USAID
FROM THE AMERICAN PEOPLE

SUAAHARA
Building Strong & Smart Families

# Suaahara: an at-scale, multi-sectoral nutrition program influences knowledge and practices while enhancing equity

July 2016

USAID
FROM THE AMERICAN PEOPLE

SUAAHARA
Building Strong & Smart Families

- Background
- Aims
- Methods
- Results
- Conclusions

USAID
FROM THE AMERICAN PEOPLE

SUAAHARA
Building Strong & Smart Families

# Suaahara: Overview

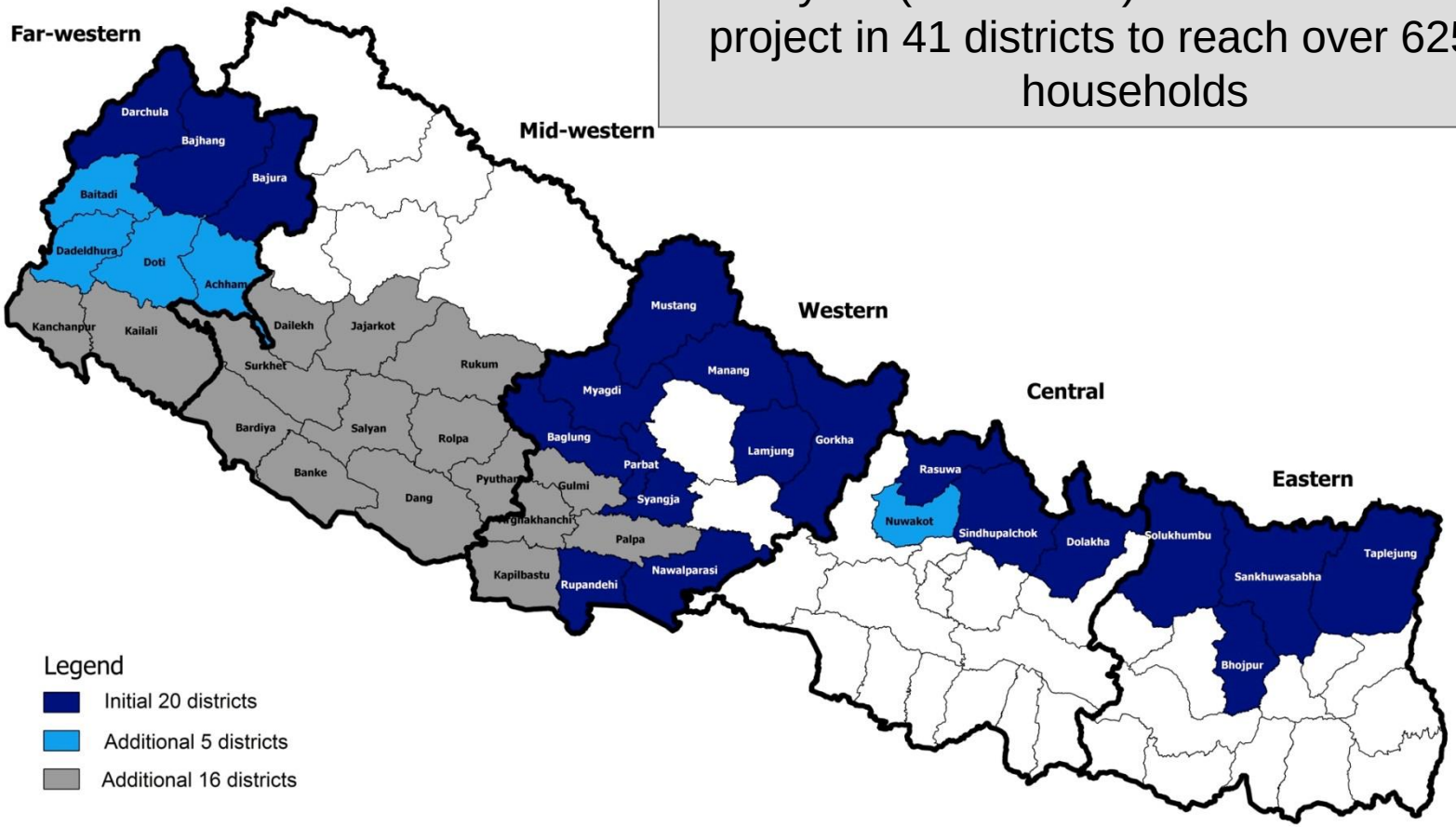
**Goal: Improve the nutritional status of women and children < 2 years**

| Result 1: | Result 2: | Result 3: | Result 4: |
|---|---|---|---|
| Household nutrition, health and hygiene behaviors improved | Use of quality nutrition and health services by women and children increased | Consumption of diverse and nutritious food by women and their families increased | Coordination on nutrition between government and other actors strengthened |

