estate tax, car registration, toll fees & other license, residence certificate, etc.)			
8. House maintenance and repair (carpentry materials, electrical materials, masonry, paint, plumbing materials, etc.)			
9. Special occasions (birthday, wedding, baptismal, anniversary, family reunion, etc.)			
10. Gifts and contributions to others (gifts and assistance to private individuals outside the family, contribution to church, donations, etc.)			
11. Other expenditures (life insurance & retirement premiums, SSS, GSIS, losses due to fire & theft, legal fees, membership fees, medicare, pre-need plan, etc.)			
12. Other disbursements			
a. Purchase/amortization of real property			
b. Payments of cash loan (principal)			
c. Installments for appliances, etc. bought before February 2011			
d. Installments for personal transport bought before February 2011			
e. Loans granted to persons outside the family			
f. Amounts deposited in banks/investments			
g. Other disbursements (major repair and construction of house, withholding taxes from current income, payment for goods/services acquired/ availed of outside reference period, back rentals paid during the reference period, etc.)			

Annex 7: Environmental and Supply-Side Factors in the Study Areas

85. **This section presents the findings from interviews with the Municipal Mayor;[27] the Village Captain; the local health facilities and their midwives who provide most of the maternal, neonatal, and child health (MNCH) services; and school principals.** The study found that access to schools at the barangay level seemed more standardized across the areas covered by the survey, perhaps reflecting the municipal mayors' reporting of having enough resources and personnel for service delivery in education. In contrast, the study found wide variation in the level of access to and provision of health services, which may partially explain the heterogeneity in *Pantawid* program impacts across regions.

Municipality Characteristics

86. **Among the eight municipalities surveyed, one-third reported having non-food subsidy programs such as for health and education, while all mayors reported having *Pantawid Pamilya* as well as the PhilHealth Indigent program.** Only half of the mayors felt they had enough budget to implement health programs. Half said they had enough infrastructure for health, and two-thirds thought they had enough professional officials for service delivery. Municipalities seemed to fare better in the implementation of education programs: two-thirds said they had enough budget, two-thirds said they had enough infrastructure for education, and three-quarters said they had enough professional officials.

87. When comparing the number of municipalities with different social programs and types of programs, Occidental Mindoro appear to have the most complete variation of social programs implemented in the municipalities at the time of the survey. Mountain Province and Lanao del Norte where the provinces with fewer municipalities with different social programs.

Table 11: Number of Municipalities Implementing Social Programs

Province	NFA Rice Subsidy		Food-For School		PhilHealth Indigent Program		Pantawid Pamilya		KALAHI-CIDSS	
	Yes	Yes in FY2011	Yes	Yes in FY2011	Yes	Yes in FY2011	Yes	Yes in FY2011	Yes	Yes in FY2011
Negros Oriental	2	1	1	1	2	2	2	2	1	1
Lanao Del Norte	2	0	2	1	2	0	2	0	2	2
Mountain Province	1	1	0	0	2	1	2	0	2	0
Occidental Mindoro	2	2	2	2	2	2	2	2	2	2

Province	Non-Food Subsidy		Improving Access to Financial Services		Transportation Infrastructure in Rural areas		Improving Business Climate for Small Enterprise		Increasing Regional Minimum Salary	
	Yes	Yes in FY2011	Yes	Yes in FY2011	Yes	Yes in FY2011	Yes	Yes in FY2011	Yes	Yes in FY2011
Negros Oriental	2	2	1	1	2	2	2	2	2	2
Lanao Del Norte	2	0	1	0	2	2	1	1	2	2
Mountain Province	1	1	0	0	1	0	2	0	0	0
Occidental Mindoro	2	2	2	2	2	2	1	1	1	1

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[27] Interviews were carried out with the eight municipal mayors of the municipalities included in the study. All of the mayors were male, with an average age of 53 years old.

Barangay Characteristics

88. **The characteristics of the 130 barangays included in the study varied considerably.** The population size ranged from an average of 1,596 people in Negros Oriental to 3,139 in Mountain Province. The proportion of IP population in the village according to the Barangay Captain also varied widely, from the lowest of 10.5 percent in Negros Oriental to the highest of 100 percent in Mountain Province.[28]

89. **At the village level, levels of access to health and education facilities seemed most problematic in Lanao del Norte, with the lowest average number of elementary schools and high schools in which the children in the village were enrolled.**[29] In contrast, Mountain Province had the largest concentration of schools in which children enrolled from the specific village. Although all villages in Mountain Province had a Barangay Health Station (BHS) with a midwife providing basic health services, the distance to the closest Rural Health Unit (RHU) was by far the longest. Access to basic MNCH services seemed to be most problematic in Lanao del Norte, followed by Negros Oriental with about 1 in 6 villages in these provinces not having a midwife to provide regular services in the village. Nevertheless, it must be noted that given the difficult geographic conditions in Mountain Province, one cannot assume that access to schools and health facilities is less problematic at the household level than in other provinces.

Table 12: Village Characteristics

Indicators	Negros Oriental (N=38)	Lanao del Norte (N=52)	Mountain Province (N=17)	Oriental Mindoro (N=23)
Avg. population size	1,596	2,225	3,139	2748
Avg. number of households	389	397	390	499
Avg. % of IP population	10.5%	30.8%	100%	56.5%
Avg. number of daycare centers in the village	1.32	1.38	4.65	3
Avg. number of elementary level schools in the village	1.05	0.94	2.53	1.96
Avg. number of high schools in the village	0.21	0.17	0.77	0.22
% with a health facility (BHS, RHU, or hospital) in the village	47%	58%	100%	74%
Avg. time to BHS if none in village (minutes)	31	24	-	10
Avg. distance to BHS if none in village (kms)	5.1	3.8	-	3.0
Avg. time to RHU if none in village (minutes)	33	25	87	32
Avg. distance to RHU if none in village (kms)	7.67	6.04	14	8.0
% with a doctor who provides services in village	34%	29%	19%	61%
% with a nurse who provides services in village	39%	56%	44%	65%
% with a midwife who provides services in village	86%	83%	100%	100%
% with a traditional midwife servicing in village	76%	62%	63%	48%
% experienced flooding in village in last two years	47%	38%	18%	65%
% experienced earthquake in village in last two years	97%	17%	24%	70%
% experienced drought in village in last two years	26%	12%	29%	43%

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[28] This is an interesting contrast with the households' self-identification of their IP status. By province, Negros Oriental had the lowest proportion of households identifying themselves as being IP (1.9 percent), and the highest was in Mountain Province (70.7 percent). In Lanao del Norte, 4.5 percent of households identified themselves as being IP.

[29] These schools, however, are not necessarily physically located in the village.

Health Facility Characteristics

90.   **The sample of health facilities in the survey consisted of two types: one rural health unit per municipality and the 130 midwives who report to these RHUs**. The midwives were sampled randomly among the midwives who provide services (or outreach services) in the 130 barangays included in the study. These samples of RHUs and midwives did not fully cover the health services in these provinces but are presented here as they may partially explain the regional differences in program impacts described above.

91.   **The study findings clearly indicate that health service providers in Lanao del Norte were by far the most stretched, which may partially explain the lack of program impact on health indicators in this province**. The two RHUs in Lanao del Norte were the least resourced in terms of medical personnel as well as finances, yet they were seeing the largest number of patients per week and were expected to cover the largest number of villages and population in their respective catchment areas. Only one of the two RHUs in Lanao del Norte was PhilHealth-accredited, probably reflecting the lack of a doctor at one of the RHUs surveyed. The RHUs in Oriental Mindoro were also stretched, with large numbers of patients seen per week and small numbers of midwives per population, and again only one of the two RHUs was PhilHealth-accredited.