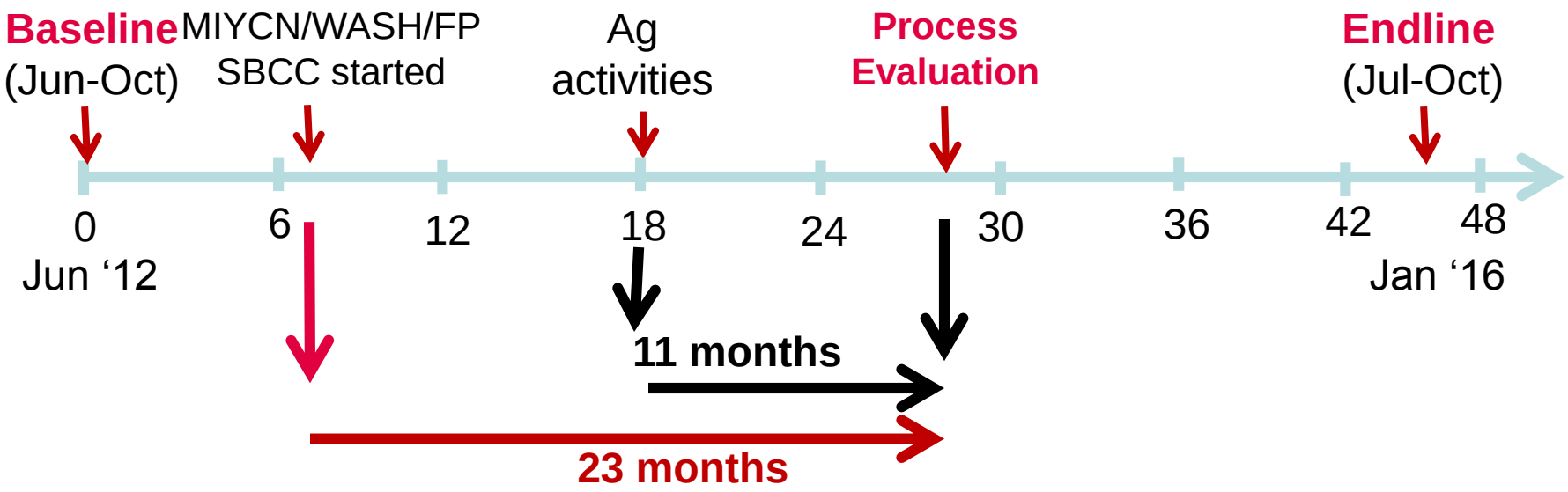
# Suaahara: Intervention districts

**Suaahara**

A 5-year (2011-2016) multi-sector nutrition project in 41 districts to reach over 625,000 households



# Program Implementation Timeline: Household Level




**Designing & implementing multi-sectoral programs to reach enough households with quality interventions at scale takes time**

**Short time of exposure to Suaahara interventions**

# Process evaluation: Study details

- **Rationale:**

Suaahara's aims to reach households and change knowledge and behavior (via FLWs)

**.....But**.....

Are households EXPOSED to Suaahara? AND Are households UTILIZING Suaahara?

- **Primary research question:**

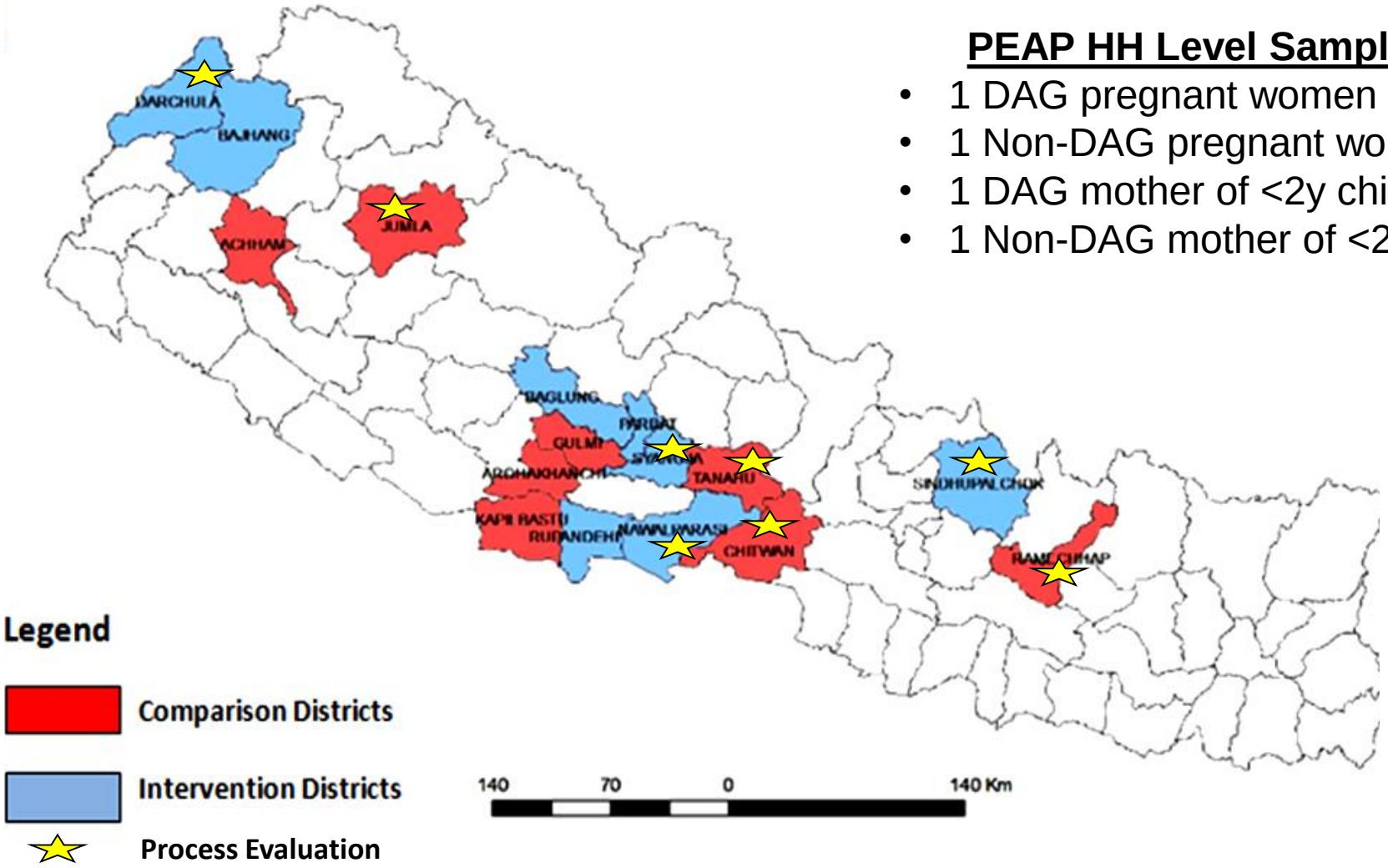
To what extent are Suaahara interventions reaching the target audiences?

(Examples: Bhanchhin Aama, FLW interactions, etc.)

**Study methods:**

- Quantitative household-level survey: Nov-Dec 2014
- Intervention and comparison areas: 8 districts/120 wards/480 households
- Data collection: VaRG
- Ethics: NHRC

# Geography of Process Evaluation




**PEAP HH Level Sampling**

- 1 DAG pregnant women
- 1 Non-DAG pregnant women
- 1 DAG mother of <2y child
- 1 Non-DAG mother of <2y child

# AIMS and METHODS

**Study Aims:**

- To assess *Suaahara's* progress in increasing exposure to nutrition-related information and services and its potential role in improving nutrition-related knowledge and practices among pregnant women and mothers of children under two in rural Nepal
- To explore *Suaahara's* potential role in narrowing gaps between disadvantaged and non-disadvantaged groups for these same nutrition-related exposure, knowledge, and practices.

**Methods:**

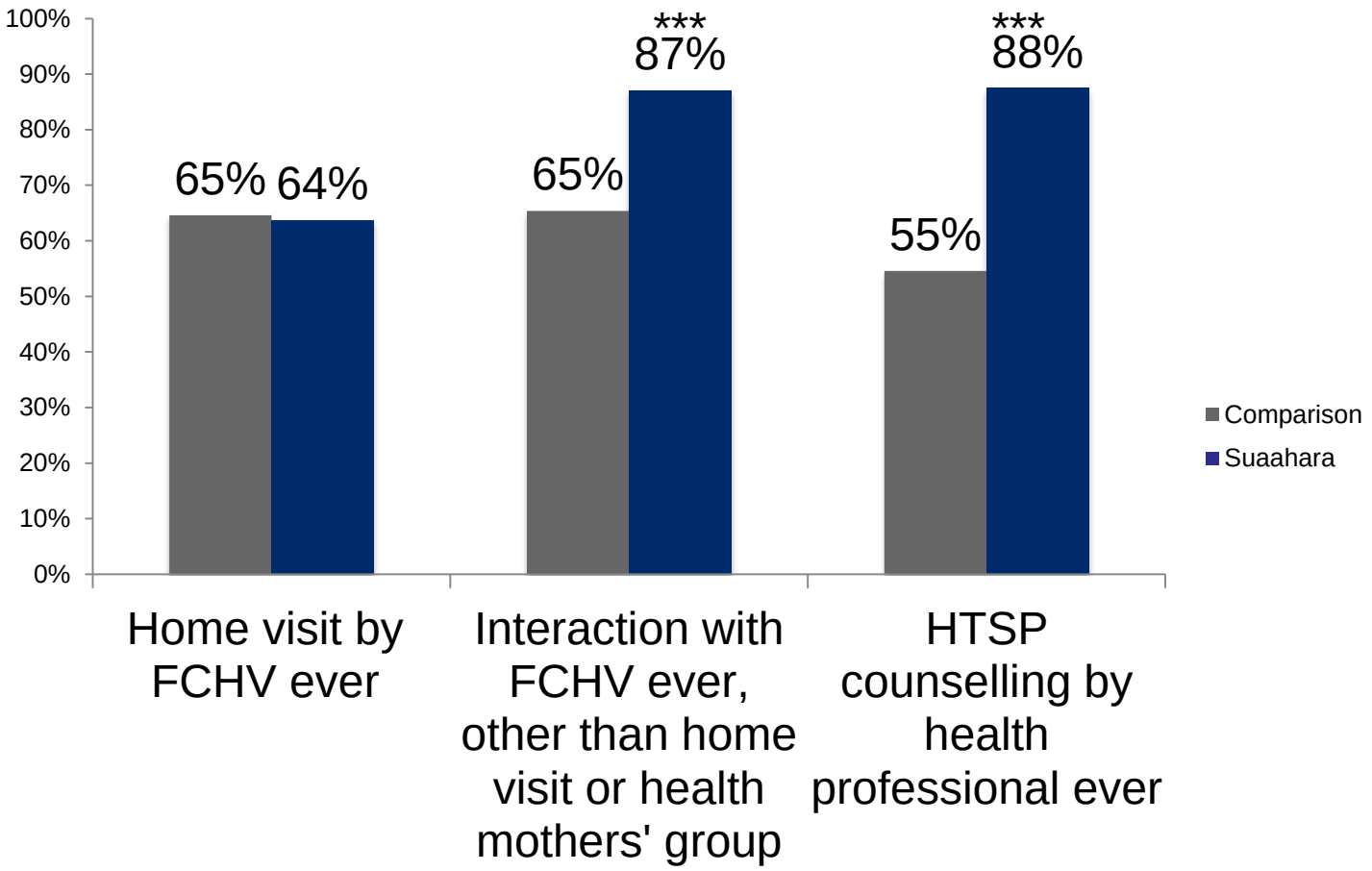
- **Descriptive statistics**: intervention vs. comparison areas
- **Regression analysis**: adjusted for child, maternal, and household-level potential confounders as well as ward-level clustering
- **Equity analysis**: interaction term and regression analysis (same adjusted analysis)