Table 13: Characteristics of Rural Health Units

Indicators	Negros Oriental (N=2)	Lanao del Norte (N=2)	Mountain Province (N=2)	Oriental Mindoro (N=2)
% accredited by PhilHealth	100%	50%	100%	50%
% accredited by Sentrong	100%	50%	50%	0
Average number of doctors	1	0.5	1	1.5
Average number of nurses	2	3	4	6
Average number of midwives	9.5	10	11	5.5
Midwife population ratio (for 10,000 people)	3.2	2.4	7.5	2.5
Average number of patients in the past week	24	57	41.5	151
Average revenues in 2010	2,082,800	245,900	22,600,000	3,665,000
Average expenses in 2010	867,879	1,111,660	523,771	956,500
Average net profit in 2010	687,810	-619,860	22,100,000	2,708,500
Average number of villages in catchment area	19	26	8.5	11.5
Average population size in catchment area	29,500	43,280	17,604.5	23,362

92.   **The study found that the characteristics of the midwives and the services they provided in the villages varied considerably by province (Table 14).** Negros Oriental and Lanao del Norte had midwives with an average age of about 50 years old, while the midwives in Mountain Province and Oriental Mindoro were younger at about 41 years old. The average number of patients seen in the village in the previous one week varied significantly from province to province, although the ranges of the number of patients seen were also wide. What is striking is that the midwives in Lanao del Norte seemed to be stretched, on average providing services in 3.8 villages and serving the largest patient load per village, with the smallest amount of support from the Barangay Health Workers (BHWs). Midwives in Lanao del Norte spent the shortest amount of time per week per village. However, as indicated by the average (and the

median) number of days lapsed since the last delivery the midwives assisted (a proxy for the frequency of deliveries they assist), midwives in both Lanao del Norte and Oriental Mindoro assisted fewer deliveries than midwives in other provinces. Again, the shortage of basic maternal and child health service delivery may have contributed to the small *Pantawid* program impacts on health indicators in Lanao del Norte.

Table 14: Services Provided by Midwives in the Villages

Indicators	*Negros Oriental (N=38)*	*Lanao del Norte (N=52)*	*Mountain Province (N=17)*	*Oriental Mindoro (N=23)*
Average age of midwives	49.5	50.5	41.8	41.2%
% of midwives originally from the municipality	60.5%	86.5%	94.1%	65.2%
Average number of patients seen in the village during the previous one week (range)	27.0 (3-136)	42.7 (0-527)	35.7 (2 – 60)	30.0 (0 – 110)
Average number of villages she serves (range)	3.6 (1-6)	3.8 (1-7)	1.0 (1)	3.5 (1 – 7)
Average number of hours spent per week in sampled barangay (non-*Pantawid*)	14.7	4.7	29	13.6
Average number of hours spent per week in sampled barangay (*Pantawid*)	9.9	6.2	42.5	12.4
Average number of Barangay Health Workers	6.0	5.0	11.5	14.6
Average number of days since last delivery assisted (median)	36.8 (12)	149 (55)	21.1 (18.5)	99 (53)
% used partograph in the previous three deliveries assisted	45.5%	17.6%	42.8%	28.4%

School Characteristics

93.   **Public elementary and high schools were also visited as part of the survey**. A total of 149 schools were visited, and the school principals were interviewed. Of the 149 schools, 10 schools were incomplete primary schools, 10 were complete primary schools (from grades 1 to 4), 100 schools were complete elementary (from grades 1 to 6), and 29 were complete high schools. Again, the data presented here do not represent the conditions of all schools in the provinces or regions, but they do reflect the conditions of schools that the children in the study attended.

Table 15: Types and Numbers of School Surveyed

Types of schools surveyed	*Number of schools surveyed*
Incomplete primary	10
Complete primary (grades 1 – 4)	10
Complete elementary (grades 1 – 6)	100
Complete high school	29
Total	**149**

94.   **At the elementary school level, the condition of schools as well as dropout and repetition rates varied considerably by province**. The student-teacher ratio and the student-classroom ratios did not differ considerably by province, except for the lower ratios in Mountain Province. According to school reports, the completion rates were highest in Lanao del Norte at 89.9 percent and lowest in Negros Oriental at 72.5 percent, but Negros Oriental had a relatively

high dropout rate (2.89 percent) and repetition rate (7.29 percent) compared to the other provinces. The average NAT scores reported by schools in Lanao de Norte were the highest, while the scores reported by schools in Mountain Province indicated that student performance in this province was lagging behind (Table 16).

95.   **The study found a similar situation in the condition of high schools, although the dropout rates and repetition rates were higher than in elementary level schools while graduation rates were lower**. The average NAT scores reported by high schools were also highest in Lanao del Norte and lowest in Mountain Province (Table 16).

Table 16: Conditions and Performance of Schools Surveyed

Indicators	*Negros Oriental*	*Lanao del Norte*	*Mountain Province*	*Oriental Mindoro*
Elementary level	*N=32*	*N=45*	*N=21*	*N=19*
Student-teacher ratio	33.03	35.5	27.4	30.8
Student-classroom ratio	33.9	34.3	32.4	36.6
Completion rate	72.5%	89.9%	79.3%	87.7%
Dropout rate	2.89%	1.73%	0.36%	1.12%
Repetition rate	7.29%	6.34%	5.67%	2.52%
Graduation rate	87.3%	94.1%	98.3%	99.4%
Average NAT score–English (Grade 6)	76.8	79.1	45.7	71.5
Average NAT score–Science (Grade 6)	76.7	76.8	41.6	69.2
Average NAT score–Math (Grade 6)	77.7	80.3	49.8	73.7
Average NAT score–Filipino (Grade 6)	78.8	79.6	63.8	77.2
Average NAT score–Social Science (Grade 6)	78.6	77.3	53.6	79.1
High School level	*N=6*	*N=7*	*N=11*	*N=5*
Student-teacher ratio	32.47	35.13	20.52	40.7
Student-classroom ratio	56.39	51.26	41.2	56.4
Completion rate	64.1%	74.9%	71.4%	73.5%
Dropout rate	3.67%	4.21%	3.73%	6.0%
Repetition rate	4.95%	16.25%	11.58%	3.63%
Graduation rate	98.1%	96.4%	91.1%	77.0%
Average NAT score – English (Year 2)	45.3	66.5	36.4	45.8
Average NAT score – Science (Year 2)	43.6	64.3	37.7	45.7
Average NAT score – Math (Year 2)	42.4	63.0	44.9	51.3
Average NAT score – Filipino (Year 2)	56.8	64.0	48.4	61.2
Average NAT score – Social Science (Year 2)	48.9	69.9	43.4	55.6

Table 17: Program Impact on Pre-School/Daycare Enrollment and Attendance

	Enrolled in day care or preschool (3-5yrs)	Day care or preschool attendance 85% of days
	coef/se	coef/se
Program impact	0.103**	0.066
	(0.040)	(0.043)
Age in months	0.018***	0.006***
	(0.002)	(0.002)
_cons	-0.286***	0.409***
	(0.100)	(0.107)
Control_mean	0.650	0.733
Treatment_mean	0.762	0.782
Number of observations	698	468

note: *** p<0.01, ** p<0.05, * p<0.1

Table 18: Program Impact on Education (6 to 17 years old)

	Enrolled in school 6-11yrs	Enrolled in school 12-14yrs	Enrolled in school 15-17yrs	Attended >85% 6-11yrs	Attended >85% 12-14yrs	Attended >85% 15-17yrs	Started elementary at age 6 among 6-9yrs	Children 12-15yrs are in high school	Years of school repeated	Years of schooling
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	0.045***	0.039	-0.027	0.038**	0.049**	0.076***	-0.036	0.003	-0.003	0.060
	(0.014)	(0.024)	(0.041)	(0.017)	(0.020)	(0.021)	(0.031)	(0.035)	(0.070)	(0.086)
Age in years	0.003	-0.046***	-0.114***	-0.001	0.009	0.044***	-0.160***	0.216***	0.024**	0.825***
	(0.004)	(0.017)	(0.022)	(0.003)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.010)
_cons	0.909***	1.449***	2.446***	0.915***	0.793***	0.204	1.811***	-2.372***	1.102***	-4.178***
	(0.034)	(0.220)	(0.348)	(0.032)	(0.168)	(0.207)	(0.088)	(0.162)	(0.148)	(0.112)
Control_mean	0.933	0.845	0.623	0.912	0.911	0.906	0.616	0.531	1.398	5.391
Treatment_mean	0.979	0.885	0.582	0.945	0.958	0.985	0.576	0.486	1.376	5.308
Number of observations	1,570	809	713	1,463	680	410	1,008	865	791	3,006

note: *** p<0.01, ** p<0.05, * p<0.1

Table 19: Program Impact on Use of Maternal Health Services (for pregnancies in the previous three years)

	Received antenatal care at least 4 times	Number of times received antenatal care	Antenatal care quality index	Postnatal care at facility w/in 24 hrs	Postnatal care at home w/in 24 hrs	Delivery assisted by doctor/ midwife	Facility-based delivery
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	0.105**	0.616*	0.628***	0.101	0.096**	0.037	0.002
	(0.047)	(0.320)	(0.176)	(0.065)	(0.038)	(0.053)	(0.039)
_cons	0.537***	4.173***	5.012***	0.646***	0.142***	0.413***	0.261***
	(0.037)	(0.280)	(0.128)	(0.047)	(0.025)	(0.040)	(0.028)
Control_mean	0.542	4.200	5.017	0.636	0.143	0.417	0.263
Treatment_mean	0.637	4.764	5.636	0.755	0.236	0.446	0.261
Number of observations	672	672	631	182	540	683	683

note: *** p<0.01, ** p<0.05, * p<0.1

Table 20: Program Impact on Maternal and Neonatal Health (for pregnancies in the previous three years)

	Suffered night blindness during pregnancy	Perceived size of newborn at birth
	coef/se	coef/se
Program impact	0.002	0.006
	(0.028)	(0.062)
_cons	0.112***	2.940***
	(0.020)	(0.039)
Control_mean	0.112	2.953
Treatment_mean	0.114	2.935
Number of observations	681	653

note: *** p<0.01, ** p<0.05, * p<0.1

Table 21: Program Impact on Malnutrition

	z-score weight-for-age	z-score height-for-age	z-score weight-for-height	Malnutrition weight-for-age:6-36months	Severe malnutrition weight-for age:6-36months	Wasting weight-for height:6-36months	Severe wasting weight-for-height:6-36months	Stunting height-for-age:6-36months	Severe stunting height-for-age:6-36months
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	-0.002	-0.202	0.081	-0.026	0.011	0.045	0.027	-0.039	-0.101**
	(0.099)	(0.207)	(0.142)	(0.048)	(0.029)	(0.034)	(0.021)	(0.052)	(0.043)
Age in months	-0.007**	-0.013**	0.010**	0.005**	-0.000	-0.006***	-0.001	0.016***	0.012***
	(0.003)	(0.006)	(0.004)	(0.003)	(0.001)	(0.002)	(0.001)	(0.003)	(0.002)
_cons	-1.008***	-1.547***	-0.483***	0.184***	0.091***	0.221***	0.064**	0.192***	0.006
	(0.129)	(0.257)	(0.186)	(0.058)	(0.031)	(0.046)	(0.027)	(0.060)	(0.044)
Control_mean	-1.213	-1.950	-0.168	0.287	0.085	0.108	0.036	0.497	0.240
Treatment_mean	-1.232	-2.218	-0.047	0.267	0.094	0.143	0.060	0.473	0.147
Number of observations	920	896	868	390	390	349	349	351	351

note: *** p<0.01, ** p<0.05, * p<0.1

Table 22: Program Impact on Feeding Practices

	Fed eggs	Fed meat	Fed fish	Fed vegetables	Initiated breastfeeding w/in 24 hrs of birth	Exclusive breasfeeding for 6 months
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	0.091***	0.001	0.042*	-0.006	-0.030	-0.046
	(0.035)	(0.036)	(0.025)	(0.021)	(0.031)	(0.042)
Age in months	0.001*	0.001*	0.002***	0.003***	-0.002**	0.001
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
_cons	0.637***	0.448***	0.743***	0.761***	0.808***	0.560***
	(0.035)	(0.042)	(0.032)	(0.030)	(0.028)	(0.049)
Control_mean	0.691	0.511	0.852	0.896	0.745	0.574
Treatment_mean	0.773	0.507	0.880	0.894	0.724	0.535
Number of observations	1,071	1,070	1,071	1,069	1,130	643

note: *** p<0.01, ** p<0.05, * p<0.1

Table 23: Program Impact on Use of Child Health Services

	Regular weighing according to age	Took deworming pills	Took Vitamin A	BCG	Measles	Sought treatment any illness
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	0.150***	0.067**	0.062**	0.030	0.036	0.132***
	(0.030)	(0.032)	(0.029)	(0.027)	(0.026)	(0.035)
Age in months	0.004***	0.010***	-0.001	0.001*	0.006***	-0.000
	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)	(0.001)
_cons	0.034	0.154***	0.774***	0.855***	0.586***	0.416***
	(0.025)	(0.031)	(0.034)	(0.025)	(0.034)	(0.034)
Control_mean	0.169	0.553	0.749	0.880	0.804	0.397
Treatment_mean	0.333	0.633	0.806	0.911	0.842	0.543
Number of observations	1,133	1,155	1,086	1,151	1,113	1,113

note: *** p<0.01, ** p<0.05, * p<0.1

Table 24: Program Impact on Deworming of School-Aged Children

	Deworm pills offered 6-14yrs	Took deworm pills 6-14yrs	Took >1 deworm pill 6-14yrs
	coef/se	coef/se	coef/se
Program impact	0.042**	0.047**	0.093***
	(0.020)	(0.022)	(0.028)
Age in years	-0.026***	-0.024***	-0.008*
	(0.004)	(0.004)	(0.004)
_cons	1.064***	0.987***	0.348***
	(0.039)	(0.044)	(0.047)
Control_mean	0.799	0.745	0.268
Treatment_mean	0.845	0.796	0.362
Number of observations	2,158	2,157	2,140