# RESULTS: Sample characteristics

| | Comparison N=240 Mean (SD)/% | Intervention N=232 Mean (SD)/% | Significance* P value |
|---|---|---|---|
| **Children (N=197-C, 166-I)** | | | |
| Age (in months) | 16.9 (14.6) | 16.9 (15.6) | 0.982 |
| Sex: percent boys | 52.1 | 53.0 | 0.862 |
| **Mother** | | | |
| Marital status: percent married | 99.6 | 100.0 | N/A |
| Age (in years) | 24.4 (5.1) | 24.3 (4.8) | 0.813 |
| Age at first pregnancy (in years) | 19.3 (2.6) | 20.1 (2.6)* | 0.018 |
| Formal schooling (in years) | 4.9 (4.2) | 6.3 (4.3) | 0.081 |
| **Household** | | | |
| Number of children <5 years | 1.1 (0.8) | 1.0 (0.8) | 0.299 |
| Religion: percent Hindu | 88.8 | 88.4 | 0.950 |
| Home: percent owning | 97.9 | 97.8 | 0.964 |
| Number of bedrooms in the house | 2.6 (1.4) | 2.7 (1.4) | 0.624 |
| Electricity: percent with access | 66.7 | 82.8 | 0.129 |
| Floor material: percent Improved (observation) | 12.5 | 20.3 | 0.352 |
| Exterior wall material: percent improved (observation) | 15.0 | 33.6 | 0.061 |
| Roof material: percent Improved (observation) | 83.3 | 97.0*** | 0.001 |
| Agricultural land: percent owning | 97.1 | 94.8 | 0.323 |
| Total types of assets owned (range: 0-22) | 7.3 (3.2) | 7.6 (3.0) | 0.577 |
| Total types of animals owned (range: 0-8) | 3.3 (1.7) | 2.8 (1.5) | 0.146 |

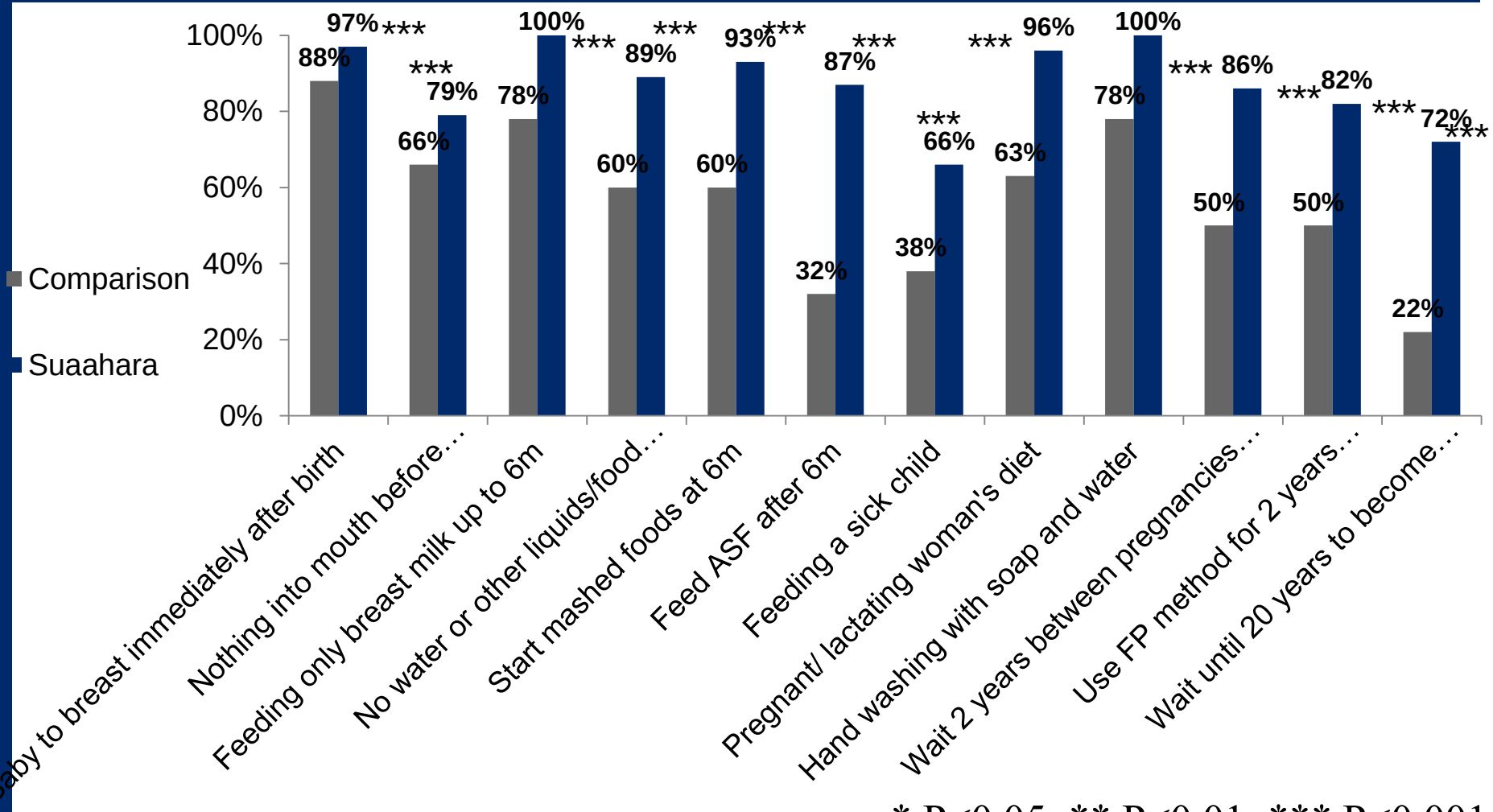
* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Exposure - Frontline Workers