note: *** p<0.01, ** p<0.05, * p<0.1

Table 25: Program Impact on Household Expenditures 1

	Ln household consumption per capita	Ln consumption on education per capita	Ln consumption on medical per capita	Ln consumption on alcohol	Ln consumption on gambling
	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	0.027	0.317**	0.289*	-0.331***	-0.065
	(0.037)	(0.129)	(0.149)	(0.092)	(0.056)
_cons	9.428***	3.969***	3.043***	1.276***	0.160***
	(0.026)	(0.086)	(0.099)	(0.069)	(0.046)
Control_mean	9.444	3.998	3.077	1.286	0.160
Treatment_mean	9.438	4.256	3.298	0.936	0.094
Number of observations	1,418	1,415	1,415	1,417	1,417

note: *** p<0.01, ** p<0.05, * p<0.1

Table 26: Program Impact on Household Expenditures 2

	Ln consumption on cereals	Ln consumption on roots	Ln consumption on fruits	Ln consumption on meat	Ln consumption on dairy	Ln consumption on fish	Ln consumption on coffee	Ln consumption on non-alcoholic beverages	Ln consumption on other food	Ln consumption on food outside home	Ln consumption on tobacco
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	-0.069	0.063	0.017	0.079	0.324***	-0.074	0.103	0.001	-0.055	0.144	-0.084
	(0.051)	(0.106)	(0.090)	(0.122)	(0.106)	(0.086)	(0.093)	(0.093)	(0.066)	(0.113)	(0.103)
_cons	5.823***	2.196***	3.509***	3.176***	2.642***	4.404***	2.650***	1.639***	3.683***	1.774***	1.721***
	(0.033)	(0.077)	(0.062)	(0.092)	(0.081)	(0.058)	(0.067)	(0.071)	(0.042)	(0.082)	(0.082)
Control_mean	5.830	2.193	3.531	3.203	2.674	4.419	2.683	1.661	3.705	1.816	1.751
Treatment_mean	5.747	2.262	3.505	3.227	2.934	4.315	2.720	1.617	3.606	1.875	1.606
Number of observations	1,417	1,417	1,417	1,417	1,416	1,417	1,416	1,417	1,417	1,417	1,417

note: *** p<0.01, ** p<0.05, * p<0.1

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Table 27: Program Impact on Expenditures on Schooling per Child

	Ln total expenditures on schooling 6-17yrs	Ln expenditures on schooling 6-11yrs	Ln expenditures on schooling 12-14yrs	Ln expenditures on schooling 15-17yrs	Ln expenditures on school tuition fees 6-17yrs	Ln expenditures on exam fees 6-17yrs	Ln expenditures on extracurricular activities 6-17yrs	Ln expenditures on supporting materials 6-17yrs	Ln expenditures on uniforms 6-17yrs	Ln expenditures on books 6-17yrs	Ln expenditures on snacks 6-17yrs
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	0.333**	0.205**	0.085	0.230	0.276**	0.218*	0.191*	0.206	0.671***	0.074*	0.320*
	(0.141)	(0.088)	(0.111)	(0.149)	(0.135)	(0.122)	(0.106)	(0.129)	(0.163)	(0.039)	(0.167)
Age in years	-0.188***	0.057**	0.220***	0.105	-0.016	0.007	0.034***	-0.143***	-0.047**	0.006	-0.130***
	(0.022)	(0.023)	(0.059)	(0.132)	(0.018)	(0.017)	(0.011)	(0.017)	(0.018)	(0.006)	(0.022)
_cons	8.207***	6.484***	4.662***	6.146***	3.529***	1.660***	0.479***	5.803***	3.577***	0.077	6.388***
	(0.256)	(0.231)	(0.762)	(2.050)	(0.226)	(0.207)	(0.135)	(0.208)	(0.245)	(0.069)	(0.282)
Control_mean	6.057	6.994	7.518	7.828	3.350	1.737	0.879	4.163	3.051	0.144	4.903
Treatment_mean	6.402	7.156	7.596	8.012	3.613	1.959	1.056	4.381	3.702	0.214	5.223
Number of observations	3,084	1,494	694	429	3,098	3,098	3,098	3,098	3,098	3,098	3,098

note: *** p<0.01, ** p<0.05, * p<0.1

Table 28: Program Impact on Social Services

	Is covered by PhilHealth or PhilHealth Indigent
	coef/se
Program impact	0.108***
	(0.030)
_cons	0.669***
	(0.021)
Control_mean	0.669
Treatment_mean	0.778
Number of observations	1,416

note: *** p<0.01, ** p<0.05, * p<0.1

Table 29: Program Impact on Assets 1

	TV	VTR/VHS/DVD	CD player	Air conditioning	Sala set/living room	Dining set	Car/jeep	Telephone / cellphone	Personal computer	Microwave oven	Motorcycle	Durable assets index
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	-0.013	0.000	-0.036*	-0.004	0.003	0.022	-0.004	-0.009	-0.001	0.000	0.009	-0.012
	(0.031)	(0.026)	(0.022)	(0.004)	(0.015)	(0.014)	(0.004)	(0.026)	(0.004)	(0.002)	(0.017)	(0.113)
_cons	0.375***	0.219***	0.213***	0.007*	0.079***	0.067***	0.007**	0.473***	0.008***	0.001	0.109***	1.674***
	(0.022)	(0.018)	(0.017)	(0.004)	(0.010)	(0.010)	(0.003)	(0.019)	(0.003)	(0.001)	(0.013)	(0.078)
Control_mean	0.382	0.224	0.213	0.007	0.081	0.069	0.007	0.478	0.008	0.001	0.112	1.700
Treatment_mean	0.355	0.214	0.178	0.003	0.081	0.087	0.003	0.460	0.007	0.001	0.115	1.635
Number of observations	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418	1,418

note: *** p<0.01, ** p<0.05, * p<0.1

Table 30: Program Impact on Assets 2

	Poultry	Number of poultries	Pig	Number of pigs	Goat	Number of goats	Cow	Number of cows	Horse	Number of horses	Owns any livestock
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact	-0.046	-0.295	-0.056*	-0.090	0.036	0.135**	-0.015	-0.024	-0.038**	-0.049**	-0.050*
	(0.033)	(0.374)	(0.033)	(0.111)	(0.027)	(0.067)	(0.035)	(0.075)	(0.019)	(0.024)	(0.029)
_cons	0.628***	3.944***	0.458***	0.938***	0.148***	0.280***	0.315***	0.517***	0.071***	0.088***	0.789***
	(0.025)	(0.257)	(0.026)	(0.091)	(0.019)	(0.039)	(0.025)	(0.054)	(0.016)	(0.020)	(0.021)
Control_mean	0.623	3.941	0.457	0.943	0.143	0.270	0.311	0.513	0.069	0.085	0.786
Treatment_mean	0.587	3.652	0.403	0.842	0.190	0.425	0.303	0.498	0.034	0.041	0.741
Number of observations	1,418	1,418	1,418	1,418	1,418	1,415	1,417	1,415	1,418	1,417	1,418

note: *** p<0.01, ** p<0.05, * p<0.1

Table 31: Program Impact on Savings and Having a Bank Account

	Has savings	Ln savings amount	Has a bank account
	coef/se	coef/se	coef/se
Program impact	0.037	0.236	0.010
	(0.024)	(0.156)	(0.017)
_cons	0.182***	1.153***	0.094***
	(0.016)	(0.100)	(0.012)
Control_mean	0.187	1.189	0.095
Treatment_mean	0.214	1.353	0.102
Number of observations	1,394	1,405	1,390

note: *** p<0.01, ** p<0.05, * p<0.1

Table 32: Program Impact on Savings and Having a Bank Account (Provincial Heterogeneity)

	Has savings	Ln savings amount	Has a bank account
	coef/se	coef/se	coef/se
Program impact on NO	0.099***	0.593***	0.017
	(0.028)	(0.167)	(0.013)
Program impact on LdN	-0.120***	-0.741***	-0.041*
	(0.046)	(0.278)	(0.024)
Program impact on MP	-0.009	0.101	0.135***
	(0.085)	(0.589)	(0.051)
Program impact on OM	-0.073	-0.439	-0.048
	(0.077)	(0.543)	(0.074)
_cons	0.181***	1.149***	0.094***
	(0.016)	(0.096)	(0.011)
Control_NO	0.084	0.373	0.010
Treatment_NO	0.176	0.937	0.027
Control_LdN	0.176	1.119	0.081
Treatment_LdN	0.150	0.945	0.055
Control_MP	0.247	1.588	0.041
Treatment_MP	0.342	2.304	0.198
Control_OM	0.336	2.363	0.325
Treatment_OM	0.351	2.441	0.292
Number of observations	1,394	1,405	1,390

note: *** p<0.01, ** p<0.05, * p<0.1

Table 33: Program Adult Labor

	Worked at least one hour past 7 days	Hours of work in a week past 7 days	Number hours worked past 7 days	Looked for job past 7 days
	coef/se	coef/se	coef/se	coef/se
Program impact	0.002	0.286	0.201	-0.011
	(0.017)	(1.286)	(1.297)	(0.010)
_cons	0.619***	41.272***	42.310***	0.036***
	(0.013)	(0.887)	(0.845)	(0.007)
Control_mean	0.619	41.543	42.563	0.037
Treatment_mean	0.621	41.277	42.253	0.024
Number of observations	4,006	2,208	2,387	1,501

note: *** p<0.01, ** p<0.05, * p<0.1

Table 34: Fertility Rates in the Last Three Years by Age Group, by Treatment and Control

	Fertility Rate (95% Confidence Interval)	
Age Groups	*Pantawid* barangay	Non-*Pantawid* barangay
15 to 19 years old	0.204 (0.125 - 0.283)	0.158 (0.055 - 0.261)
20 to 24 years old	0.257 (0.204 - 0.309)	0.221 (0.157 - 0.284)
25 to 29 years old	0.200 (0.157 - 0.243)	0.248 (0.202 -0.293)
30 to 34 years old	0.169 (0.121 - 0.217)	0.133 (0.092 -0.174)
35 to 39 years old	0.111 (0.071 - 0.150)	0.104 (0.070 - 0.137)
40 to 44 years old	0.076 (0.048 - 0.104)	0.063 (0.037 - 0.090)
45 to 49 years old	0.018 (-0.006 - 0.043)	0.018 (-0.002 -0.038)
Total Fertility Rate	5.171 (4.590 - 5.752)	4.724 (4.013 - 5.434)

Table 35: Program Impact on Household Expenditures 1 (Provincial Heterogeneity)

	Ln household consumption per capita	Ln consumption on education per capita	Ln consumption on medical per capita
	coef/se	coef/se	coef/se
Program impact on NO	0.092*	0.812***	0.410
	(0.054)	(0.196)	(0.270)
Program impact on LdN	-0.116	-0.738***	0.024
	(0.080)	(0.276)	(0.351)
Program impact on MP	-0.176	-1.129***	-0.534
	(0.134)	(0.391)	(0.618)
Program impact on OM	0.020	-0.339	-0.358
	(0.110)	(0.421)	(0.391)
_cons	9.427***	3.962***	3.040***
	(0.026)	(0.082)	(0.098)
Control_NO	8.993	2.919	2.011
Treatment_NO	9.083	3.726	2.429
Control_LdN	9.590	3.998	3.165
Treatment_LdN	9.560	4.069	3.597
Control_MP	9.617	5.690	3.771
Treatment_MP	9.502	5.370	3.611
Control_OM	9.701	4.437	4.037
Treatment_OM	9.804	4.914	4.071
Number of observations	1,418	1,415	1,415

note: *** p<0.01, ** p<0.05, * p<0.1

Table 36: Program Impact on Household Expenditures 2 (Provincial Heterogeneity)

	Ln consumption on cereals	Ln consumption o roots	Ln consupmt ion on fruits	Ln consumpt ion on meat	Ln consumpt ion on dairy	Ln consumpt ion on fish	Ln consupmt ion on coffee	Ln consumpt ion on non-alcoholic beverages	Ln consumpt ion on other food	Ln consumpt ion onfood outside home	Ln consumpt ion on tobacco
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact on NO	-0.083	0.005	-0.040	0.593***	0.585***	-0.061	0.436**	0.432***	0.087	0.389**	-0.038
	(0.079)	(0.208)	(0.163)	(0.156)	(0.155)	(0.157)	(0.186)	(0.129)	(0.082)	(0.174)	(0.163)
Program impact on LdN	0.023	-0.057	0.188	-0.874***	-0.512**	-0.050	-0.642***	-0.946***	-0.243*	-0.498**	-0.035
	(0.117)	(0.257)	(0.213)	(0.271)	(0.235)	(0.203)	(0.234)	(0.184)	(0.145)	(0.253)	(0.246)
Program impact on MP	-0.196	0.099	-0.365	-0.801**	-0.354	-0.222	-0.439	-0.458	-0.402**	-0.469	-0.345
	(0.170)	(0.336)	(0.337)	(0.314)	(0.345)	(0.340)	(0.294)	(0.287)	(0.195)	(0.303)	(0.295)
Program impact on OM	0.173	0.394	0.175	-0.377	-0.072	0.206	-0.129	0.013	0.036	0.074	0.077
	(0.137)	(0.357)	(0.245)	(0.340)	(0.307)	(0.243)	(0.249)	(0.288)	(0.181)	(0.373)	(0.294)
_cons	5.823***	2.198***	3.510***	3.169***	2.639***	4.404***	2.647***	1.635***	3.681***	1.772***	1.720***
	(0.032)	(0.076)	(0.061)	(0.088)	(0.079)	(0.058)	(0.065)	(0.065)	(0.041)	(0.080)	(0.081)
Control_NO	5.645	2.571	2.949	2.329	1.760	3.995	1.735	0.865	3.095	0.762	0.964
Treatment_NO	5.567	2.569	2.903	2.930	2.354	3.934	2.146	1.298	3.179	1.142	0.904
Control_LdN	5.831	1.644	3.553	3.337	2.849	4.717	2.889	2.055	3.705	1.525	1.842
Treatment_LdN	5.768	1.597	3.709	3.032	2.903	4.596	2.677	1.535	3.547	1.417	1.772
Control_MP	6.077	2.751	4.018	4.050	3.168	3.907	2.911	1.950	4.290	2.553	2.609
Treatment_MP	5.792	2.864	3.582	3.796	3.334	3.572	2.849	1.861	3.939	2.401	2.146
Control_OM	5.932	2.389	4.033	3.643	3.354	4.812	3.551	1.827	4.226	3.565	2.144
Treatment_OM	6.019	2.787	4.149	3.849	3.855	4.960	3.858	2.258	4.338	4.015	2.188
Number of observations	1,417	1,417	1,417	1,417	1,416	1,417	1,416	1,417	1,417	1,417	1,417

note: *** p<0.01, ** p<0.05, * p<0.1

Table 37: Program Impact on Child Health (Provincial Heterogeneity)