* P<0.05; ** P<0.01; *** P<0.001

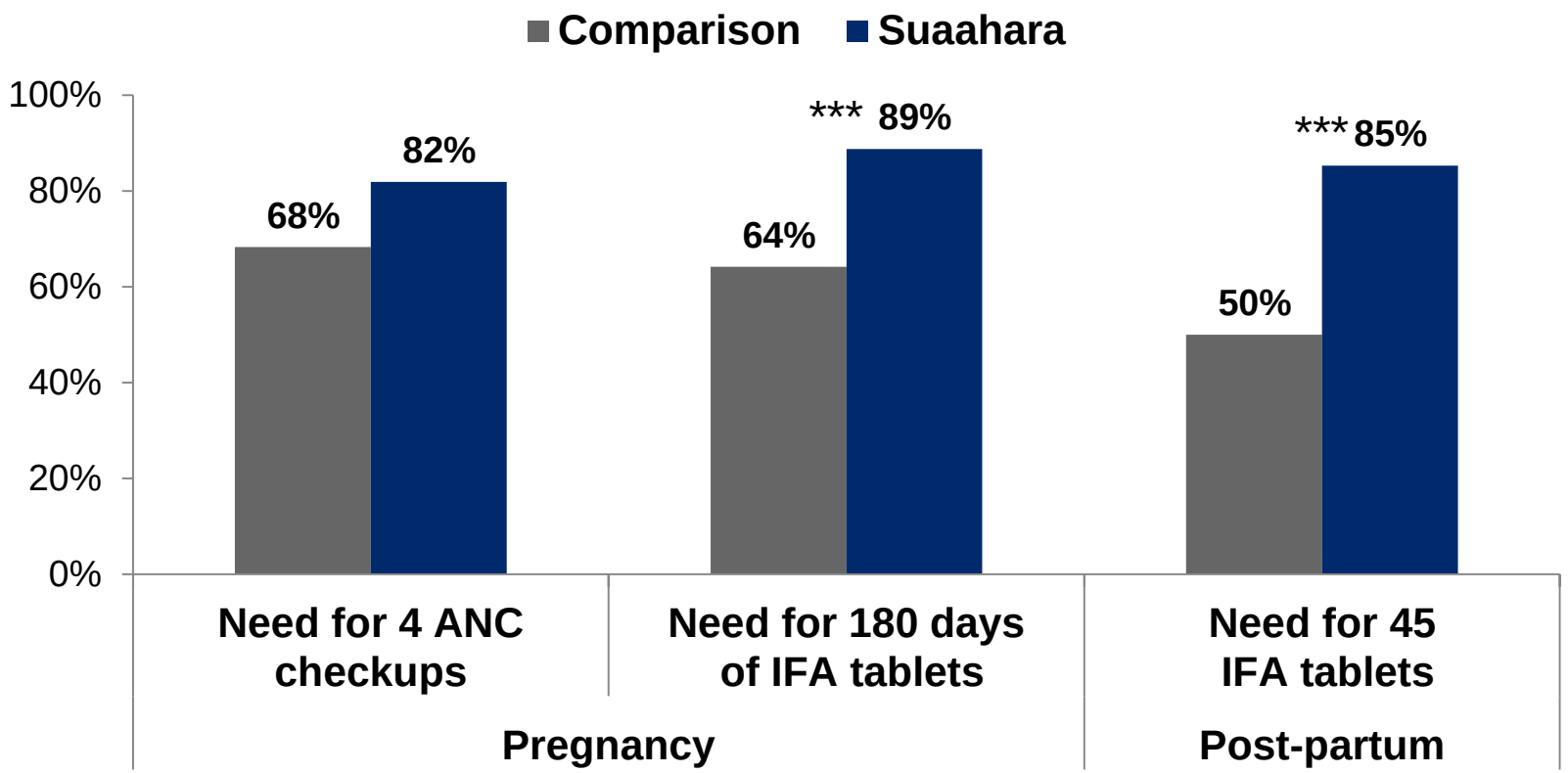
# RESULTS: Exposure - Key Messages




**Note: Ever heard except for HTSP messages are in last counseling sessions**

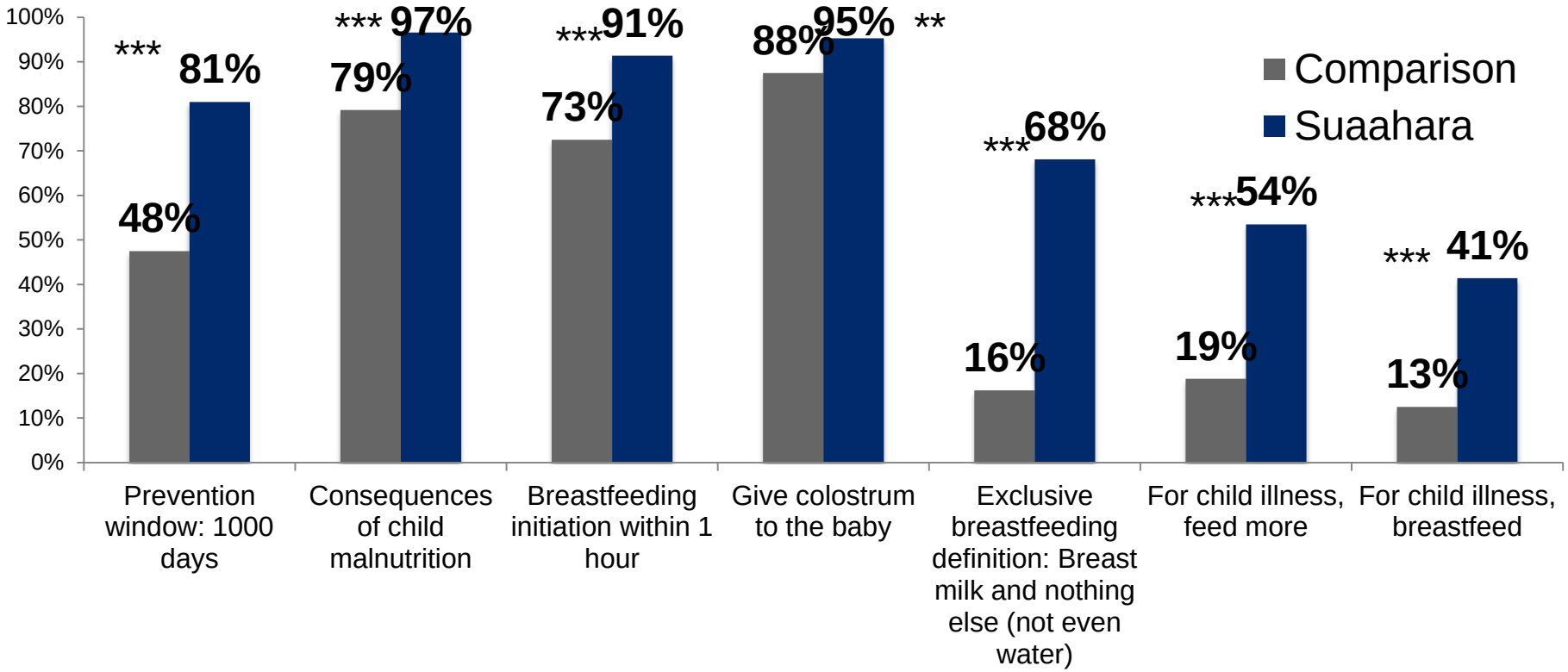
* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Knowledge - Maternal health & nutrition