	Enrolled in day care or preschool 3-5yrs	Day care or preschool attendance 85% of days	Regular weighing according to age	Took deworming pills	Took Vitamin A	BCG	Measles
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact on NO	0.291***	0.098	0.213***	0.182***	0.203***	0.107*	0.160***
	(0.070)	(0.085)	(0.063)	(0.061)	(0.058)	(0.057)	(0.051)
Program impact on LdN	-0.422***	-0.114	-0.094	-0.159**	-0.212***	-0.088	-0.185***
	(0.092)	(0.105)	(0.077)	(0.079)	(0.073)	(0.076)	(0.071)
Program impact on MP	-0.180*	0.082	-0.123	-0.266***	-0.166***	-0.135**	-0.162**
	(0.102)	(0.122)	(0.086)	(0.097)	(0.064)	(0.062)	(0.071)
Program impact on OM	0.020	0.016	-0.039	-0.062	-0.164*	-0.123*	-0.145**
	(0.085)	(0.153)	(0.108)	(0.097)	(0.094)	(0.066)	(0.058)
Age in months	0.018***	0.006***	0.004***	0.011***	-0.001	0.001*	0.006***
	(0.002)	(0.002)	(0.001)	(0.001)	(0.001)	(0.000)	(0.001)
_cons	-0.280***	0.383***	0.033	0.152***	0.767***	0.853***	0.583***
	(0.093)	(0.108)	(0.025)	(0.030)	(0.033)	(0.025)	(0.033)
Control_NO	0.571	0.667	0.061	0.519	0.610	0.835	0.743
Treatment_NO	0.866	0.747	0.272	0.696	0.815	0.942	0.899
Control_LdN	0.758	0.808	0.150	0.523	0.732	0.839	0.762
Treatment_LdN	0.630	0.800	0.271	0.563	0.706	0.853	0.734
Control_MP	0.706	0.724	0.400	0.713	0.932	0.975	0.896
Treatment_MP	0.852	0.898	0.576	0.641	0.978	0.957	0.903
Control_OM	0.500	0.594	0.171	0.546	0.819	0.962	0.911
Treatment_OM	0.800	0.694	0.351	0.680	0.859	0.947	0.935
Number of observations	698	468	1,133	1,155	1,086	1,151	1,113

note: *** p<0.01, ** p<0.05, * p<0.1

Table 38: Program Impact on Education Indicators (Provincial Heterogeneity)

	Enrolled in school 6-11yrs	Enrolled in school 12-14yrs	Enrolled in school 15-17yrs	Attended >85% 6-11yrs	Attended >85% 12-14yrs	Attended >85% 15-17yrs	Started elementary at age 6 among 6-9yrs	Children 12-15yrs are in high school	Years of school repeated	Years of schooling
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program impact on NO	0.099***	0.035	0.070	-0.007	0.032	0.042	-0.007	0.063	0.047	0.305**
	(0.033)	(0.043)	(0.071)	(0.037)	(0.039)	(0.039)	(0.056)	(0.074)	(0.146)	(0.144)
Program impact on LdN	-0.082**	-0.012	-0.192*	0.037	0.042	-0.004	-0.095	-0.117	-0.022	-0.519***
	(0.038)	(0.059)	(0.106)	(0.042)	(0.056)	(0.045)	(0.074)	(0.095)	(0.175)	(0.201)
Program impact on MP	-0.055	0.021	-0.161	0.075	0.002	0.030	0.022	0.015	0.140	-0.180
	(0.042)	(0.074)	(0.117)	(0.050)	(0.049)	(0.054)	(0.086)	(0.107)	(0.188)	(0.226)
Program impact on OM	-0.081*	0.021	-0.049	0.101*	0.010	0.161*	0.030	-0.116	-0.451**	-0.174
	(0.048)	(0.071)	(0.103)	(0.059)	(0.048)	(0.088)	(0.109)	(0.094)	(0.221)	(0.277)
Age in years	0.002	-0.047***	-0.113***	-0.000	0.009	0.045***	-0.159***	0.215***	0.024**	0.825***
	(0.004)	(0.017)	(0.022)	(0.003)	(0.013)	(0.012)	(0.012)	(0.012)	(0.012)	(0.010)
_cons	0.912***	1.451***	2.423***	0.914***	0.790***	0.198	1.806***	-2.368***	1.091***	-4.183***
	(0.033)	(0.221)	(0.346)	(0.033)	(0.168)	(0.203)	(0.088)	(0.163)	(0.149)	(0.113)
Control_NO	0.879	0.838	0.474	0.912	0.906	0.923	0.590	0.393	1.390	5.294
Treatment_NO	0.983	0.877	0.540	0.905	0.938	0.967	0.568	0.435	1.400	5.447
Control_LdN	0.966	0.844	0.720	0.928	0.879	0.953	0.651	0.510	1.336	5.193
Treatment_LdN	0.983	0.872	0.586	0.958	0.952	1.000	0.534	0.400	1.356	4.925
Control_MP	0.932	0.829	0.762	0.909	0.945	0.921	0.540	0.585	1.192	5.557
Treatment_MP	0.977	0.885	0.667	0.976	0.981	1.000	0.588	0.607	1.355	5.305
Control_OM	0.939	0.872	0.577	0.882	0.940	0.763	0.655	0.705	1.803	5.736
Treatment_OM	0.963	0.930	0.583	0.961	0.985	0.974	0.682	0.642	1.385	5.823
Number of observations	1,570	809	713	1,463	680	410	1,008	865	791	3,006

note: *** p<0.01, ** p<0.05, * p<0.1

Table 39: Program Impact on Access to Bank Account (Heterogeneity for Location of Residence)

	Has a bank account
	coef/se
Program impact (Live outside of Poblacion)	0.029*
	(0.017)
treatXpob	-0.129**
	(0.060)
Program impact (Live in poblacion)	0.131***
	(0.042)
_cons	0.075***
	(0.011)
Control_pob	0.230
Treatment_pob	0.161
Control_nonpob	0.072
Treatment_nonpob	0.093
Number of observations	1,390

note: *** p<0.01, ** p<0.05, * p<0.1

Table 40: Robustness Test Applying Instrumental Variables (Reported Beneficiary Status)
Program Effects on Education