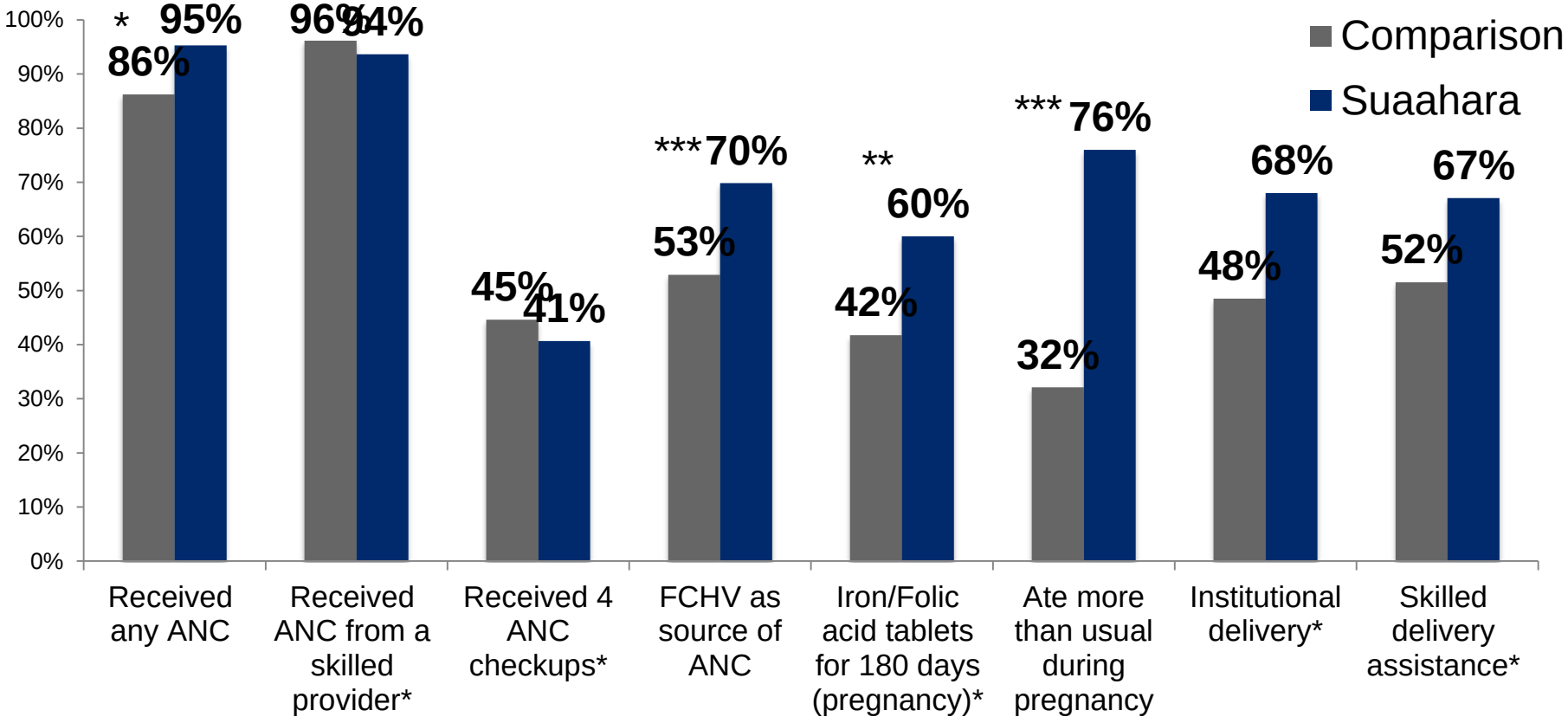

* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Knowledge - Child health & nutrition



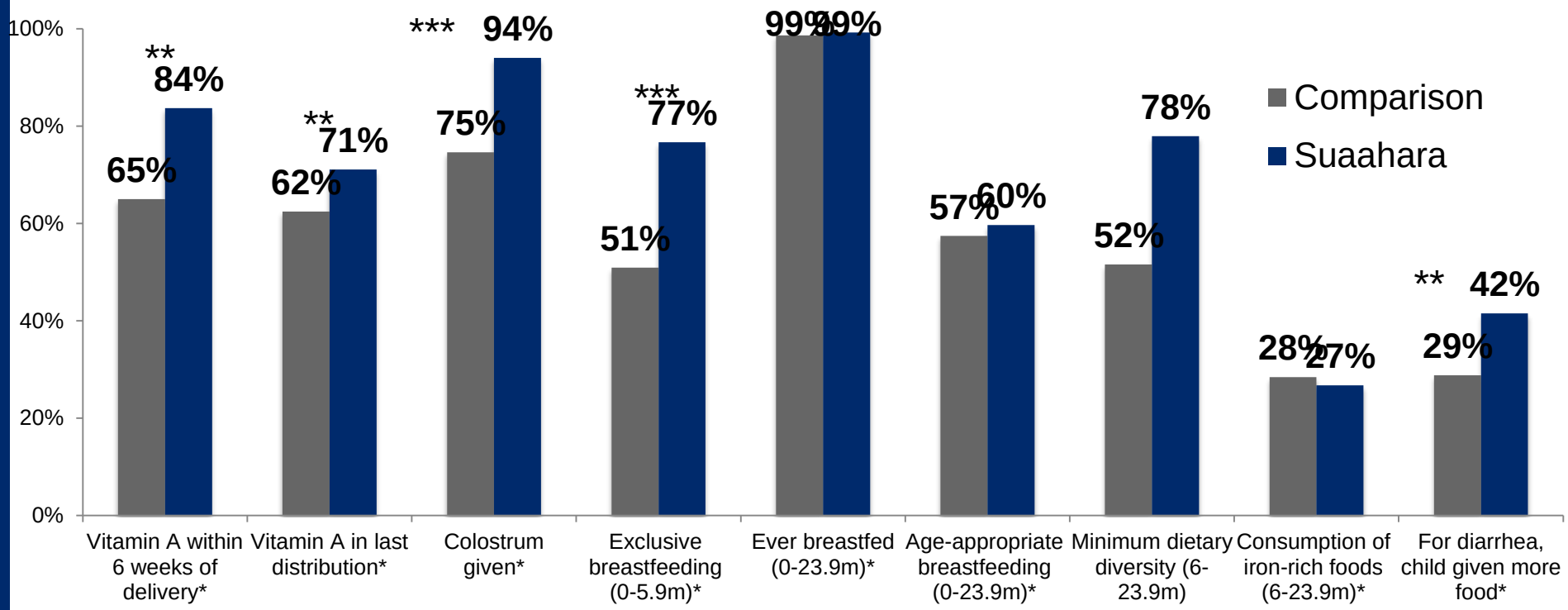

* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Practices – Maternal health & nutrition




* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Practices – Child health & nutrition




**Note: Exclusive breastfeeding was NOT calculated using the standard WHO recommendation; this is a sum of reporting to have never given their child 0-6 months of age any water/liquid, milk/milk product, semi-solid food, solid food, eggs, or animal flesh foods.**

* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Equity analysis - exposure

| | Comparison | Suaahara | |
|---|---|---|---|
| | Non-DAG to DAG Difference Mean/% | Non-DAG to DAG Difference Mean/% | Interaction term difference* Signficance P value |
| **Exposure to Suaahara** | | | |
| HTSP counseling by health professional: percent ever received | 9.3% | -9.3% | <0.001 |
| Health: number of information sources in last 6 months | 0.7 | 0.2 | <0.001 |
| Nutrition: number of information sources in last 6 months | 0.6 | 0.3 | <0.001 |
| FP: number of information sources in last 6 months | 0.6 | 0.3 | <0.001 |
| Health and nutrition: number of tools/materials seen | 0.0 | 0.4 | 0.015 |
| Key message: Waiting 2 years between each pregnancy: | 12.5% | 5.0% | 0.065 |
| Key message: FP method of woman's choice for 2 years between | 13.3% | 1.9% | 0.013 |
| Key message: Not putting anything into the child's mouth before | 8.9% | 14.2% | 0.076 |
| Key message: Not giving the child any water, other liquids or oth | 15.3% | 5.7% | 0.034 |

* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Equity analysis - knowledge

| | Comparison | Suaahara |
|---|---|---|
| | Non-DAG to DAG Difference Mean/% | Non-DAG to DAG Difference Mean/% | Interaction term difference* Signficance P value |
| **Knowledge: percent reported correctly** | | | |
| Knowledge: 180 days of iron/folic acid tablets need for pregnant | 12.1% | 14.0% | 0.046 |
| Age to introduce water/clear liquids (6-8.9 months) | 14.7% | -2.5% | 0.008 |
| Age to introduce milk/milk products (6-8.9 months) | 14.9% | -3.3% | 0.008 |
| For child illness, feed an extra meal daily/more food/more liquid | 8.1% | -6.1% | 0.006 |

* P<0.05; ** P<0.01; *** P<0.001

# RESULTS: Equity analysis - practices

| | Comparison | Suaahara | |
|---|---|---|---|
| | Non-DAG to DAG Difference Mean/% | Non-DAG to DAG Difference Mean/% | Interaction term difference Signficance P value |
| **Practices: percent reported correctly** | | | |
| Received ANC from a skilled provider* (among those who receive | -1.7% | 9.2% | 0.074 |
| FCHV as source of ANC services or counselling | 12.6% | -13.3% | 0.008 |
| Eating more than usual during pregnancy | 18.6% | -3.0% | 0.002 |
| Dairy: consumed by woman in previous 24 hours | 24.6% | 13.5% | 0.055 |
| Exclusive breastfeeding (0-5.9m)* (N= 29, 24, 19, 24, 96) | 13.5% | -32.2% | 0.061 |
| Dairy: consumed by children 6-23.9 months in previous 24 hours | -3.6% | -1.3% | 0.081 |
| Other fruits and vegetables consumed by children 6-23.9 months | -6.5% | 27.6% | 0.023 |
| Handwashing station with water and soap/ash available (OBSERV | 22.5% | 4.5% | 0.012 |

* P<0.05; ** P<0.01; *** P<0.001

# Conclusions

- These results show effective scale and reach can be obtained in multi-sectoral nutrition programs, while simultaneously addressing equity gaps.
- After only two years of full program intervention, large differences were found in exposure, knowledge, and some practices between comparison and intervention groups for maternal and child health and nutrition, as well as water, sanitation and hygiene.
- Progress even on difficult to move child nutrition indicators, i.e. appropriate sick child feeding, can be made via multi-sectoral integrated at scale interventions.
- More work remains to be done by the Government of Nepal and development partners to continue to address persistent undernutrition and its determinants.
- Investments in research and rigorous evaluations is needed to enhance our understanding of what works and why in addressing undernutrition, particularly among hard to reach populations.

USAID
FROM THE AMERICAN PEOPLE

SUAAHARA
Building Strong & Smart Families

Suaahara is made possible by the generous support of the American people through USAID

Co-authors:

Akriti Singh, Tufts University
Pooja Pandey Rana, Suaahara
Dr. Karin Lapping, Suaahara
Silvia Alayon, Suaahara
Dr. Carol Underwood, Suaahara
Dr. Rolf Klemm, Suaahara
Laura Brye, Suaahara