	Enrolled in school 6-11yrs	Enrolled in school 12-14yrs	Enrolled in school 15-17yrs	Attended >85% 6-11yrs	Attended >85% 12-14yrs	Attended >85% 15-17yrs	Started elementary at age 6 among 6-9yrs	Children 12-15yrs are in high school	Years of school repeated	Years of schooling
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program Impact	0.050***	0.012	-0.050	0.046**	0.045*	0.106***	-0.028	-0.056	-0.035	-0.188
	(0.018)	(0.025)	(0.052)	(0.020)	(0.024)	(0.029)	(0.042)	(0.044)	(0.081)	(0.146)
Municipality 2	0.144**	-0.012	-0.030	0.133**	0.045	0.070	0.088	-0.090	-0.111	0.602***
	(0.057)	(0.047)	(0.076)	(0.055)	(0.054)	(0.050)	(0.075)	(0.067)	(0.141)	(0.181)
Municipality 3	0.135**	0.025	0.120*	0.140**	0.055	0.096**	0.182**	0.011	-0.193	0.152
	(0.059)	(0.045)	(0.068)	(0.055)	(0.057)	(0.049)	(0.073)	(0.071)	(0.127)	(0.196)
Municipality 4	0.158***	-0.013	0.106	0.142***	0.019	0.080	-0.055	-0.104	-0.097	0.019
	(0.058)	(0.049)	(0.089)	(0.054)	(0.058)	(0.050)	(0.084)	(0.069)	(0.109)	(0.230)
Municipality 5	0.118**	0.040	0.139	0.123**	0.078	0.004	0.072	0.139	-0.223	0.312
	(0.059)	(0.052)	(0.096)	(0.058)	(0.058)	(0.066)	(0.072)	(0.091)	(0.150)	(0.274)
Municipality 6	0.110*	0.002	0.144	0.179***	0.085	0.069	-0.021	0.122*	-0.107	0.541**
	(0.062)	(0.058)	(0.099)	(0.053)	(0.055)	(0.054)	(0.098)	(0.074)	(0.119)	(0.241)
Municipality 7	0.107*	0.053	0.152**	0.159***	0.108**	-0.081	0.221**	0.231***	0.156	0.703**
	(0.062)	(0.058)	(0.069)	(0.054)	(0.051)	(0.081)	(0.091)	(0.072)	(0.199)	(0.327)
Municipality 8	0.155***	0.054	-0.071	0.047	0.043	0.035	0.046	0.117	0.069	1.036***
	(0.057)	(0.051)	(0.088)	(0.075)	(0.058)	(0.065)	(0.089)	(0.072)	(0.141)	(0.238)
_cons	0.808***	0.864***	0.565***	0.783***	0.866***	0.849***	0.536***	0.520***	1.502***	5.090***
	(0.060)	(0.042)	(0.060)	(0.054)	(0.052)	(0.048)	(0.074)	(0.053)	(0.097)	(0.152)
Control_mean	0.935	0.868	0.609	0.915	0.916	0.911	0.588	0.531	1.422	5.485
Treatment_mean	0.982	0.894	0.594	0.944	0.960	0.982	0.601	0.486	1.384	5.279
Number of observations	1,403	710	649	1,318	608	379	900	775	703	2,686

note: *** p<0.01, ** p<0.05, * p<0.1

Table 41: Robustness Test Applying Instrumental Variables (Beneficiary Status According to Program Database)
Program Effects on Education

	Enrolled in school 6-11yrs	Enrolled in school 12-14yrs	Enrolled in school 15-17yrs	Attended >85% 6-11yrs	Attended >85% 12-14yrs	Attended >85% 15-17yrs	Started elementary at age 6 among 6-9yrs	Children 12-15yrs are in high school	Years of school repeated	Years of schooling
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program Impact	0.047***	0.043*	-0.035	0.040**	0.051**	0.084***	-0.033	-0.038	-0.015	-0.087
	(0.015)	(0.025)	(0.044)	(0.018)	(0.020)	(0.023)	(0.035)	(0.039)	(0.073)	(0.130)
Municipality 2	0.120**	-0.023	-0.023	0.105*	0.034	0.059	0.070	-0.091	-0.146	0.559***
	(0.051)	(0.045)	(0.071)	(0.054)	(0.054)	(0.051)	(0.066)	(0.070)	(0.144)	(0.175)
Municipality 3	0.118**	0.013	0.133**	0.110**	0.034	0.088*	0.175***	0.020	-0.203	0.216
	(0.053)	(0.044)	(0.066)	(0.053)	(0.056)	(0.050)	(0.063)	(0.074)	(0.134)	(0.184)
Municipality 4	0.128**	-0.049	0.131	0.115**	0.007	0.071	-0.054	-0.083	-0.114	-0.035
	(0.051)	(0.050)	(0.085)	(0.053)	(0.059)	(0.052)	(0.072)	(0.072)	(0.118)	(0.223)
Municipality 5	0.102*	0.009	0.197**	0.074	0.050	0.047	0.046	0.093	-0.269*	0.291
	(0.052)	(0.050)	(0.078)	(0.061)	(0.057)	(0.063)	(0.066)	(0.083)	(0.142)	(0.229)
Municipality 6	0.109*	-0.042	0.189**	0.154***	0.089*	0.080	0.013	0.117	-0.185	0.626***
	(0.056)	(0.063)	(0.085)	(0.052)	(0.053)	(0.052)	(0.088)	(0.072)	(0.132)	(0.209)
Municipality 7	0.078	0.034	0.150**	0.139***	0.090*	-0.070	0.205**	0.235***	0.189	0.682**
	(0.060)	(0.055)	(0.067)	(0.052)	(0.052)	(0.080)	(0.086)	(0.068)	(0.194)	(0.304)
Municipality 8	0.141***	0.023	-0.059	0.042	0.049	0.045	0.045	0.126*	0.036	0.936***
	(0.052)	(0.061)	(0.086)	(0.070)	(0.056)	(0.065)	(0.083)	(0.071)	(0.148)	(0.214)
_cons	0.828***	0.854***	0.540***	0.810***	0.870***	0.858***	0.546***	0.504***	1.506***	5.014***
	(0.053)	(0.041)	(0.055)	(0.051)	(0.051)	(0.048)	(0.062)	(0.057)	(0.109)	(0.140)
Control_mean	0.933	0.846	0.608	0.916	0.915	0.911	0.620	0.533	1.402	5.393
Treatment_mean	0.981	0.885	0.597	0.943	0.956	0.984	0.569	0.482	1.370	5.301
Number of observations	1,570	809	713	1,463	680	410	1,008	865	791	3,006

note: *** p<0.01, ** p<0.05, * p<0.1

Table 42: Robustness Test Applying Instrumental Variables (Reported Beneficiary Status)
Program Effects on Use of Maternal Health Services

	Received antenatal care at least 4 times	Number of times received antenatal care	Antenatal care quality index	Postnatal care at facility w/in 24 hrs	Postnatal care at home w/in 24 hrs	Delivery assisted by doctor/ midwife	Facility-based delivery
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program Impact	0.125**	0.895***	0.732***	0.115	0.116**	0.036	-0.021
	(0.057)	(0.322)	(0.204)	(0.077)	(0.046)	(0.066)	(0.050)
Municipality 2	-0.115	-0.585	-0.216	-0.371**	0.074	-0.053	0.006
	(0.096)	(0.553)	(0.342)	(0.150)	(0.066)	(0.096)	(0.088)
Municipality 3	0.201**	0.739	0.330	-0.133	0.192**	0.258***	0.258***
	(0.084)	(0.533)	(0.307)	(0.109)	(0.081)	(0.089)	(0.084)
Municipality 4	-0.054	-0.371	-0.178	-0.050	0.039	0.021	-0.048
	(0.087)	(0.630)	(0.325)	(0.121)	(0.059)	(0.107)	(0.089)
Municipality 5	-0.132	-0.502	1.004**	-0.454**	0.259**	0.215*	0.024
	(0.134)	(0.670)	(0.408)	(0.195)	(0.116)	(0.129)	(0.110)
Municipality 6	0.022	0.117	0.136	-0.212	0.471***	0.295***	-0.004
	(0.155)	(0.689)	(0.329)	(0.131)	(0.132)	(0.098)	(0.091)
Municipality 7	0.220**	0.949	0.289	0.092	0.222**	0.178	-0.108
	(0.103)	(0.699)	(0.322)	(0.101)	(0.109)	(0.121)	(0.089)
Municipality 8	0.048	-0.011	-0.244	-0.364**	-0.000	0.030	0.007
	(0.115)	(0.651)	(0.446)	(0.161)	(0.065)	(0.117)	(0.105)
_cons	0.506***	3.956***	4.918***	0.831***	0.005	0.321***	0.249***
	(0.080)	(0.522)	(0.274)	(0.105)	(0.056)	(0.084)	(0.078)
Control_mean	0.546	4.103	5.095	0.642	0.133	0.433	0.277
Treatment_mean	0.635	4.717	5.607	0.756	0.237	0.437	0.264
Number of observations	597	597	562	167	475	607	607

note: *** p<0.01, ** p<0.05, * p<0.1

Table 43: Robustness Test Applying Instrumental Variables (Reported Beneficiary Status)
Program Effects on Use of Child Health Services

	Regular weighing according to age	Took deworming pills	Took Vitamin A	BCG	Measles
	coef/se	coef/se	coef/se	coef/se	coef/se
Program Impact	0.173***	0.077*	0.051	0.033	0.047
	(0.037)	(0.041)	(0.037)	(0.030)	(0.033)
Municipality 2	-0.055	-0.095	-0.006	-0.073*	-0.035
	(0.110)	(0.083)	(0.064)	(0.039)	(0.052)
Municipality 3	0.124	-0.095	0.157***	-0.004	0.039
	(0.109)	(0.087)	(0.055)	(0.031)	(0.045)
Municipality 4	-0.109	-0.191**	-0.179***	-0.192***	-0.225***
	(0.105)	(0.087)	(0.069)	(0.052)	(0.058)
Municipality 5	-0.054	0.008	0.180***	-0.018	0.019
	(0.109)	(0.093)	(0.059)	(0.040)	(0.053)
Municipality 6	0.633***	-0.019	0.237***	0.039	0.096**
	(0.116)	(0.094)	(0.049)	(0.028)	(0.044)
Municipality 7	0.050	-0.025	0.125*	0.009	0.074*
	(0.134)	(0.095)	(0.074)	(0.036)	(0.043)
Municipality 8	0.054	-0.114	0.058	-0.006	0.075
	(0.113)	(0.091)	(0.078)	(0.039)	(0.046)
_cons	0.132	0.655***	0.727***	0.938***	0.827***
	(0.098)	(0.080)	(0.058)	(0.034)	(0.045)
Control_mean	0.155	0.557	0.729	0.871	0.790
Treatment_mean	0.360	0.641	0.842	0.925	0.858
Number of observations	1,003	1,019	962	1,017	986

note: *** p<0.01, ** p<0.05, * p<0.1

Table 44: Robustness Test Applying Instrumental Variables (Reported Beneficiary Status)
Program Effects on Malnutrition

	z-score weight-for-age	z-score height-for-age	z-score weight-for-height	Malnutrition weight-for-age:6-36months	Severe malnutrition weight-for-age:6-36months	Wasting weight-for-height:6-36months	Severe wasting weight-for-height:6-36months	Stunting height-for-age:6-36months	Severe stunting height-for-age:6-36months
	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se	coef/se
Program Impact	-0.015	-0.251	0.155	-0.038	0.010	0.064	0.029	-0.041	-0.111**
	(0.123)	(0.258)	(0.167)	(0.058)	(0.035)	(0.041)	(0.025)	(0.065)	(0.054)
Municipality 2	0.075	-0.193	0.207	-0.238**	0.040	0.058**	0.045*	-0.119	-0.040
	(0.199)	(0.355)	(0.352)	(0.112)	(0.051)	(0.030)	(0.025)	(0.096)	(0.079)
Municipality 3	0.021	0.317	-0.049	-0.176*	0.039	0.211***	0.088***	-0.236**	-0.008
	(0.209)	(0.436)	(0.352)	(0.097)	(0.052)	(0.049)	(0.032)	(0.092)	(0.093)
Municipality 4	0.218	-0.113	0.492	-0.208**	0.062	0.084***	0.041*	-0.099	-0.069
	(0.212)	(0.358)	(0.315)	(0.098)	(0.050)	(0.030)	(0.022)	(0.086)	(0.082)
Municipality 5	0.126	-0.633	0.128	-0.356***	-0.039	0.201*	0.006	-0.270**	-0.189**
	(0.213)	(0.630)	(0.439)	(0.104)	(0.041)	(0.119)	(0.009)	(0.133)	(0.091)
Municipality 6	-0.318*	-0.431	0.037	0.004	0.112	0.188***	0.075**	-0.057	0.087
	(0.193)	(0.330)	(0.312)	(0.102)	(0.088)	(0.071)	(0.037)	(0.116)	(0.099)
Municipality 7	-0.256	-0.309	-0.358	-0.157	0.037	0.100	0.002	-0.211	-0.044
	(0.280)	(0.473)	(0.351)	(0.129)	(0.079)	(0.074)	(0.007)	(0.149)	(0.124)
Municipality 8	-0.293	0.356	-0.490	-0.172	0.121	0.287***	0.123*	-0.281**	-0.200**
	(0.209)	(0.295)	(0.329)	(0.125)	(0.086)	(0.097)	(0.074)	(0.134)	(0.082)
_cons	-1.218***	-1.903***	-0.264	0.482***	0.035	-0.038	-0.017	0.661***	0.293***
	(0.181)	(0.297)	(0.302)	(0.092)	(0.044)	(0.026)	(0.016)	(0.077)	(0.075)
Control_mean	-1.180	-1.969	-0.133	0.283	0.090	0.101	0.040	0.500	0.220
Treatment_mean	-1.262	-2.206	-0.075	0.283	0.092	0.145	0.060	0.479	0.156
Number of observations	817	795	772	350	350	315	315	317	317

note: *** p<0.01, ** p<0.05, * p<0.1

Table 45: Robustness Test Applying Instrumental Variables (Beneficiary Status According to Program Database)
Program Effects on Household Expenditures

	Ln household consumption per capita	Ln consumption on education per capita	Ln consumption on medical per capita	Ln consumption on alcohol	Ln consumption on gambling
	coef/se	coef/se	coef/se	coef/se	coef/se
Program Impact	0.030	0.346**	0.316*	-0.362***	-0.071
	(0.040)	(0.141)	(0.162)	(0.100)	(0.061)
Municipality 2	-0.074	-0.160	0.302	0.140	0.181**
	(0.073)	(0.273)	(0.322)	(0.106)	(0.082)
Municipality 3	0.606***	0.647**	1.405***	0.411***	0.142**
	(0.079)	(0.291)	(0.319)	(0.115)	(0.060)
Municipality 4	0.332***	0.497*	1.344***	-0.435***	0.116**
	(0.081)	(0.277)	(0.329)	(0.160)	(0.059)
Municipality 5	0.757***	2.155***	2.162***	0.452**	0.102
	(0.123)	(0.309)	(0.470)	(0.194)	(0.110)
Municipality 6	0.157*	2.062***	1.232**	0.480**	-0.003
	(0.089)	(0.419)	(0.484)	(0.223)	(0.016)
Municipality 7	0.506***	1.269***	1.794***	0.600***	0.056
	(0.102)	(0.390)	(0.367)	(0.191)	(0.055)
Municipality 8	0.813***	1.228***	2.391***	0.489***	0.255**
	(0.091)	(0.330)	(0.328)	(0.163)	(0.104)
_cons	9.081***	3.289***	1.849***	1.082***	0.034
	(0.072)	(0.254)	(0.295)	(0.086)	(0.031)
Control_mean	9.480	3.999	3.123	1.290	0.162
Treatment_mean	9.395	4.278	3.263	0.899	0.086
Number of observations	1,418	1,415	1,415	1,417	1,417

note: *** $p<0.01$, ** $p<0.05$, * $p<0.1$